

**Out-of-Network Costs:
Impacts on Patient Experience and Health Outcomes**

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Abstract

The issue discussed throughout this paper is the influence of out-of-network costs on the healthcare system. In-network and out-of-network charges are something that most people with insurance have heard of. Networks were created to reduce the overall cost of healthcare, but they also have come with several side-effects. These side-effects include increased cost when services are considered “out-of-network” and decreased access for patients that have to go farther to reach an “in-network” provider. These side-effects can negatively impact a patient’s life just as much as a medical side-effect. Networks also makes it more difficult for physicians to be able to effectively treat and refer their patients. While in most cases physicians know where to refer their patients within their networks, that does not mean the referral is the best physician for their patient to see or the physician their patient would prefer to see. Networks take advantage of the value of volume at the cost of patient experience, by funneling volume to specific physicians or hospitals the cost is discounted. This discount is often passed along to the patients in the form of cost reduction but comes with the disadvantage of certain restrictions. Networks have their benefits but, they can also lead providers to overcharge “out-of-network” patients for the same services they provide to “in-network” patients. We need to create a system that prevents providers from overcharging for their services without decreasing the value of those services.

All change comes with consequences whether intentional or unintentional. We must continue seeking cost-effective ways to improve the patient experience and overall healthcare

system. Networks are meant to reduce the price physicians charge. There are many potential opportunities to reduce the negative effects of networks that effectively maintain the cost reduction seen from networks without creating barriers to access for patients. A policy change like this would result in other consequences, and more planning is necessary for such an initiative be successful. With the correct leadership and research, this could make a significant impact in the long-term effectiveness of the U.S healthcare system.

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Preface

I would like to give a special thanks my wife Allie for supporting me throughout graduate school and this paper process. I would also like to give a special thanks to essay advisors Angela Perri & Dr. Cynthia Salter, for their patience and help in making this essay a meaningful project.

1.0 Background

Anyone who has health insurance in the United States has probably seen the term ‘out-of-network’. Nearly half of all Americans have employer-sponsored insurance that encourages care seeking within a specific network of providers (Song, 2020). Most insurance plans disclose a general description of their policies regarding in-network and out-of-network care, whether the plan is an HMO, PPO, MCO, or another type of plan. An HMO is a plan that will not cover care received at out-of-network sites, a PPO offers the benefits of a network but will still cover some out-of-network care, and an MCO is a Medicaid funded organization that maintains a network of providers as dictated by each State’s Medicaid agency. In most cases the prices for out-of-network care are significantly higher than that of in-network care. Healthcare is already extremely expensive in the United States, which means that going to a facility or provider that is considered ‘out-of-network’ generally means there will be a significant increase in the out-of-pocket portion owed by the patient.

Out-of-network implies that the insurance plan does not have an existing contract with a specific provider. As a result, “in-network” implies that the health care provider has contracted with your insurance provider to accept a discounted rate for services (LaMontagne, 2016). This means that in-network providers save patients money, but it is a catch 22 because now if these patients end up at an out-of-network provider they accrue significantly higher costs.

1.1 HMO

If the insurance provider is an HMO, the entire cost of an out-of-network visit may become 100% the patient's responsibility. For example, HMO plans through Blue Cross Blue Shield Michigan do not include out-of-network benefits. This means that with that plan, going to a provider for non-emergency care that does not take the plan would leave the patient paying the entire bill (BCBS Michigan, 2022). This kind of expense for most people is difficult if not impossible to pay. This is especially true because most out-of-network experiences are unplanned. These shortfalls of HMO plans decrease health care access for patients who need life-changing or life-saving care and make the process of getting healthcare more stressful for beneficiaries.

1.2 PPO

PPOs or Preferred Provider Organizations have a different approach to out-of-network care than HMOs. HMOs can be viewed as “all or nothing” based on in-network vs. out-of-network but, PPOs are set up to pay less if you choose an in-network provider but still offer some form of coverage for out-of-network care. However, this coverage or the offered benefit is often significantly more expensive than in-network options. It is also worth noting that PPOs are the dominant model of managed healthcare in the private sector but exist within the government and public sector as well on a less common basis (Pope, 2006). In other words, PPOs are less common for those insured through Medicaid and Medicare.

