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Causes and Consequences of Surprise Billing and What States Are Doing About It

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Causes and Consequences of Surprise Billing and What Regulators Are Doing About It

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ABSTRACT
Surprise billing can impose severe and unexpected financial burdens on patients and have psychological repercussions, including stress, which, ultimately, could lead to avoidance of necessary medical treatment and delayed care. Surprise billing can also affect insurers' cost structures, premium pricing, and the overall stability of the health insurance market. This paper examines the anatomy of surprise billing in the U.S. health care system, focusing on its causes, consequences, and the fragmented regulatory landscape surrounding it. The study evaluates the federal No Surprises Act (NSA) alongside state-level laws and documents key areas of divergence in arbitration design, reimbursement standards, and regulatory clarity. An option for a uniform and more equitable framework is provided.

KEYWORDS
surprise billing, No Surprises Act, health insurance, unintended consequence

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EXECUTIVE SUMMARY

Surprise billing can impose severe and unexpected financial burdens on patients and have psychological repercussions, including stress, which, ultimately, could lead to avoidance of necessary medical treatment and delayed care. Surprise billing can also affect insurers' cost structures, premium pricing, and the overall stability of the health insurance market. This paper examines the anatomy of surprise billing in the U.S. health care system, focusing on its causes, consequences, and the fragmented regulatory landscape surrounding it. The study evaluates the federal No Surprises Act (NSA) alongside state-level laws and documents key areas of divergence in arbitration design, reimbursement standards, and regulatory clarity. An option for a uniform and more equitable framework is provided.

IMPORTANCE

Surprise billing can erode public trust in the health care system, disproportionately impacts lower- and middle-income families, and has lasting psychological and financial effects on consumers. Inconsistent enforcement across states, coupled with opaque policy language, can generate confusion among patients and add a layer of uncertainty for insurers and providers. This issue is further compounded for individuals enrolled in Employee Retirement Income Security Act (ERISA), self-funded employer plans, where federal oversight limits the scope of state-level protections.

OBJECTIVES

This study investigates: 1) the systemic factors that lead to surprise billing; 2) the financial consequences of surprise billing on the cost of health insurance; 3) the relationship between state and federal surprise billing regulations; and 4) the variation in state arbitration and reimbursement models, including their implications for consumer protection and premium pricing.

FINDINGS

While the NSA established a federal baseline, the analysis reveals significant variation in the structure and enforceability of surprise billing protections across states. While some states have cut consumer costs through more stringent regulations, it is unclear whether the NSA has led to any reduction in premiums. The findings suggest that a uniform and equitable framework, for example, more specific and widespread price controls, may be needed to create better safeguards for consumers.

CONCLUSIONS AND RELEVANCE

Though the NSA represents a step in the right direction toward federal baseline protection, policy effectiveness hinges on alignment between federal and state systems, clarity of legal language, and consistent implementation. As medical billing complexity continues to rise, regulatory reform should emphasize increased transparency in provider-insurer contracts, standardized arbitration benchmarks, and expanded protections for self-funded employer plans currently exempt under the ERISA. The study contributes to the discourse on health care policy reform and offers actionable insights to regulators, legislators, and consumer advocacy groups, drawing upon the successes of states with existing regulatory policies.

INTRODUCTION

Balance billing and surprise billing, often unintended consequences of the U.S. health care system, can impose significant financial and psychological burdens on patients. Though often discussed together, there are distinctions between balance billing and surprise billing. Balance billing refers to instances where health care providers bill patients for the difference between their total charges and the amount covered by their insurance. Surprise billing can be defined as an "unexpected" balance bill, generally occurring when individuals receive care from an out-of-network (OON) provider without their consent or knowledge, typically in emergency situations or during planned procedures that tie in ancillary services. While balance billing can occur in non-emergency settings where patients knowingly seek care from an OON provider, surprise billing is uniquely problematic because it can occur in situations where patients have no meaningful choice in provider selection (e.g., during an emergency room visit or when a radiologist or an anesthesiologist involved in a procedure is OON, despite the hospital being in-network [IN]). However, public policy efforts to address these problems do not typically distinguish between the two practices, and this article takes a similar approach. We use the term "surprise billing" throughout the paper to reference both practices.

Studies indicate that a significant proportion of hospital admissions and emergency department (ED) visits generate surprise medical bills, specifically in circumstances where patients cannot choose their provider (i.e., Cooper & Morton, 2016).[1] Biener et al. (2021) discover that patients who received surprise OON bills for emergency physician services, on average, paid approximately 10 times higher out-of-pocket costs compared to all other emergency room physician services. Utilizing commercial claims data, Elevance Health (2021) estimates that potential surprise bills vary by service and clinical context, with averages ranging from approximately $1,000 for ED visits to $6,700 for emergency hospitalizations. Another study finds that OON emergency physician charges can reach up to 798% of Medicare rates (Cooper & Morton, 2016). Additionally, while the study finds an average balance billing amount of $622.55, the highest possible balance bill was nearly $20,000. This can create a financial burden for some health care consumers. Surprise billing can also disproportionately impact middle-class and lower-income families, resulting in medical debt and/or the depletion of savings to cover unforeseen costs. In addition to these financial implications, more than 60% of adults in the U.S. are "very" or "somewhat worried" about unexpected medical bills for themselves or their family members (Kaiser Family Foundation, 2025). Collectively, these studies suggest that surprise billing should be a public concern, given its potential impact not only on the financial stability of U.S. health care consumers but also on the psychological repercussions, including stress, which, ultimately, could lead to avoidance of necessary medical treatment and delayed care (Viriyathorn et al., 2023).

[1] In addition to emergency services, surprise billing is also frequently observed with OON air ambulance services and certain non-emergency services delivered by OON providers at in-network facilities (Centers for Medicare & Medicaid Services, 2021).

