MILLIMAN CLIENT REPORT

Setting reference prices in surprise billing situations

Evaluation of data sources and methodologies

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Executive Summary

The issue known as "surprise billing"—wherein a member thinks services received have come from in-network providers, but subsequently receives a bill (including a balance bill for the difference between provider charges and the plan's allowed amount) from an out-of-network provider—has caught the attention of consumers, health plans, and regulators alike. It causes considerable dissatisfaction among a plan's members and can have a significant adverse financial impact on consumers, providers, and health plans. A combination of expanded commercially insured (non-Medicare, non-Medicaid) populations receiving their healthcare through provider networks and increasing prevalence of pockets of providers not participating in networks, have raised the visibility of this issue.

Surprise billing's adverse financial impacts on consumers involve both out-of-pocket costs on rendered services and premiums paid for coverage. Therefore, stakeholders, including employers, providers, plans, and regulators, are looking for solutions that reduce the impact of these occurrences or prevent them altogether. A variety of solutions are possible, but the implementation of reference prices for use in surprise billing situations has been offered from parties on multiple sides of the debate. Solutions such as these that involve limitations on payments to providers based on industry payment benchmarks have the potential to lower consumer costs through lower cost sharing and reduced balance billing responsibility.

Surprise billing solutions that simply propose to eliminate direct member exposure to balance bills, but do not also seek to limit the magnitude of such out-of-network charges with the use of a reference price, will merely shift the cost of those charges into the insurers' cost of coverage. The result will increase consumer costs through higher premiums, all else equal. This approach may also make the higher out-of-network provider charges become less visible, and may provide even stronger incentives for providers to stay out-of-network and charge higher prices. Therefore, careful consideration must be made when selecting and applying a reference price solution, particularly as a part of a larger solution.

Several legislative proposals surveyed call for the use of data sources to establish reference prices for services involved in surprise billing situations. These reference prices can be used in surprise billing solutions as either mandatory payment levels or a factor in dispute resolution. Methodologies to set the reference price should:

- Be used carefully in order to avoid the incentive for providers to raise their charges to increase the benchmark data used to set the reference price
- Produce reference prices that are reasonable relative to contracted allowed amounts to preserve the long term integrity of network-based health insurance products
- Avoid increasing costs and putting upward pressure on premium rates

These reference prices must be crafted to arrive at fair prices that provide the right incentives and protections for provider, payer, and consumer. Considerations include:

- Selecting an appropriate source of data for market prices that is appropriate to the commercial populations, where surprise billing occurs
- Ensuring sufficient volumes of high-quality data at the geographic region and code level that produces credible results and avoids distortions due to lack of data or data clustering
- Using a methodology to establish prices with the data that is transparent, but preserves confidential or proprietary information

Milliman has been retained by the Blue Cross Blue Shield Association (BCBSA) to provide analysis and commentary on relevant considerations when evaluating the appropriateness of various databases and methods to establish reference prices in surprise billing situations. Our analysis is limited to situations that arise in the commercial (e.g., employer-sponsored, individual) markets and that involve facility-based professionals providing services at in-network hospitals.

Introduction

The issue known as "surprise billing" has caught the attention of consumers, health plans, and regulators alike. It occurs when members enrolled in a particular health plan utilize an in-network facility, but are treated by a non-network provider (or providers) at the facility without the member's knowledge or consent and thus beyond the member's control.

Often these members believe they have used network providers, but end up financially responsible for a balance bill amount (see the sidebar) as well as significantly higher out-of-network deductibles and copays. The most common out-of-network providers operating at in-network facilities are anesthesiologists, emergency room (ER) doctors, assistant surgeons, pathologists, radiologists, and labs.

These providers often find less value to being in a carrier's network often because their revenue is driven by facility patient volume rather than by referrals from other network providers.

Included below are two common scenarios that result in surprise billing:

- John Doe has a scheduled outpatient surgical procedure at a nearby hospital and his primary surgeon, the surgical team, and the facility itself are all in-network, but the anesthesiologist is not part of his plan's network.
- Jane Doe goes to a hospital ER for an asthma attack. The hospital is in her plan's network, but the ER physicians are not.

Balance Billing

A practice that occurs when a health plan pays a non-contracted provider an amount based on its maximum price for the service (called the "allowed" amount), which is less than what the provider would otherwise charge (the "charge" amount). The provider then passes on the difference between the full charge amount and the plan's allowed amount to the member directly. If a provider is a contracted in-network provider, he or she is generally precluded from balance billing and must accept the plan's allowed amount as payment in full. With non-contracted providers, it is not uncommon for the allowed amount to be the same as that for contracted providers.