2.0 Importance

Insurance companies create provider networks to reduce payments for care that their members get. By making a deal with providers to lower prices on services, insurance companies promise to essentially incentivize their members to go to specific providers. This creates a more cost-effective way of covering healthcare costs for their members. This helps members by driving their costs down while also hurting the members by decreasing their options regarding where they can go for their healthcare needs. This becomes even more problematic in emergencies and unexpected circumstances. These are times where people do not have the ability to plan out where they will go for care; they must go wherever is closest to them. They don't worry about the cost because at the end of the day their life and health are most important. When they have gotten their care and returned home, they may realize that their problems may have only just begun. If the provider they ended up using was out-of-network, regardless of what plan they have, they will pay more than they would have paid at an in-network provider. These prices can further complicate their lives, especially among low-income populations.

2.1 Patient Experience

The process diagram below runs through the average person's experience when getting an appointment with a physician. This process emphasizes the impact of in-network and out-of-network costs on the care and decision making process. The green circles specify the outcomes

and shows how simple decisions can lead to even more stress in the form of a higher bills during an already difficult time caused by their health condition.

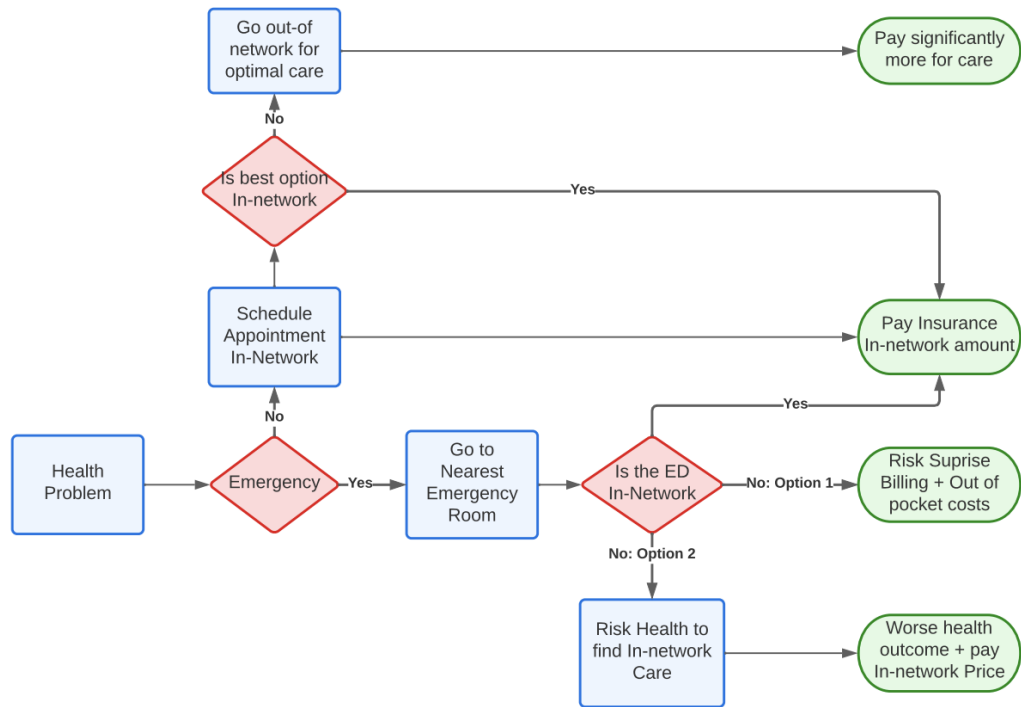


Figure 1 Process Diagram

3.0 Problems

Numerous problems make out-of-network charges a particularly large problem that spans several different aspects of the healthcare system and are worth discussing individually. These problems include but are not limited to Surprise-Billing, Access, and Inequity.