Beyond the consumer impacts, surprise billing can substantially affect insurers' cost structures, premium pricing, and overall market stability. According to a 2024 report by the Office of the Assistant Secretary for Planning and Evaluation (ASPE), unexpected OON charges introduce uncertainty into insurer-provider contract negotiations, potentially inflating reimbursement demands from providers and further complicating insurer cost projections (Office of the Assistant Secretary for Planning and Evaluation [ASPE], 2024). These modifications of bargaining dynamics might impact insurers' decisions about network composition, possibly encouraging providers to further consolidate or pushing insurers to restrict network breadth to limit costs. Such actions can increase claim expenditures, leading insurers to increase premiums, thereby affecting their competitive positioning within highly price-sensitive insurance markets. Moreover, ASPE offers insight into regulatory variations between federal and state approaches that further complicate insurers' compliance strategies, initiating diverse risk exposures across jurisdictions.

The immediate financial burden on individual patients, the psychological impact on potential U.S. health care consumers, and the influence on insurer strategies demonstrate the complex implications of surprise billing. Zhang et al. (2022) emphasize that while federal legislation, such as the No Surprises Act (NSA), has installed baseline protections, disparities persist at the state level. More than 30 states have some type of surprise billing law, with some opting for more "comprehensive" protections, while others provide "limited" safeguards (National Conference of State Legislators, 2021).[2] This distinction is important as the effectiveness of the law in controlling surprise billing can vary depending on the approach taken by states. For example, when examining some states with more comprehensive protections, such as California, Florida, and New York, La Forgia et al. (2021) find reductions in prices paid to OON anesthesiologists, providing some evidence that the regulatory intervention directly affected pricing.

Given the existing evidence of the adverse impact of surprise billing and the varying legislative approaches taken to address this issue, this study critically examines surprise medical billing in the United States. We consider both federal and state-level measures in this analysis. This research is warranted for two primary reasons. First, due to the existence of both federal and state legislation and the potential for both federal and state laws to apply to a given situation, this is a complex issue. Understanding the specific situations in which the federal law, the state law, or both apply is of key importance to the determination of payments. Second, differences exist in how individual states approach surprise billing. These differences can have varying implications for U.S. consumers, based on income and insured status, as well as others involved in the health care system, depending on the state and the specifics surrounding the surprise billing.

[2] For the criteria employed to define approaches as either comprehensive or limited in their protections, see Hoadley et al. (2019). Additionally, this study focuses more broadly on surprise billing related to a variety of services. Some states have surprise billing laws or provisions specifically related to ground ambulance services, which are not protected under the NSA. See Harden (2025) for information on these specific laws.

A review of the NSA and state laws suggests that consumers may face challenges in understanding their protections since, even in states with surprise billing laws, the NSA may apply to specific individuals and/or specific surprise billing situations. Additionally, through a comparative analysis of state policies, this study finds that while some jurisdictions have implemented robust regulation and arbitration systems designed to effectively reduce OON costs, others lack such protections. The findings further suggest that arbitration models vary across states and can inadvertently drive up health care costs, exhibiting the unintended consequences of certain regulatory frameworks. Moreover, the analysis highlights how market dynamics—specifically the leverage held by hospital-based specialists such as emergency physicians and anesthesiologists—may be leading to pricing distortions, increasing premiums for insured patients, and contributing to broader inefficiencies in the health care system.

Overall, the information presented in this study suggests that there is a need for greater regulatory cohesion and policy refinements that emphasize increased transparency in provider-insurer contracts, standardized arbitration benchmarks, and expanded protections for self-funded employer plans currently exempt under the Employee Retirement Income Security Act (ERISA). By highlighting these critical gaps, this research not only contributes to the discourse on health care policy reform but also offers actionable insights to regulators, legislators, and consumer advocacy groups, drawing upon the successes of states with existing regulatory policies. As medical costs continue to increase and the consequences of surprise billing continue to impact the health care market, this paper may be valuable to a variety of stakeholders as they work to create a more equitable, transparent, and financially sustainable health care system.

The remainder of the paper is organized as follows. In the next section, we provide a discussion of some of the common causes of surprise billing and its impact on health insurance costs. In Section 3, we provide a brief review of the NSA. The various approaches of states are discussed in Section 4, and concluding remarks are presented in Section 5.

2. CAUSES AND IMPACT OF SURPRISE BILLING

Surprise billing generally arises from systemic inefficiencies, primarily occurring in emergency care settings and through ancillary provider involvement. Common instances include:

Emergency care settings: Patients often receive care from OON providers during emergencies when they lack the ability to choose IN options. For example, an OON surgeon may perform emergency procedures at an IN hospital, resulting in unexpected medical charges. Alternatively, a patient may need emergency care at an OON facility.

Ancillary provider involvement: In planned, non-emergency procedures, patients encounter OON providers, such as anesthesiologists, who are constitutive to their care but not part of their insurance network. This lack of transparency generates a vulnerability for patients, as the insurer and OON provider do not have a contract. The insurer may not pay the entire balance of the bill from the OON provider, which results in the balance being billed to the patient.

The existing contract system between hospitals and independently contracted providers (such as emergency physicians and anesthesiologists) is a major driver of surprise billing (Cooper & Morton, 2016). This disconnect makes it possible for OON providers to charge higher rates than IN providers, with OON emergency physicians charging an average of 798% of Medicare rates.

Prior research sheds light on the prevalence and financial impact of surprise billing within various health care scenarios. An early study examining ED visits suggests that 20% of inpatient admissions and 14% of outpatient visits may have resulted in a surprise medical bill (Garmon & Chartock, 2017). Utilizing claims data from a large employer, Pollitz et al. (2020) find that 18% of emergency visits and 16% of IN hospital admissions resulted in at least one OON charge. Additionally, a study by Elevance Health (2021) finds that 6.2% of health care visits across commercial health plans included OON claims that could result in surprise bills. Emergency hospitalizations were particularly notable, with nearly 24% involving potential surprise bills, compared to the 5.8% for non-emergency hospitalizations. For ED-only visits, the study finds emergency medicine was responsible for 42% of potential surprise billing, followed by radiology and ambulance services at 11% and 19%, respectively. Non-emergency settings, such as hospital outpatient departments (1.0%) and ambulatory surgical centers (1.8%), indicate lower prevalence rates. In addition to variations in the occurrence of surprise billing across services, studies find differences based on medical conditions. For example, Pollitz et al. (2020) note that mental health/substance abuse treatments (20%), surgical admissions (21%), and inpatient heart attack care (23%) were distinctly susceptible to OON charges.