The Appendix provides information on how often surprise billing occurs and numerical examples to illustrate the financial implications.

Due of the negative financial consequences of surprise billing for members, stakeholders, including employers, providers, plans, and regulators, are looking for solutions that reduce the impact of these occurrences or prevent them altogether. Proposed solutions must be carefully crafted in order to retain the proper incentives, control costs, and provide the needed protections for all stakeholders.

The use of a reference price to limit out-of-network provider reimbursement in these situations can be one solution or part of a larger proposed solution. Without a reference price to limit out-of-network provider charges, other aspects of a proposed solution could be less effective.

Proposed solutions such as reference prices that involve limitations on provider reimbursement based on industry payment benchmarks should be designed to produce results are appropriately calculated, use credible data, are updatable, and are transparent to all stakeholders. Care must also be taken to minimize potential perverse incentives in the healthcare system that ultimately increase premiums.

Milliman was retained by the Blue Cross Blue Shield Association (BCBSA) to provide analysis and commentary on relevant considerations when evaluating the appropriateness of various databases of market prices and methods to establish reference prices in surprise billing situations. Our analysis is limited to situations that arise in the commercial (e.g., employer-sponsored, individual) markets and that involve facility-based professionals providing services at in-network hospitals.

Setting and using reference prices

For purposes of this paper, we define a reference price as a price for a medical service or procedure (such as an MRI or surgical procedure) that is derived from a distribution of industry prices or benchmark data for that particular service or procedure. Reference prices should reflect appropriate[1] characteristics to be considered a fair and reasonable price by both payer and provider.

The use of reference prices in proposed solutions for the surprise bills can vary. Some proposals call for the reference price to be the mandatory maximum provider reimbursement for the out-of-network services rendered and the provider is precluded from balance billing. In other cases, it is used as a factor in dispute resolution or arbitration processes that determines final payment. Still other proposals surveyed call for the carrier to absorb the full cost of the out-of-network costs, holding the member harmless for any excess charges over and above what would be paid in network. In these proposals a reference price is equally important, as any excess charges absorbed by the plan will be ultimately be passed on to members in the form of higher premiums. Thus setting a reference price, even if the member is held harmless, can help to hold overall costs, and ultimately premiums, down.

The selection of a data source for purposes of establishing reference prices is an important process that should take into account many different factors as outlined in this section. However, equally important is the methodology chosen to establish these prices, which is clearly related to the data itself. While it is beyond the scope of this paper to establish such a methodology, it is important to outline key considerations, particularly those that are data-related.

Generally, any method used to establish a reference price is going to be susceptible to distortion of the underlying distribution due to lower volumes of data or clustering of data in certain commercial markets, geographic areas, or by payers. A key step in any methodology is to make sure all reference prices output at the end of the process make sense relative to each other within a specific geographic area.

METHODOLOGIES

Use of averages: If averages are used in a methodology, care should be taken to adjust the data for outliers either on the high end or on the low end of price ranges. Somewhat by definition, outliers generally tend to be lightly weighted in the average, but this is not always the case, particularly in areas with few claims (e.g., specialties in rural areas). Averages can also be influenced by heavily weighted prices that are not on the extremes, but still might distort the average. For example, a single provider, facility, or laboratory might have a dominant market share in a particular region. The price set by this provider might be higher relative to other prices in the area when compared to the relationships that hold in other regions.

Use of percentiles: The use of percentiles to establish usual and customary prices (for example, using the 80th percentile of aggregate billed charges) is a common payer practice, and is the methodology specified in several of the legislative solutions surveyed. The use of percentiles avoids some of the distorting effects of outliers to which averages are susceptible. However, percentiles can also present challenges. For example, distributions of prices that are bimodal (with concentrations of data on the high and low ends) may not produce an overall reference price that is reasonable. To give one example of how this distortion could occur, consider a situation where a single large provider has prices for particular services that are relatively high; because that provider dominates the distribution of charge amounts it encompasses a large portion of the percentiles (such as the 45th through the 90th). Selecting the 80th percentile in this case may not produce a reasonable reference price.

CONSIDERATIONS

Relationship between billed charges and allowed charges: As noted above, several legislative proposals surveyed call for the use of percentiles of billed charges as the reference prices. However, because the relationship between billed charges and actual contracted allowed amounts paid by carriers varies by geographic area, the use of a single percentile of billed charges may not be appropriate. In other words, the percentile may need to vary by geographic area. This is certainly true across states but can also be true across regions within a state. Because billed charges are highly variable and may not represent actual costs, any reference price approach that uses a percentile of billed methodology should be reviewed to confirm it produces prices that make sense relative to actual contracted allowed amounts by region.