3.1 Surprise Billing

One of the biggest problems associated with out-of-network care is the increased and usually unexpected cost burden on patients, referred to as surprise billing. Surprise billing has a significant impact on these increases in cost. While surprise billing has received increased attention in recent years, most patients do not realize they have been treated out-of-network until their bill arrives (Song, 2020). Research through the Kaiser Family Foundation(KFF) conducted by Karen Pollitz shows that among all patients receiving unaffordable out-of-network bills, 70% report not expecting the bill (Pollitz,2020). In other words, when a patient gets a bill for out-of-network services and the costs are too much for the patient to handle, only 3 in 10 patients have knowingly made the decision to have the procedure completed out-of-network.

While surprise billing is receiving unexpected care from an out-of-network provider, this does not guarantee that the patient went directly to an out-of-network provider to start with. In some cases, the patient will go to an “in-network facility” and during their treatment, an out-of-network physician will participate in their care, often without the patient realizing this has happened. This would be an example where the patient expects their care to be covered by their

plan because they went to the correct “in-network” facility. Unfortunately, when they receive their bill, it will include noncovered charges, from the out-of-network physician specifically, and it will require them to pay these charges out-of-pocket, which is often substantially more than initially expected.

Another example of how surprise billing may come about, is if a patient is forced to go to an emergency room. Emergency visits, which are discussed in more detail later in this paper, are responsible for a relatively high rate of surprise billing. Upon arrival at an Emergency Department a patient will receive care from numerous different physicians. While the facility or hospital may be considered in-network this does not guarantee that all the physicians in the hospital are considered in-network for the person’s insurance plan. This is especially true in the Emergency Departments. Approximately two-thirds of all hospitals nationwide use physician staffing companies to ensure that their ED operations are fully staffed and to manage their billing operations (Lehrich, Kalenderian, and Nentin 2013). There are even theories that these companies intentionally leverage out-of-network charges to increase profits.

A study conducted by KFF determined that one third of insured adults between 18-64 reported receiving an unexpected medical billing in the last two years. They also found that approximately 65% of Americans say that they are at least somewhat worried about being able to afford unexpected medical bills (Lopes, 2020).

3.2 Access

One of the largest impacts of in-network and out-of-network charges is on the accessibility of care for patients. In a world without networks, a patient can go to any given provider and pay

the same amount. This would make it so that they could chose the most convenient provider for them without risking any increased cost. Instead, patients must determine what providers are in-network. Once they have determined the provider closest to them, they may have to pass by several perfectly good providers en route to their in-network choice. In many cases this is only an inconvenience to drive an extra mile or two for their care, but for those with limited financial resources or means of transportation, this means they must walk an extra two miles or plan on an extra bus transfer to get to their appointment. These factors inhibit patients from getting the care they need. When it is more difficult to get care, people by nature are more likely to put it off or forego care all together. Deferring care can have a significant impact on the health outcomes. Late-stage diagnosis for conditions like cancer increases the number of complications associated with the disease as well as increase the mortality of the disease. Studies have shown that delaying care as little as four weeks can increase mortality rate among breast cancer patients (Hanna, 2020). This may be a small population that is affected, but health inequities of all kinds are important to address and fix.

3.3 Inequity

The reality of inequity is most easily noticed in Medicaid Managed Care Organizations (MCOs). MCOs are government contracted insurance programs that provide low-cost insurance by creating a network of providers to provide services. Looking at the entire insurance landscape, insurance is set up in a way that benefits the rich. Those who have enough money can get the care that they need regardless of network. This applies specifically to those who can afford the private insurance plans that they want, or who can pay for the extra costs associated with out-of-network

charges. Wealthier individuals also are able to travel farther distances more easily, if necessary, to get to a specific provide. For those with little money, however, they may have only one or two affordable options for health insurance. When they are forced to travel a longer distance to get to a specific provider, these patients generally have a harder time traveling because they already have little money to start with. Some patients will refuse care from a provider because they would rather risk living without that care than pay for the appointment.