The financial liabilities created by these potential surprise bills are estimated at $1.5 billion; however, the costs vary widely across services, ranging from an average of $1,000 for ED visitations to over $6,700 for emergency hospitalizations (Elevance Health, 2021). Though the average cost per visit may appear small, these potential surprise billing costs can still inflict financial burdens on affected patients, given that an unexpected medical bill of just $500 would lead to debt for approximately 50% of consumers (Lopes et al., 2024).

Beyond the direct financial consequences for patients, surprise billing could also impact health premiums across the market as insurers may be pressured to cover OON rates or resolve disputes through arbitration.[3] Lieneck et al. (2023) emphasize that arbitration outcomes, especially when they are centered on provider-submitted charges, tend to incentivize higher rates, further inflating costs absorbed by insurers.[4] Another study suggests that "surprise-billing legislation would not only protect patients from unexpected out-of-pocket expenses, but also likely affect negotiated payments for the ancillary and emergency services that generate most surprise bills" (Duffy, 2020). Specifically, the study examines claims data from three large health insurers and concludes that limiting payments for the services that commonly result in surprise billing could reduce the cost of health insurance by 1.6%.

These findings illustrate how surprise billing is not an isolated issue, but a pervasive challenge occurring throughout the U.S. health care system, disproportionately affecting individuals who cannot avoid OON providers. Additionally, the instances of surprise billing vary geographically, with one study finding that patients in California, New Mexico, New York, and Texas face among the highest rates of OON charges, whereas states like Alabama, Minnesota, Nebraska, and South Dakota have significantly lower incidences (Pollitz et al., 2020).[5] A national analysis of consumer credit data finds that medical debt was most concentrated in the South, where average outstanding balances significantly exceeded those in the Northeast, $616 versus $167, respectively (Kluender et al, 2021). It also finds that individuals in lower-income ZIP codes carried a medical debt burden nearly five times higher than those in wealthier areas, underscoring the financial strain imposed by unexpected medical costs.[6]

There has been significant legislative activity in recent years on the subject of medical debt and credit reports. In 2022, Experian, Equifax, and TransUnion announced they would no longer include the following types of medical debt on consumers' credit reports: paid medical debts, those medical debts less than

[3] It is important to note that state approaches to rate approvals and premium rate reviews can also impact the cost of health and premium growth. For a discussion of this topic, see Davenport and Pitsor (2023).

[4] State and federal variability in arbitration benchmarks can further aggravate the remaining cost pressures. For example, New York initially used the 80th percentile of billed charges as an arbitration benchmark, unintentionally leading to increased rates paid to OON doctors (La Forgia et al., 2021). Similarly, California's reliance on Medicare-based payment standards dropped OON costs by 13.6%, providing some evidence that strict regulatory controls can mitigate cost inflation. A discussion of federal and state approaches to managing surprise billing are discussed in the following sections.

[5] It should be noted that since Pollitz et al. (2020) uses claims data of large employers that are more likely to self-insure, these consumers may not receive the benefits of any consumer protections provided by states.

[6] Medicaid expansion under the Affordable Care Act (ACA) provides insight into how regulation can reduce disparities. States that expanded Medicaid in 2014 saw a 34-percentage-point greater decline in medical debt accumulation compared to non-expansion states. In contrast, non-expansion states only saw a 10% reduction in medical debt, exposing preexisting regional and income-based disparities (Kluender et al., 2021).

one year old, as well as medical debts under $500 (Congressional Research Service, 2025). In January 2025, the Consumer Financial Protection Bureau (CFPB) finalized a 'medical debt rule' that: (a) prohibited the inclusion of medical bills on credit reports and (b) banned lenders from using medical information in lending decisions (CFPB, 2025). Challenged in court shortly after being finalized, this rule was overturned in July 2025. While numerous states have enacted (or proposed) laws limiting the reporting of medical debt,[7] the overturning of the CFPB's medical debt rule calls into question the enforceability of these state laws. The CFPB issued an interpretive rule clarifying "…that the Fair Credit Reporting Act (FCRA) generally preempts State laws that touch on broad areas of credit reporting, consistent with Congress's intent to create national standards for the credit reporting system" (Federal Register, 2025).

Existing literature suggests that the potential occurrence of surprise billing varies significantly depending on the type of coverage consumers hold. For example, Medicare and Medicaid enrollees experience durable protections against surprise billing due to federal regulations. These programs prohibit balance billing for emergency services and selective non-emergency care, effectively protecting consumers from financial responsibility associated with OON claims (Elevance Health,

2021). However, individuals carrying private or commercial insurance have a greater risk of surprise billing, particularly those covered by self-insured, large employer-sponsored plans, due to gaps in federal and state protections. Collectively, these discrepancies suggest that comprehensive and uniform policy interventions may be needed to address the vulnerabilities created by the current system's inconsistencies.

3. THE FEDERAL APPROACH TO SURPRISE BILLING – THE NO SURPRISES ACT

At the federal level, the NSA has established a unified approach to address surprise billing. Created by the Consolidated Appropriations Act of 2021, and effective January 1, 2022, the NSA provides critical protections against OON charges in several scenarios, including:

Post-stabilization services: After an emergency room visit, protections continue for necessary services to stabilize the patient's condition. Providers must follow guidelines for cost-sharing rules unless the patient consents to OON charges.

Emergency room visits: Patients cannot be charged more than their IN cost-sharing amounts for emergency services, regardless of whether the providers or the hospital are OON. These protections extend to services provided by air ambulance services and independent EDs.

[7] See, for example, Brownstein Client Alert (2025) for a summary of state laws on this subject.

Planned non-emergency care: Patients are protected from unexpected OON charges when receiving care at IN ambulatory surgical centers or IN hospitals, even if ancillary providers are OON. However, protections do not extend to OON facilities or services occurring in outpatient offices.