Use of billed charges generally: Data and methodologies used to establish reference prices for surprise billing situations should provide the right incentives to all stakeholders. The use of provider billed charges, or a percentile of those charges, could create incentives for providers to increase billed charges such that they *influence* the ultimate

[1] For discussion of appropriateness of data, please see "Third-party data sources" below.

payment. Moreover, in certain situations, a provider (whether a large lab, physician group, or hospital) could represent a material share of the charges for certain procedures in a specific region and, therefore, would be able to effectively *dictate* the reference price.

Using a percentile of billed charges approach could create other misaligned incentives in the healthcare marketplace as well. For example, it could also lead to benchmark prices that are significantly higher than corresponding contracted allowed amounts for in-network providers. This relationship might incentivize providers to stay out-of-network or more providers to leave networks in order to receive higher reimbursement.

Impact on arbitration: Several legislative proposals call for arbitration between payer and provider in cases of disputes on what constitutes fair payment. If the combination of methodology and billed charge benchmark data produces a reference price for out-of-network charges that is significantly above contracted network amounts, this reference price could have an "anchoring" effect on negotiations, making resolution harder and costlier. Arbitration, in general, is expensive. However, clouding the discussions with reference prices that vary significantly between in and out-of-network may add to the length and cost of arbitration.

Evaluation of external benchmarking data used for setting reference prices

Most healthcare transactions involve three parties (health plan, provider, and member); therefore, viable long-term solutions to address surprise billing situations will need to consider the following:

1) **Members:** Reduce or eliminate the surprise element of surprise billing, as well as insulate against large out-of-pocket expenses and high costs that increase future premiums if absorbed by the plan.

2) **Plans:** Preserve the ability to contract and develop cost-effective, high-quality networks that result in high value delivery and reasonable premiums for members.

3) **Providers:** Encourage market conditions that are conducive to an adequate supply of a variety of providers that are reimbursed at a fair price.

As of this writing, Congress and state legislatures[2] have seen a variety of bills introduced to address the issue of surprise billing.[3] These proposals differ in their approaches, scopes of applicability (e.g., which markets, emergent claims only or both emergent and non-emergent claims), and the likely impact to each of the three stakeholders mentioned above. While it is beyond the scope of this paper to conduct an in-depth review and analysis of these proposals, we note that most of these bills deal with three aspects of the surprise billing issue:

- Should a member pay the in-network or out-of-network coinsurance, copays, and deductibles?
- Is balance billing allowed and, if so, under what circumstances and who is responsible for it (the plan or the member)?
- How should reimbursement for out-of-network providers be determined to be reasonable for all stakeholders? Reference prices should provide fair compensation for providers, but also be consistent with the ability of plans to develop cost-effective networks.

Although the issues of balance billing and coinsurance levels are not unimportant, we note that if the question of fair compensation can be determined and agreed to up-front, then providers are less likely to need or want to balance bill the member for additional charges above what the health plan has already paid. In addition, the difference between in-network and out-of-network cost sharing becomes much smaller for the member. Therefore, the remainder of this evaluation focuses on the considerations related to certain data and methodologies for the determination of "fair" reimbursement.

The discussion and process of setting fair reimbursement for all stakeholders commonly involves examining prices that are currently used or seen in the market. These benchmark prices are often referred to as "usual, customary and reasonable" charges, "prevailing" prices, or other similar terms. These price benchmarks can be used in surprise billing solutions to set reference prices that are either mandatory payment levels, a reference point (framing), or a factor in dispute resolution. The benchmarks most commonly[4] cited are:

a) Medicare fee schedules or some multiple (generally greater than 100%) of the Medicare payment amount.

b) Average allowed amounts for groupings of procedures or some multiple (generally greater than 100%) of that amount. A related method is to use some percentile of the distribution of allowed amounts, generally at or above the 50th percentile.

c) Average billed charge amounts for groupings of procedures or some multiple (generally less than 100%) of that amount or a stated percentile of the distribution.

[2] It is important to note that self-funded employer plans are governed by federal ERISA law. State laws addressing surprise billing would not apply to these plans without federal action.
[3] For this paper we reviewed bills introduced by Congress sponsored by Hassan, Shaheen, and Cassidy, as well as state legislation introduced or passed in California, Connecticut, and New York.
[4] Based on our review of proposed federal legislation and either proposed or enacted legislation at the state level.

MEDICARE

The Medicare fee schedule forms a consistent, recognized, nationwide basis for contracting with providers. Physicians' fees are updated annually with each year's Medicare Physician Fee Schedule (PFS) Final Rule, with midyear updates for legislative and medical coding changes.