MCOs and Medicaid are meant to make it possible for everyone to get the care they need regardless of social-economic status. However, health insurance has a unique capability to compound the problems of those of lower socio-economic status. When an unexpected larger health problem occurs in someone's life, they may be forced to take time off from work. This is so that they have the time they need to be able to both get the care they need and adequately recover before returning to work. For those of a lower economic status, taking time off work is more difficult because they often have less savings to cover their expenses while not working. It costs them money to be able to take care of that problem which is then multiplied by the amount of time they spend not working and thus not earning the money they need. Even when insurance pays for most of the care they need, it will not account for the wages lost during that time-period. This means that people with fewer resources may need to cut their recovery time short to return earlier to work to make more money to cover their bills. Their early return to work can make it more likely that they will need more care because they did not take an adequate amount of time to heal, beginning an endless cycle that harms the patient.

4.0 Perspectives

4.1 Reimbursement

According to national census data approximately 34% of all Americans rely on Medicaid or Medicare for their health needs (Keisler-Starkey, 2021). A significant portion of Americans rely on these services but the reimbursement levels from Medicaid and Medicare are still significantly lower than those of private insurers. The reimbursement levels of private insurers are approximately 199% that of Medicare on average but vary depending on procedure and location anywhere from 141% to 259% (Lopez,2020). There are concerns that if private insurers payments were brought down to the same rate as Medicaid or Medicare payment rates, it would threaten the financial viability of providers nationwide. The priority for policymakers is to create an equitable system that provides the highest quality of care to all patients at the lowest possible cost without running providers out of business. Policymakers that control how Medicare and Medicaid reimbursements are allocated must ensure providers are reimbursed adequately to continue providing quality care.

4.2 PEAR Physicians

In four medical specialties patients have next to no choice about which specific physician treats them regardless of their insurance. These specialties are pathology, emergency medicine, anesthesiology, and radiology (known as PEAR physicians). In economic terms, this means that

the demand for these services is relatively inelastic, and the pricing power sits strongly on the physician side in the average buyer-seller relationship. In the case of healthcare, this means that when insurers negotiate with these physicians, PEAR physicians can bargain for higher payments or choose not to join a network altogether. A PEAR study conducted at Yale University found that negotiations with PEAR physicians raise private healthcare spending approximately 8.8% annually (Cooper & Morton, 2021). This means that in the long-term future, it will be important for policymakers to account for these specialties and find a way to reduce their negotiating power. Overspending is a large problem in healthcare, and PEAR is one of the key areas where overpaying for services takes place.

4.3 Emergencies

Emergency physicians and Emergencies are one of the specialties included in PEAR. Emergency situations in most cases are unplanned for. Prior to the passing of the Affordable Care Act (ACA), a comprehensive healthcare reform law passed in 2010, no hard-set rules existed regarding emergency situations. As a result, some insurance plans that were established prior to the ACA are not guaranteed to include coverage for emergency circumstances. Under the ACA, an exception is granted to patients that are forced to receive care at an out of network facility due to emergency circumstances. This exception prevents them from being charged at an out-of-network rate for these services. However, this is not the only problem created by networks during emergency situations. Another problem created in emergency situations is that numerous physicians within a hospital may provide care to a patient. In some circumstances an out-of-network specialist may see a patient. This simple or complex interaction leads to an out-of-network

charge for the patient. Insurance is obligated to pay certain amounts within plan arrangements and the law, that does not include all potential bills within a hospital. The biggest problem with out-of-network emergency care is the higher charge for a life-saving service and the burden for patients that are unaware of their responsibility to pay for each charge.