Notice and consent forms: Providers may ask patients to waive these protections by signing a notice and consent form, but strict requirements apply to its use to ensure an informed decision-making process. These forms include detailed cost estimates and disclosures about network status.

Exceptions to the NSA include certain limited-duration health plans, ground ambulance services, and some dental-only and vision-only policies. These provisions, as detailed within the Department of Health and Human Services 2023 Annual Report, emphasize the systemic safeguards and ongoing challenges in surprise billing (Department of Health and Human Services, 2023). The report further highlights that while the NSA provides clear protections for post-stabilization and emergency services, gaps remain for ground ambulance services and certain insurance plans (Centers for Medicare & Medicaid Services, 2023).

Finally, a key component of the NSA is transparency. As discussed by the American Medical Association (2021), this includes clear disclosures by providers related to the estimated amount of billing and applicable federal and/or state surprise billing requirements and restrictions. Additionally, health plans are required to share details of scheduled care with plan participants in advance of treatment or at the request of plan participants prior to scheduling care.

While the NSA generally requires coverage for the cost of emergency care, situations can arise in which patients receive surprise bills for non-emergency treatment. The NSA contains a specific process for resolving payment disagreements. For disputes between patients and providers/facilities, the patient-provider dispute resolution (PPDR) process is used. To take part in this process, the patient must have: (a) received a bill of $400 or more in excess of the good faith estimate and (b) not have any insurance, have insurance but no coverage for the services received, or have insurance but elected not to utilize the coverage for the services. Once the process is initiated by the patient, the HHS will identify a selected dispute resolution (SDR) entity. The SDR entity reviews the information submitted by the patient and, if it is determined that the items or services meet the criteria, the patient and provider/facility are notified, and the provider/facility can submit documentation for review. For each item or service in dispute, the SDR entity will determine how much should be paid (Department of Health and Human Services, 2021). At any time during this process, the patient and provider/facility can reach an agreement and stop the process. Disputes are initiated by the patient via an online portal, and the fee for the patient to begin the process is $25.[8]

[8] For more information on the PPDR process, visit https://www.cms.gov/medical-bill-rights/help/dispute-a-bill#what-to-expect.

A somewhat similar process is used to resolve disputes between OON providers and insurers, though the cost for the service is greater.[9] Before beginning arbitration procedures, parties must first attempt to resolve disagreements via negotiations. If the parties cannot reach an agreement within 30 business days, either of the parties can start the independent dispute resolution (IDR) process. Parties then choose an IDR entity, which must be certified by the federal government, and submit their final payment offers for consideration. The IDR entity can weigh a variety of factors in making a decision. Once the IDR entity selects an offer, the entity whose offer was not selected must pay the IDR's costs. Since the IDR entity will pick from one of the offers submitted, the design of the process should encourage parties to act in "good faith" and "make reasonable offers" (Amin et al., 2023).

Beginning in April 2022, a portal has been used to collect IDR data. This information is publicly available on the U.S. Centers for Medicare & Medicaid Services website.[10] As shown in Table 1, most of the disputes relate to OON emergency or non-emergency items or care. This is not surprising given that the use of these services is greater when compared to OON air ambulance services.[11] What is surprising is the growth in the number of disputes. Between 2023 and 2024, the number of disputes initiated more than doubled, rising from 679,156 to more than 1.4 million. It is important to note that not all initiated disputes are eligible for the IDR process. Additionally, some may be resolved through continuing negotiations by the parties involved, the dispute being withdrawn, or the required fees not being paid. A major concern relates to the impact that the IDR arbitration process will have on provider payments and ultimately the cost of insurance. While the Congressional Budget Office projected that, "reductions in prices paid to providers would reduce insurers' costs, in turn reducing premiums by roughly 1 percent and reducing federal deficits from 2021 to 2030 by a total of $17 billion," there is no clear evidence that suggests this has been the case (Pelech, 2024).

While the NSA would apply in states with no surprise billing law, what may not be as evident to consumers is that the federal law can also apply in states with existing surprise billing laws. This can occur in a few different situations.[12] First, workers covered by self-insured group health insurance plans are generally

[9] For a list of certified IDR entities and 2025 fees, see https://www.cms.gov/nosurprises/help-resolve-payment-disputes/certified-idre-list.

[10] Reports are provided on the CMS website at https://www.cms.gov/nosurprises/policies-and-resources/reports.

[11] It is estimated that more than 550,00 people use air ambulances each year (Goldbeck & Mahoney, 2023). Alternatively, there are more than 120 million visits to hospital emergency rooms (Abir et al., 2025).

[12] Specific examples and whether state laws and/or the NSA would apply can be found in a publication provided by CMS and available at https://www.cms.gov/files/document/nsa-state-laws.pdf.

exempt from state laws.[13] As such, in cases in which a state has a surprise billing law, if the individual is enrolled in a self-insurance plan, the NSA would likely apply. Given that 65% of employees with employer-provided health insurance participate in self-insured plans (Kaiser Family Foundation, 2023), this is a significant percentage of the population. Additionally, participants in plans provided by out-of-state health insurance companies would not be subject to the participants' state laws and therefore afforded the protections provided by the NSA. Outside of these jurisdictional considerations, the NSA can apply in states with surprise billing laws if: (a) the state law does not apply to the billing issue in question, or (b) it does not fully apply to all the items or services in question. In cases in which the state law does not fully apply, it is possible that the state law could be applicable to some items or services while the NSA would be applicable to others.