Advantages of using the Medicare PFS as a reference price in the determination of payment in surprise billing situations include:

- **Familiarity:** Many providers contract with Medicare, and health plans frequently contract with providers for their commercial products on a "percentage of Medicare" basis using the Resource-based. Relative Value Scale (RBRVS) fee schedule as the underlying baseline.
- **Availability:** The fee schedules are publicly available, free of charge, and easily accessible.
- **National presence:** The Medicare PFS encompasses the entire United States and some territories. It has geographic variations by state, as well as major cities (e.g., Chicago, Baltimore).
- **Robust data source:** Because the Medicare program covers so many people in the United States, those services that are represented within the data (see the note below about potential data gaps/mix issues) are represented well and form a credible basis for reference price setting.
- **Regular updates:** The Medicare PFS is released annually, and the underlying relative values are reviewed and updated periodically.

Disadvantages include:

- **Fee adequacy:** The Medicare fee schedule is generally *lower* than the reimbursement paid by plans on their commercial (individual, small group, etc.) populations. Providers often characterize reimbursement at 100% of Medicare's fee schedule as inadequate. Medicare fees reflect federal budgets and policy objectives, not necessarily market dynamics, provider costs, or revenue needs.

  Several of the legislative proposals that were reviewed suggest using the maximum fee out of various selected benchmarks to set reference prices, including Medicare. As a purely practical matter, unless a percentage of Medicare greater than 100% were used in this process, the Medicare fee schedule would be unlikely to be used in a reimbursement determination involving commercial products because it is generally much lower than the other suggested benchmarks.
- **External factors influencing payment rates:** The Medicare fee schedule incorporates legislative and regulatory requirements that may distort fee schedule relativities across codes or geographies.
- **Complexity:** Adjudication of the fee schedule used by Medicare includes many adjustments, such as multiple procedure discounting, global surgery payments, bundling of services, and provider specialty adjustments.
- **Other Issues:** Because Medicare is designed with primarily an over-65 population in mind, there are gaps in the fee schedule for services that would be delivered to younger populations. Moreover, even the Medicare recipients that are under age 65 are primarily disabled, and thus would be expected to have different mixes of services than the populations of other markets. Various gap-filling methodologies or acuity adjustments would be needed for the missing services and differing mixes of services.

THIRD PARTY DATA SOURCES

General considerations

When using market-based allowed or billed amounts, the reference price determination could rely on the use of a third party database that contains market-wide information. The following are some general considerations when determining whether these data sources would be an adequate source of data for the process of setting provider charge limitations:

1. Geographic detail

Because the absolute amounts of provider-billed charges and allowed amounts (as well as the relationship between the two) vary by geography, any source data for benchmarking must contain enough detail to set appropriate prices by

geographic area. The definition of "area" in certain cases may need to be as small as a county, but would likely need to be at least no larger than a metropolitan statistical area (MSA) within a state.

2. Data volume, credibility, and quality

The data quality of a particular database is an important consideration. A database may contain a large number of lives and/or claims records, but if the quality of the data submission is low, the volume advantage is diminished. Data should be scrubbed and examined for errors, anomalies, and records either corrected or removed.

In order to be used as a credible source for benchmarking, databases must contain enough volume (after scrubbing) at the lowest level of data analysis (e.g., individual code level for a geographic region) to calculate robust statistics such as mean, median, and other percentiles, all within reasonably narrow 95% confidence intervals. "Gaps" in procedure codes, where there is low volume or no data at all, should be minimal. In particular, codes that are typically involved with surprise billing situations should have enough volume to be credible and any methodology used for filling gaps should be transparent. For example, combining codes or code ranges to increase credibility will result in more averaging and less accuracy for any specific code. Combining certain geographic areas might average over important distinctions in the provider markets (e.g., certain types of specialty hospitals) in these areas as well.

3. Outliers

Data should allow the identification and exclusion of outliers in either billed charge amounts or allowed amounts that skew averages or percentiles.

4. Transparent methodology

Transparency allows all stakeholders to understand how the reference prices are determined. To the extent not proprietary, data and methodology for calculating various benchmarks (such as mean charge, median allowed, etc.) should be transparent, as should the methodologies for filling gaps in fee schedules due to low or no volume or new procedure codes and adjusting for outliers. Proprietary information and methodologies that could be excluded from general transparency would be any data or modeling parameters that would allow for derivation of negotiated discounts of carriers, as well as any methodology used to fill gaps or impute missing values. For example, the imputation methodology used by FAIR Health is specifically noted by the company as proprietary.

5. Population appropriateness

Data should be applicable to the population for which the reference price solution to surprise billing is targeted. Generally, this means data that is derived from commercial, non-Medicare, and non-Medicaid populations.

6. Contributor characteristics

Databases should have a broad base of contributors that participate in the various commercial markets including individual, small group, large group, and the self-insured. Reimbursement even within a single payer can vary materially between these markets. If a database has concentrations of data contributions from carriers that operate heavily in the individual market or alternatively in the self-insured space, this might skew distributions of charges and allowed amounts.

7. Public availability and costs

Data should be publicly available for purchase or the organization should be willing to make the data used to set reference prices publicly available. Broad availability will improve transparency and quality. Cost for such availability should be reasonable.

8. Other

Data sources that fulfill some or all of these criteria may still not capture ultimate provider reimbursement, particularly by specialty, as the data would not capture the effects of capitation, the impacts of value-based reimbursements (such as quality bonuses and risk-sharing payments or receipts), or salaried physicians.

Specific data sources

FAIR Health

According to its website, "FAIR Health is an independent nonprofit that collects data for and manages the nation's largest database of privately billed health insurance claims. FAIR Health was established to bring transparency to healthcare costs and health insurance information. A conflict-free, nonprofit organization that qualifies as a public charity under section 501(c)(3) of the Internal Revenue Code, FAIR Health is charged with maintaining and making available trusted claims data resources that are used to promote sound decision-making by all participants in the healthcare system."[5]

[5] FAIR Health. About Us. Retrieved March 7, 2019, from https://www.fairhealth.org/about-us.

The FAIR Health database is a convenience sample[6] (albeit a very large one) collected from approximately 150 million individuals nationwide and from approximately 60 private insurers. It can be used to benchmark both commercial billed charges and allowed amounts.[7] Billed amounts are based on actual provider charges. However, allowed amounts are not the actual allowed amounts paid by carriers. Rather, the allowed amounts are calculated using a proprietary methodology that imputes values based on allowed-to-billed ratios for groupings of related codes in a geographic region rather than using the actual negotiated allowed amounts. This approach avoids disclosing confidential information of health plan contributors.

Of significant note, *about 50% of claims do not have allowed amounts submitted at all.*[8] This means that allowed amounts for those claims are further imputed from the remaining data. This could cause inaccuracies, depending on the imputation methodology.

The FAIR Health data does represent commercial populations, which is where the surprise billing issue is most acute.[9] In addition, there are likely few instances of missing fees or gaps in data. Moreover, FAIR Health makes several adjustments in its methodology to account for the variation in provider fees by specialty, procedure code range, and geography. Finally, several legislative proposals (Connecticut and New York[10]) call for the use of a database that is not related to any insurer and/or is a nonprofit and FAIR Health would meet those conditions. FAIR Health is already being used in several states for setting reference prices in certain situations.[11]

Because FAIR Health can be used to calculate reference prices for both allowed amounts and billed charge amounts, any legislation or regulation should specify which metric should be used. Without specificity in language, the inadvertent use of billed charges where the intent was to benchmark health plan contracted allowed amounts would yield a decidedly different (in this case higher) reference price than desired, which could have downstream implications for plans looking to contract with providers who are now being limited to very high reference prices.

In evaluating FAIR Health, the advantages described above are:

- Large sample of commercial lives, meaning a credible data source that is a good fit for the circumstances where surprise billing arises.
- Contains both billed and allowed amounts, giving flexibility about how to structure a reference price.
- Makes efforts to be complete in terms of procedure codes as well as geography.

Meanwhile, the disadvantages are:

- The so-called “allowed amounts” are actually imputed based on a proprietary methodology, increasing the “black box” nature of this database.
- Over 50% of claims are not submitted with actual carrier allowed amounts. This increases the need for imputation of values based on average and relationships within the rest of the data.
- The use of a “convenience sample” means that the data may not be representative in certain circumstances.