4. STATE APPROACHES TO SURPRISE BILLING[14]

Issues surrounding balance billing, and surprise billing in particular, have driven diverse legislative responses across states over the past 15 years, both before and after the passage of the NSA. Though a number of states have attempted such legislation, not all have been successful. Currently, more than 30 states have legislation. While the specifics of state laws vary, similar to the NSA, the primary purpose of the state legislation is to protect consumers from balance billing for certain types of medical care.[15] For example, with the passage of House Bill 221 (2016), Florida requires that preferred provider organizations and exclusive provider organizations cover emergency care at the same cost, regardless of whether treatment is provided by an IN or OON provider (Florida House of Representatives, 2016). As it relates to non-emergency services, insurers are required to cover services rendered by OON providers if treatment occurs in a facility with which the insurer has a contract and if there is no IN provider available from which the plan participant can choose. The law also states that OON providers cannot bill the insured for the balance. Washington's law includes a similar provision. Prior to the passage of House Bill 1065 in 2019, the law stated that an insurer only had to cover emergency services by a nonparticipating hospital ED "if a prudent layperson would have reasonably believed that use of a participating hospital emergency department would result in a delay that would worsen the emergency, or if a provision of federal, state, or local law requires the use of a specific provider or facility." The bill strikes this language and replaces "nonparticipating" with "out-of-network," thereby extending coverage

[13] As noted by Zhang et al. (2022), state-level protections, even when comprehensive, may not be applicable due to ERISA, as self-funded employer health plans are generally exempt from state regulations. One exception is if the self-insured plans opt into the state law, which is allowed in Georgia, Maine, Nevada, New Jersey, Virginia, and Washington.

[14] Information in this section was obtained using various sources, including searches by the authors, Hoadley and Lucia (2021), and O'Brien and Hoadley (2023).

[15] In addition to consumer protections against surprise or balance billing, most state laws include one or more of the other provisions discussed in this section, with some states having more comprehensive surprise billing regulations relative to others.

for emergency care at OON hospital emergency departments without qualifications.[16] Additionally, it states that OON providers cannot balance bill an insured for emergency services or non-emergency services provided at an IN surgical facility in specific situations (An Act Relating to Protecting Consumers from Charges for Out-of-Network Health Care Services - 2SHB 1065, 2019).

In addition to restricting surprise or balance billing, state surprise billing laws also include various other regulations and consumer protections, such as dispute resolution and arbitration mechanisms, as well as transparency and notice requirements. Additionally, network adequacy standards are a separate issue but can impact access to care. As such, while not typically incorporated within surprise billing laws, we will briefly discuss a few states' approaches to ensuring adequate care networks.[17] Table 2 provides a list of states with surprise and/or balance billing laws. States are identified as having either limited or comprehensive protections. As defined by Hoadley et al. (2019), laws are considered to have comprehensive protections if they: (a) apply to both emergency and IN care; (b) apply to all insurance providers; (c) do not allow providers to hold consumers liable for charges not covered and restrict balance billing; and (d) have either a payment standard or process in place to handle disputes. Descriptions of key provisions of the laws, including examples from states, are provided in the remainder of this section.

4.1 DISPUTE RESOLUTION AND ARBITRATION MECHANISMS

The majority of the states use the federal PPDR approach to handle disputes between patients and providers/facilities or some shared collaborative method, though there can be some differences.[18] However, states employ a variety of approaches to resolving billing disputes between providers, plans, and insurers. Broadly, they fall into one of three primary categories: (a) payment standard approach; (b) IDR approach; and (c) hybrid approach.

4.2.1 PAYMENT STANDARD APPROACH

The payment standard approach for handling surprise bills generally utilizes a benchmark to establish how much OON providers/facilities will receive for the treatment of patients. This approach is used by Connecticut, Maryland, and New Mexico, among others.[19] Maryland established early balance billing laws in 2010. Its payment standard for doctors and facilities is generally 140% of the average rate

[16] Additional changes were made to the law with the passage of House Bill 1688 in 2022, to better align the state law with the NSA.

[17] For a more detailed discussion of the relation between surprise billing and network adequacy, see Young et al. (2019).

[18] For specific details, see data provided by The Commonwealth Fund at *https://www.commonwealthfund.org/publications/maps-and-interactives/2022/feb/map-no-surprises-act*.

[19] Initially, Oregon initially limited payments to a rate determined using its All Payer All Claims database. However, this specific provision of the law sunset in 2022.

paid in the prior calendar year in the equivalent region or location for said services.[20] In Connecticut, the payment for OON providers/facilities is the greater of "(i) The amount the insured's health care plan would pay for such services if rendered by an in-network health care provider; (ii) the usual, customary and reasonable rate for such services, or (iii) the amount Medicare would reimburse for such services. As used in this subparagraph, 'usual, customary and reasonable rate' means the eightieth percentile of all charges for the particular health care service performed by a health care provider in the same or similar specialty and provided in the same geographical area, as reported in a benchmarking database maintained by a nonprofit organization specified by the Insurance Commissioner. Such organization shall not be affiliated with any health carrier" (State of Connecticut, 2015). This is very similar to the payment standard employed in New Mexico, with one exception: New Mexico's third option is 150% of the Medicare rate.

4.2.2. IDR APPROACH

States such as Illinois, New Hampshire, New Jersey, New York, and Texas have implemented an IDR process similar to that utilized by the NSA. However, there are some differences. For example, while there is no restriction on the disputed amount within the NSA to begin the arbitration process, in New Jersey, the disputed amount must be at least $1,000 (State of New Jersey, 2018).[21] In Illinois, if a provider/facility and insurer cannot agree on the amount due after 30 days of negotiation, either can initiate the arbitration process, and both parties must agree on the selected arbitrator, similar to the IDR process of the NSA.[22] However, while the parties are bound by the arbitrator's decision, the law states that "(t)he arbitrator shall not establish a rebuttable presumption that the qualifying payment amount should be the total amount owed to the provider or facility by the combination of the issuer and the insured, beneficiary, or enrollee" and "(t)he arbitrator's expenses and fees, together with other expenses, not including attorney's fees, incurred in the conduct of the arbitration, shall be paid as provided in the decision," which suggests that the decision regarding payments varies somewhat in comparison to the NSA (Public Act 102-0901, 2022). Finally, in Texas, while the arbitration process is used to resolve disputes between providers and health plans, mediation is used to resolve disputes between facilities and health plans.

One of the more recent states to institute an IDR process for resolving disputes is New Hampshire. New Hampshire's original law, passed in 2018, focused solely on enrollees of managed care plans receiving services at an IN facility, essentially restricting billing to the cost-sharing provisions within the plan, regardless of

[20] The benchmark for determination of payment is slightly different for hospital-based doctors.