MarketScan

The IBM MarketScan is a database comprised of healthcare encounters from approximately 43.6 million annual enrollment lives with employer-provided health insurance, as of March 2017.[12] According to its website, the database(s) are used extensively in research applications and notably for “fee-schedule comparative information.”[13]

[6] Convenience samples are non-probability-based samples that represent the data that is easiest to obtain. In the case of public databases, this means it is the data that willing contributors provided.
[7] FAIR Health also contains Medicare data.
[8] NORC (May 24, 2017). Qualitative Assessment of Databases for Out-of-Network Physician Reimbursement. Retrieved March 7, 2019, from https://endinsurancegap.org/wp-content/uploads/2017/01/NORC-Revised-Final-5-24-17-2.pdf.
[9] Medicare beneficiaries are less likely to be affected by the issue of surprise billing because Medicare already imposes a charge limit on nonparticipating providers of 15% above the participating provider’s reimbursement, and this excess is often covered by Medicare supplemental plans.
[10] Of the states we reviewed, CT and NY specified FAIR Health. There could be others.
[11] https://www.fairhealth.org/benchmark-data-products/benchmark-modules
[12] IBM MarketScan Research Database White papers, Retrieved March 7, 2019, from https://www.ibm.com/downloads/cas/OWZWJ0QO
[13] IBM Watson Health (2018). Solution Brief: IBM MarketScan Research Databases. Retrieved March 7, 2019, from https://www.ibm.com/downloads/cas/4QD5ADRL.

The MarketScan commercial data is also a convenience sample and is comprised heavily of data from large employers, although the database does also include data from about 40 health plans. Small group and individual claims experience is underrepresented and, therefore, adjustments to data or methodology would be needed to obtain a representative sample for these markets. The data represents payment and charge information including amounts that are member responsibility.

Because of the comparatively smaller volume of commercial lives and the concentration of those lives in the large group and self-insured space, use of MarketScan for benchmarking prices for reference payment is more likely to be non-representative, particularly in geographic areas of low population density.

When evaluating the MarketScan data, the advantages are:

- A large sample of commercial lives, forming a good fit for the intended use
- Gives the option to use billed charges or allowed amounts, so any reference price methodology would need to specify which amount should be used

Meanwhile, the disadvantages are:

- The volume of commercial data is less than FAIR Health
- The nature of this "convenience sample" means that the data could be skewed, particularly toward the large group market and self-funded employers

Medical Expenditure Panel Survey (MEPS)

Fee surveys, such as the Medical Expenditure Panel Survey (MEPS), conducted by the federal Agency for Healthcare Research and Quality, are also publicly available. This source, and other survey-based sources, are limited in scope through the data collected and/or the geographic regions covered. The MEPS asks about usage and costs, but not at a specific procedure code level.

In addition, the geographic specificity is regional, at best. Finally, survey data generally has a long lag between collection and availability for public use. For all these reasons, survey data is unlikely to be an appropriate source of data for establishing reference prices for surprise billing situations.

All-payer claims databases (APCDs)

States are in varying stages of developing APCDs. Development stages vary from long-standing databases with robust data to early in the development process to no plans at all to develop one. Existing APCDs also vary in the data fields collected, the timing of updates, the format and access to the data, and the volume of data as a percentage of the market. It is for these reasons that using APCDs as an all-encompassing, nationwide solution would be unfeasible.

However, at a state level, whether APCDs represent a reasonable database solution depends on the design of the APCD and the robustness of its data. The most significant concern would be in states where submission of data is voluntary. This could lead to volume and credibility issues, as well as clustering of data around certain carriers, regions, or markets.

Conclusion

The simplest solution to the surprise billing problem would be for plans to successfully contract with the out-of-network providers at in-network hospitals to bring them in-network. This would eliminate any surprise billing issues related to these providers immediately. More importantly, by virtue of the mutual agreement of terms, this represents a solution that is more likely to be a win-win and create longer-term stability in a health plan's panel of in-network physicians.

However, market realities indicate that various providers (or more generally, certain provider specialties) will continue to operate out-of-network. As a result, alternative solutions are necessary, and legislative or regulatory proposals that create and impose limits on provider reimbursement have the potential to improve the negative experiences members have with surprise billing.

The use of high-quality, credible data, coupled with a sound methodology that is transparent and produces proper incentives and reasonable, "fair" reference prices, is a significant part of an overall solution (that might also include things like arbitration, provider appeals, and a member redress process) to the surprise billing challenge.

Caveats and limitations on use

This report is designed to assist BCBSA with its evaluation of various proposed solutions to surprise billing occurrences and various data sources used to calculate reference fees for out-of-network providers in these situations. This information may not be appropriate, and should not be used, for purposes unrelated to the surprise billing issue. We do not intend this information to benefit, or create a legal liability to, any third party upon the distribution to said third party.

Fritz Busch, Barb Collier, and Stacey Muller are consulting actuaries for Milliman, members of the American Academy of Actuaries, and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

This engagement will be undertaken pursuant to Work Order 12033 signed by BCBSA and Milliman on December 12, 2017.

Appendix

HOW COMMON IS SURPRISE BILLING?

Various studies and surveys have been undertaken to quantify the extent of the surprise billing problem. These studies are not consistent in terms of the type of study, the data used, or even the definition of "surprise bill." However, a brief survey of these sources reveals that the problem is not isolated or anomalous, but rather common and widespread.

A 2017 Health Affairs[14] study that uses data from 2014 adopts a definition that is very consistent with the definition used in this paper. Specifically, it defines surprise billing as where the facility is in-network, but one or more of the providers that billed charges were out-of-network and the member did not select them or was otherwise unaware of their use. In this study, the authors found that 20% of hospital inpatient admissions that originated in the emergency room (ER), 14% of outpatient visits to the ER, and 9% of elective inpatient admissions *likely* led to a surprise bill.

A New England Journal of Medicine study[15], using nationwide data from January 2014 through September 2015 found that 20% of all ER visits involved out-of-network physicians (similar in magnitude to the Health Affairs study). The study also notes that there is a great deal of variation by state, with a high of 89% and a low near 0%.

A Kaiser Family Foundation survey found that out-of-network charges were a contributing factor about one-third of the time when insured, non-elderly individuals were struggling to pay their medical bills. Moreover, about 70% of the time those members did not know the provider was out-of-network when they received care. Taken together, this implies that approximately 23% of people struggling to pay significant medical debt note surprise billing as a contributing factor.

Another survey from the Kaiser Family Foundation[16] showed that 25% of in-network hospital admissions that also included an ER claim included claims from out-of-network providers. When limited to inpatient admissions that did not have an ER claim, 13% had out-of-network claims charges associated with the admission. These results are similar to the Health Affairs study noted above.

Please note that these numbers are surveys, and will likely vary meaningfully based on a number of factors including a respondent's interpretation and understanding of the question, as well as the size and breadth of the network to which they belong.

[14] Garmon, C., Chartock, B., (January 2017). One In Five Inpatient Emergency Department Cases May Lead To Surprise Bills. Retrieved March 7, 2019, from https://www.healthaffairs.org/doi/10.1377/hlthaff.2016.0970

[15] Cooper, Z., Scott Morton, F., (November 2016) Out-of-Network Emergency-Physician Bills — An Unwelcome Surprise. Retrieved March 7, 2019 from https://www.nejm.org/doi/full/10.1056/NEJMp1608571

[16] Claxton, G., Rae, M., Cox, C. et al. (August 13, 2018). An Analysis of Out-of-Network Claims in Large Employer Health Plans. Peterson-Kaiser Health System Tracker. Retrieved March 7, 2019, from https://www.healthsystemtracker.org/brief/an-analysis-of-out-of-network-claims-in-large-employer-health-plans/#item-start.

WHAT DOES SURPRISE BILLING COST?

Member cost

The impact of surprise billing on a member's out-of-pocket costs can depend on several factors including:

- Is the surprise bill due to an emergent situation or not? Under the Patient Protection and Affordable Care Act (ACA), in ACA-compliant plans and non-grandfathered commercial plans members can only be charged in-network cost sharing for emergencies.
- Is the member balance billed for the difference between the plan's allowed amount and the full provider charge? This is the prevalent practice although, in many cases, the final amount owed by the member could be reduced through negotiations by either the plan or members themselves.
- Depending on the various proposed solutions to the surprise billing issue, members could ultimately "pay" for out-of-network claims through higher plan premiums. For example, any proposal that requires the plan to cover the balance bill amount in surprise billing situations will have to increase premium rates, all else equal, to cover this cost.

The tables in Figures 2 to 4 demonstrate the difference in expected out-of-pocket costs to a member where all services are conducted with in-network providers versus a "surprise billing" situation with an out-of-network provider for both a non-emergent (out-of-network coinsurance) and an emergent (in-network coinsurance) situation. In both Figures 3 and 4, balance billing is assumed to apply.

Please note that these tables use purely illustrative amounts for provider charges and plan allowed amounts, and are not intended to represent actual cases. For the examples shown in Figures 2 to 4, we assume member cost sharing as shown in Figure 1 and that the examples represent the first (or only) charges for the member in the plan year.