[21] Similarly, in Arizona, the disputed amount of the surprise bill, after subtracting the patient's required cost-sharing payments, must be $1,000 or more.

[22] An approved arbitrator must be selected by the parties. If the parties cannot agree on an arbitrator, the Department of Insurance will provide a list of five, allowing each party to reject two. The arbitrator not rejected will serve as the selected arbitrator.

whether care was provided by an IN or OON provider of "anesthesiology, radiology, emergency medicine, or pathology services." With the expansion of its balanced billing law in 2024, the current law is more similar to the NSA, as it now restricts surprise billing of most emergency medical services by OON providers and outlines how disputes are to be resolved. The new language gives the insurance commissioner of the state the "exclusive jurisdiction" to resolve disputes between providers and insurers for OON care and indicates that rules from RSA 541-A can be adopted. This includes arbitration. With the passage of Senate Bill 173, this change became effective January 1, 2025.

Early research on the impact of the arbitration process utilized by states has yielded mixed results. Ideally, this method should incentivize reasonable offers by both parties and reduce complaints. In fact, Texas reports that provider complaints have declined by 70% since the implementation of its surprise billing law (Texas Department of Insurance, 2020).[23] However, the factors considered by arbitrators as they relate to awards may have the opposite effect. For example, in a report by the New York State Department of Financial Services (Lacewell, 2019), it states that the IDR entity must "consider the provider's training, education, experience, and usual charge; the circumstances and complexity of the case; patient characteristics; and UCR," where the UCR is "the 80th percentile of all charges for the particular health care service performed by a provider in the same or similar specialty and provided in the same geographical area as reported in a benchmarking database." In examining randomly selected IDR outcomes occurring between 2016 and 2018, the report finds that for emergency services decided in favor of the provider, around 60% were at or below the UCR, and for those decided in favor of the health plan, more than 80% were at or below the UCR. The report also suggests that the law has saved consumers more than $400 million, decreased OON billing by 34%, and reduced IN emergency physician payments by 9%. However, it is also important to note that in nearly 32% of cases decided in favor of the provider, the payment was 10–100% above the UCR, and in almost 8% of cases, the payment was more than 100% greater than the UCR. In cases decided in favor of the health plan, these percentages were lower, with approximately 18% receiving payments 10–100% above the UCR and less than 2% receiving payments that were more than 100% of the UCR.

Similarly, a study conducted by Chartock et al. (2021) examines the arbitrations filed between 2018 and 2019 in New Jersey. The New Jersey law also allows the arbitrators to consider a variety of factors in the evaluation process, including the average amount paid for the service by IN and OON providers. However, there is evidence that arbitrators are actually shown the 80th, 90th, and 95th percentiles instead of the averages. The authors find that payments selected by arbitrators were greater than both Medicare payment rates and IN payment amounts for the same services. Additionally, the average award was 107% of the 80th percentile

[23] It is also noted that consumer complaints have been reduced by 96%.

of the amount charged for the same services, and in 67% of the cases, the decision was made in favor of the party whose offer was nearest to the 80th percentile. New Jersey's arbitration framework has seen considerable activity, receiving over 15,000 arbitration requests since 2018. Of the arbitration cases in which a decision was rendered, decisions were made in favor of the providers in nearly 66% and carriers in close to 34% percent of the cases. Additionally, the New Jersey Department of Banking and Insurance finds that involuntary OON claim costs were reduced by 45% in the individual market, 58% in the large-group market, and 60% in the small-employer market, indicating a decline in overall OON expenditures statewide.[24] While this reduction in claims costs appears positive, one study finds that "the mean and median arbitration awards were 9.0 and 5.7 times higher, respectively, than the median in-network price for the same set of services, with 31 percent of cases decided for amounts more than ten times the median in-network price," concluding the current approach used by New Jersey actually results in greater claims costs (Chartock et al., 2021). More studies are needed to determine the long-term impact of New Jersey's current arbitration process, but to the extent that the process is resulting in greater payments, over time, this could result in higher loss costs, which will eventually lead to higher premiums.

4.2.3. HYBRID APPROACH

As the name suggests, the hybrid approach combines the IDR process with some payment standard. This approach is currently being used in a few states, including California, Colorado, Florida, Georgia, Maine, Michigan, Nebraska,[25] Ohio, Virginia, and Washington. The initial payment process can vary, but in these states, if the parties are not able to reach a resolution via the initial process, arbitration is used to determine payment. For example, in California, reimbursements are based on either the greater of the average contracted rate for services in a geographic area or 125% of the Medicare reimbursement rate for similar services. To the extent OON providers are not willing to accept this amount and wish to pursue recovery of a higher payment, the IDR process is used (California Assembly Committee on Health, 2016). Colorado uses a similar approach, with payments based on median IN rates as benchmarks. Arbitration can be used if the initial informal negotiations fail, with the losing party covering arbitration costs. In states such as Virginia and Washington, payments are made based on "commercially reasonable" rates or payments (i.e. Office of the Insurance Commissioner – Washington State, 2023). If providers are not willing to accept these amounts and negotiations fail, arbitration is used. Unlike with the IDR process of the NSA, in Washington, the costs of the arbitration process are equally shared between the two parties.

[24] This information was obtained from the State of New Jersey Department of Banking & Finance website at https://www.nj.gov/dobi/division_insurance/oonarbitration/data/240131report.html. The Out-of-network Consumer Protection, Transparency, Cost Containment, and Accountability Act (P.L. 2018, c. 32) Data Reporting web page reports the total number of arbitration cases received, the disposition of the cases, and the total amount of the awards by year, along with other information, including which self-funded plans have elected to participate in the arbitration process.

[25] Technically, if parties are not able to reach an agreement in Nebraska, mediation, not arbitration, is used (A Bill for an Act Relating to Insurance - Legislative Bill 997, 2020).