FIGURE 1: ASSUMPTIONS

MEMBER COST SHARING	IN-NETWORK	OUT-OF-NETWORK
Deductible	$1,000	$2,000
Coinsurance	10%	30%
Out-of-Pocket Maximum	$3,500	$7,000

FIGURE 2: NON-EMERGENT OR EMERGENT CLAIM, ALL PROVIDERS IN-NETWORK (ILLUSTRATIVE)

	STATUS	PROVIDER CHARGES	PLAN ALLOWED AMOUNTS	DEDUCTIBLE	COINSURANCE	MEMBER BALANCE BILL	TOTAL MEMBER COST	TOTAL PLAN PAID	PROVIDER RECEIVES
Facility Charges	In-Network	$10,000	$5,000	$1,000	$400	$0	$1,400	$3,600	$5,000
Primary Surgeon	In-Network	$5,000	$2,500	$0	$250	$0	$250	$2,250	$2,500
Anesthesiologist	In-Network	$5,000	$2,500	$0	$250	$0	$250	$2,250	$2,500
Total		$20,000	$10,000	$1,000	$900	$0	$1,900	$8,100	$10,000

FIGURE 3: NON-EMERGENT SURPRISE BILLING CLAIM (ILLUSTRATIVE)

	STATUS	PROVIDER CHARGES	PLAN ALLOWED AMOUNTS	DEDUCTIBLE	COINSURANCE	MEMBER BALANCE BILL	TOTAL MEMBER COST	TOTAL PLAN PAID	PROVIDER RECEIVES
Facility Charges	In-Network	$10,000	$5,000	$1,000	$400	$0	$1,400	$3,600	$5,000
Primary Surgeon	In-Network	$5,000	$2,500	$0	$250	$0	$250	$2,250	$2,500
Anesthesiologist	Out-of-Network	$5,000	$2,500	$2,000	$150	$2,500	$4,650	$350	$5,000
Total		$20,000	$10,000	$3,000	$800	$2,500	$6,300	$6,200	$12,500

FIGURE 4: EMERGENT SURPRISE BILLING CLAIM (ILLUSTRATIVE)

	STATUS	PROVIDER CHARGES	PLAN ALLOWED AMOUNTS	DEDUCTIBLE	COINSURANCE	MEMBER BALANCE BILL	TOTAL MEMBER COST	TOTAL PLAN PAID	PROVIDER RECEIVES
Facility Charges	In-Network	$10,000	$5,000	$1,000	$400	$0	$1,400	$3,600	$5,000
Primary Surgeon	In-Network	$5,000	$2,500	$0	$250	$0	$250	$2,250	$2,500
Anesthesiologist	Out-of-Network	$5,000	$2,500	$0,000	$250	$2,500	$2,750	$2,250	$5,000
Total		$20,000	$10,000	$1,000	$900	$2,500	$4,400	$8,100	$12,500

The financial impact on the member of being seen by the out-of-network provider can be substantial. In Figure 3, the member is responsible for the balance bill amount of $2,500, the higher out-of-network coinsurance rate (30% versus 10%) and an out-of-network deductible of $2,000 (in addition to the in-network deductible[17]). In practice, plans will often waive the out-of-network cost sharing and require only in-network cost sharing in these cases.

In Figure 4, representing emergent situations,[18] the member pays in-network coinsurance as required by the ACA (and thus no additional deductible), but is still responsible for the balance bill amount of $2,500.

Plan cost

Health plans employ networks to help control costs and use the differential between in-network and out-of-network member cost sharing to incentivize usage of contracted providers. In Figures 2 to 4 above, when one of the providers is out-of-network, the plan costs are at or below the in-network costs when the plan-allowed amounts are limited to in-network levels (because the member pays a greater share).

In particular, in Figure 3, the plan is contractually responsible for *less* of the cost for that provider than in Figure 2 (70% of the cost less the deductible versus 90% of the full cost). Several proposed legislative solutions would set limits for the plan-allowed cost based on an external benchmark. Depending on where that benchmark is placed, plans costs and ultimately premiums paid by members could be higher.

As we noted above and illustrate in Figure 4, plans are required by federal law to hold members responsible for in-network cost-sharing amounts only in emergent circumstances. However, several representative legislative solutions we examined call for the treatment of *all* surprise billing situations (not just emergent care) in a similar manner.

Some proposals if adopted would require the plan to cover the balance bill amount as well. The incremental cost of the lower member cost sharing and the additional out-of-network provider balance bill charges would be absorbed into overall plan costs and socialized across various groups of plan members, putting upward pressure on premiums. *In addition, this socialization of the cost will make the higher out-of-network provider charges become less visible, and may strengthen provider motivations to stay out-of-network and charge higher prices.*

[17] Beginning in 2018 under the ACA, a qualified health plan (QHP) must count out-of-network cost sharing in surprise billing situations toward the enrollee's in-network maximum out-of-pocket if the QHP did not provide timely notification. However, this protection does not currently extend to non-QHPs.

[18] Under federal law, all emergency care must be subject to in-network cost sharing. However, federal law currently does not limit or prohibit balance billing in these situations.

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