4.2 TRANSPARENCY AND NOTICE REQUIREMENTS

Several states have enacted legislative measures to enhance transparency related to the cost of medical treatment, ensuring patients are better informed about their network affiliations and potential health care costs before services are rendered. For example, Connecticut's Act Concerning Hospitals, Insurers, and Health Care Consumers (Senate Bill 811) mandates strict cost transparency requirements, ensuring that both hospitals and insurers disclose pricing structures through online platforms in addition to requiring qualified health plan certification and providing a toll-free hotline for consumer assistance and dispute resolution (An Act Concerning Hospitals, Insurers, and Health Care Consumers, 2015). Massachusetts's Act of Promoting a Resilient Health Care System that Puts Patients First (Senate Bill 2984) established comprehensive disclosure requirements for ambulatory surgical centers and hospitals, allowing patients to receive clear, upfront cost estimates before having non-emergency procedures. Under this law, providers must confirm their network status with a patient's health plan before scheduling treatment, reducing the risk of surprise billing in an effort to safeguard against improper billing. Specifically, if an OON provider fails to notify a patient at least seven days before a scheduled procedure, they cannot bill the patient beyond standard IN cost-sharing obligations (An Act Promoting a Resilient Health Care System that Puts Patients First, 2021). Consequently, providers must have both verbal and written notice when a procedure is scheduled, allowing patients an opportunity to verify coverage and make informed financial decisions. To further enforce this compliance, Massachusetts imposes financial discipline of up to $2,500 per violation.

With the passage of Senate Bill 1264, Texas now mandates that health maintenance organizations and insurers provide written notice to both patients and providers regarding balance billing prohibitions. Within this notice, an itemized breakdown of costs must be included to accomplish transparency in medical billing. Furthermore, the Texas Attorney General holds the power to bring civil action against repeated violators, and state regulators can push disciplinary measures on non-compliant providers or insurers (The Texan Template for the National Fight Against Balance Billing – SB No. 1264, 2019).

4.3 NETWORK ADEQUACY STANDARDS

Network adequacy standards are imperative regulatory frameworks designed to ensure that health insurance plans provide sufficient access to health care services and providers. These standards typically mandate that insurance networks include an adequate number and variety of health care providers within reasonable geographic proximity, providing consumers access to necessary care without excessive delays or OON costs. Both state and federal policymakers have set network adequacy standards using quantitative and qualitative measures. However, quantitative standards are more precisely defined, often including explicit maximum travel

distances, minimum provider-to-patient ratios, and acceptable appointment wait times (National Conference of State Legislators, 2023).[26]

According to Pollitz (2022), network adequacy is crucial, as inadequate networks can possibly lead consumers to face reduced coverage for services obtained OON or incur unexpected costs. Federal network adequacy standards have historically utilized quantitative metrics, essentially focusing on geographic access (distance and time standards) to evaluate provider accessibility.[27] Individual states have developed diverse regulatory frameworks to address network adequacy standards, offering valuable insights into effective implementation practices and potential areas for improvement.

At the state level, network adequacy standards show considerable diversity in their regulatory frameworks, implementation strategies, and enhancement mechanisms. Haeder et al. (2023) highlight key dimensions across various states, focusing on qualitative and quantitative requirements. A state-level standard involves specifying provider-to-enrollee ratios. For example, California explicitly mandates at least one full-time primary care physician per 2,000 covered individuals, while Kentucky adopts more qualitative standards, requiring plans to arrange an adequate number of specialists and primary care providers to meet enrollee needs. Geographic accessibility is also considered, as states like Arkansas impose explicit travel requirements (e.g., one primary care provider within a 30-mile radius) and others, such as Montana, enact more general proximity guidelines. State approaches also address timely access to care by regulating maximum appointment wait times. California mandates that urgent care appointments occur within 96 hours, whereas New Jersey sets standards for routine appointments within two weeks.

Efforts to accommodate underserved populations differ across states. Arkansas and Texas include explicit provisions to manage language barriers and require culturally competent care, allowing effective service delivery regardless of patients' cultural values. Additionally, states address consumer awareness through stringent regulations on provider directory accuracy. Vermont requires updates every six

[26] Note that at the federal level, network adequacy standards originate from the ACA, which regulates that qualified health plans (QHPs) must offer a sufficient choice of providers and clearly communicate to enrollees the status of providers within their network.

[27] More specifically, beginning in 2023, the CMS proposed specific standards requiring that at least 90% of enrollees reside within defined maximum travel distances for various provider specialties, such as emergency medicine, primary care, and acute inpatient hospitals. Furthermore, CMS introduced standards to regulate appointment wait times, streamlining timely access to specialty, routine, and behavioral health care services. Federal regulations have also addressed minimum network compositions by setting requirements for essential community providers (ECPs), which are health care providers serving primarily medically underserved or low-income communities. CMS adjusted the minimum threshold for the inclusion of ECPs and QHP networks, suggesting an increase to 35% of available providers starting in 2023. Moreover, the federal government has emphasized network transparency by implementing measures to help consumers compare the relative breadth of health plan networks. These indicators categorize networks into "basic," "standard," or "broad," based on their inclusion of available providers within specified geographic areas. Nevertheless, Pollitz highlights challenges in maintaining accurate provider directories, a vital component of evaluating network adequacy.

months, whereas states like Washington mandate monthly updates. Notification requirements also vary. California broadly mandates consumer notifications upon provider departures, whereas Washington requires notification within 30 days of any provider changes. Additionally, Kentucky restricts notifications to primary care providers. Despite these extensive regulations, enforcement mechanisms remain relatively infrequent. Haeder et al. (2023) note limited statutory provisions outlining enforcement, highlighting the lack of regulatory consequences or meaningful penalties as a serious shortcoming. In considering this information on network adequacy, accurate provider directories, effective enforcement, and inclusive measures for underserved populations emerge as pivotal elements of successful strategies.

5. CONCLUDING REMARKS AND POLICY CONSIDERATIONS

Surprise billing remains a paramount challenge within the U.S. health care system, underscoring the structural inequities that can impose financial and emotional hardship on patients, undermine trust in medical institutions, and contribute to rising health care costs. This study examines the structural causes, economic consequences, and legislative responses at both the federal and state levels, underscoring the fragmented nature of existing protections. While the NSA established a federal baseline, this analysis finds that state-level interventions are often stricter than federal protections, yet are inconsistent in coverage and enforcement. Specifically, we find that some states have implemented more comprehensive and stringent protections, often exceeding federal standards in critical areas such as payment arbitration, notice and consent requirements, and reimbursement limits.

While there is some evidence that consumers in states receiving increased or additional protections following the passage of state laws and the NSA have experienced lower out-of-pocket medical expenses (i.e. Liu et al., 2025; New York State Department of Financial Services, 2019), a recent study reports that the NSA IDR system is slow and costly, with payment determinations taking much longer than the 30 days as required by statute and resulting in approximately $2.24 billion in administrative fees in its first three years of operation (Hoadley & Watts, 2025). Additionally, it is unclear if the NSA has resulted in a reduction in premiums. At the same time, there is evidence that a significant percentage of the NSA IDR disputes and disputes resolved using various state approaches are decided in favor of the provider and can yield higher payments (i.e., Chartock et al., 2021; Liu et al., 2025). These findings, along with the other information presented in this paper, suggest that despite the advancements in consumer protections, disparities persist among states. As the health care industry continues to evolve, policymakers should consider prioritizing patient-centered strategies that standardize arbitration processes, enhance financial transparency, and bridge regulatory gaps between federal and state protections. A uniform and equitable framework, regardless of the geographic location or insurance plan, may be needed to create better safeguards for consumers.

One such option may be to institute more specific and widespread price controls. As discussed in Gudiksen and Murray (2022), "OON price caps can generate savings by truncating very high OON price levels and more importantly, have an indirect spill-over effect on in-network negotiated rates. With OON caps, insurers should be able to negotiate in-network rates that are close to the OON price cap because, if the provider refused to contract near the OON rate, the insurer could cancel the provider's contract and simply pay the capped price for all OON services delivered by that provider."[28] Maryland instituted a standard reimbursement rate approach, the Maryland All-Payer Model, for hospitals in the 1970s. Other states use benchmarking or reference-based pricing. There is some evidence that limiting payments using these approaches can be effective in controlling claims costs. For example, since Maryland instituted its rate regulation, the growth rate of hospital costs per admission has generally been below that of the U.S. overall. It is estimated that "(h)ad Maryland costs grown at the national rate from 1976 to 2007, hospital spending would have been cumulatively $40 billion higher than what resulted under rate setting" (Murray, 2009). Additionally, after Oregon passed a law limiting hospital payments for members of its state health plans to a percentage of the Medicare rate, it experienced savings of roughly $81 million; a similar approach taken by Montana resulted in savings of nearly $48 million (Davenport & Pitsor, 2023). While the payment standards currently used by some states rely on a similar benchmarking approach to restrict how much OON facilities and providers can charge consumers, the benchmarks differ, which can result in varying outcomes for consumers.

This analysis contributes to the ongoing discussion on health care policy by providing a review of the structural causes and policy responses to surprise billing. Within the discussion, we present available evidence on the potential impact of surprise billing on consumers through both additional medical bills and premiums, as well as how the actions of some states may be mitigating the impact of surprise billing. By addressing the root causes of surprise billing and focusing on collaborative, data-driven solutions, policymakers can improve both the accessibility and equity of the U.S. health care system, ultimately strengthening consumer protections and restoring public confidence in medical billing practices. If left unaddressed, the consequences may extend far beyond adverse impacts on some individual patients. Failure to adequately address these issues could lead to escalating medical debt, rising insurance claims, suppressed consumer spending, and market instability, further exacerbating the economic disparities and inequities across the population. Effective legislation is therefore crucial not only for individual financial well-being but for broader stability of the health care system and the overall economy.

[28] While a few states currently have payment standards that limit how much OON providers can charge for services, these generally do not apply to all services (Gudiksen & Murray, 2022).

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Table 1: Federal Disputes Initiated by Year

Type of Items or Services	2022	2023	2024
OON Emergency or Non-Emergency Items or Services	189,977	657,040	1,419,634
OON Air Ambulance Services	10,135	22,116	44,238
Total Disputes Initiated	200,112	679,156	1,463,872

Notes: Information obtained from reports. For 2022, only disputes initiated beginning April 15 are included. Reports available on the U.S. Centers for Medicare & Medicaid Services website at https://www.cms.gov/nosurprises/policies-and-resources/reports.

Table 2: State with Surprise and Balance Billing Laws

State	Law Type
Arizona	Limited
California	Comprehensive
Colorado	Comprehensive
Connecticut	Comprehensive
Delaware	Limited
Florida	Comprehensive
Georgia	Comprehensive
Illinois	Comprehensive
Indiana	Limited
Iowa	Limited
Maine	Comprehensive
Maryland	Comprehensive
Massachusetts	Limited
Michigan	Comprehensive
Minnesota	Limited
Mississippi	Limited
Missouri	Limited
Nebraska	Limited
Nevada	Limited
New Hampshire	Comprehensive
New Jersey	Comprehensive
New Mexico	Comprehensive
North Carolina	Limited
New York	Comprehensive
Ohio	Comprehensive
Oregon	Comprehensive
Pennsylvania	Limited
Rhode Island	Limited
Texas	Comprehensive
Vermont	Limited
Virginia	Comprehensive
Washington	Comprehensive
West Virginia	Limited

Note: Information in this chart and the section of the paper discussing the provisions of the state laws was obtained using various sources, including searches by the authors, Hoadley and Lucia (2021), and O'Brien and Hoadley (2023). Laws are considered to have comprehensive protections if they: (a) apply to both emergency and in-network care; (b) apply to all insurance providers; (c) do not allow providers to hold consumers liable for charges not covered and restrict balance billing; and (d) have either a payment standard or process in place to handle disputes. For more specific details on the provisions of the laws, see https://www.commonwealthfund.org/sites/default/files/2021-03/Hoadley_state_balance_billing_protections_table_02052021.pdf. Additionally, see Hoadley et al. (2019) for the criteria employed to define approaches as either comprehensive or limited in their protections.