4.4 Telehealth

Telehealth has seen massive growth because of our fight against COVID-19 which requires minimizing face-to-face interaction. These same services have a direct impact on how easy it is for patients to attend important health check-ups. While telehealth will never replace all in-person health services, simple problems that were caused by simple health appointments can be mended easily. Patients that had difficulty getting to and from check-ups can now find their nearest computer and have access to the same care. This does not solve all problems because in-network and out-of-network fees for services will remain, but telehealth makes it significantly easier to provide basic care to patients with access to electronic devices on an in-network basis. (Dinesan, 2016)

Most Americans have access to a phone or device capable of utilizing telehealth. From the perspective of a physician, telehealth provides opportunities for different interactions with patients. Patients are no longer required to travel all the way to the office to be able to meet with their doctor. If they only need a consultation, they can set up a meeting with their doctor at their convenience, from the comfort of their own home. This also gives doctors the opportunity to have conversations with their patients from a home setting. This potentially opens the door to different

conversations and potentially learning more about their patient's lifestyle and circumstances than can be learned in a clinic. (McKiever,2021)

The pandemic has created an opportunity to prove the long-term viability of using telehealth to improve care. In December of 2020 a survey was conducted in response to the increased use of telemedicine because of the COVID-19 pandemic. The survey was sent to physicians to gain insight into their experience utilizing this technology more often. More than 75% of physicians surveyed said that telehealth made it possible for them to provide quality care to their patients (O'Reilly, 2020). The survey also reported an improvement in the cost of care, the timeliness of care, and improved safety for most physicians surveyed (See Appendix: Figures II - V).

Regardless of how COVID-19 evolves, it will be important that we continue to learn from our experiences during the pandemic and continue to develop and utilize telehealth. This is an opportunity that has plenty of room for growth and will continue to improve patient experiences. If we can effectively implement telehealth programs, and continue to improve access to healthcare it will make a significant difference for all patients health regardless of their economic circumstances.

4.5 Clinical Impact

In-network and out-of-network care has an impact on the care physicians provide for better or for worse. This system motivates physicians to get to know their patients, and these patients naturally visit them again based on these positive experiences. Humans are not accustomed to change especially when alternatives demand more of them (i.e., money, time). The network system

helps encourage patients to continue seeing the same providers by limiting their options. This helps establish relationships with their usual provider and helps their PCP provide the best care possible. This relationship builds trust and can improve communication. These improvements help patients make the best decisions to improve their health.

On the other hand, the network system may prevent physicians from being able to refer patients to the “best” providers. The network system generally connects the preferred referral destinations for the insurance provider; however, this does not guarantee the best referral possible. These factors limit the options for affordable care, or highest quality care, for all patients.

5.0 System Reform

On a state-by-state basis numerous tools are being implemented with the goal of curbing costs and improving the health outcomes of all patients. Medicare and Medicaid programs are essential in the healthcare reform process. As covered early, Medicare and Medicaid accounted for approximately 37% of the National Healthcare Expenditure in 2020 and this is expected to rise to nearly 42% by 2028 according to the CMS NHE Projections (U.S., 2021). This means that as healthcare providers make decisions on how to provide care, they must ensure that they have accounted for the lower reimbursement rates for Medicare and Medicaid populations. Providers must balance these lower reimbursement rates with higher rates of reimbursement for private insurance patients or reducing costs of care to ensure that they can maintain long-term financial viability.

5.1 Fee-for-Service

In the fee-for-service environment, the priority for providers was to get as many patients as possible coming in and utilizing as many services as possible. Regardless of whether they are in-network or not it is all about the numbers. In a fee-for-service environment, providers have the most incentive to improve access and reduce patients concerns about things like in-network and out-of-network prices. However, providers motivation remains limited because they get the same amount of money for the services they provide, regardless of their network status. The only difference is if the patient will pay for it themselves or if their plan will cover it. Simultaneously,

insurance plans have no incentive to improve this problem because they lose money every time a patient seeks care. Furthermore, when patients go to out-of-network providers, the out-of-pocket portion of their bill increases, and their premium remains unchanged. As a result, insurers almost benefit when a patient goes out-of-network because their revenue stays the same and their costs go down.

5.2 The Affordable Care Act

When the ACA went into effect, insurance companies were pressured to have plans available with lower premiums for those seeking insurance. One of the ways that companies were able to do this was by shrinking their networks. When insurance companies created smaller networks, hospitals were willing to give them greater discounts on services. This increased the number of affordable plans available and as a result a greater portion of the population was able to purchase some type of insurance coverage. However, the positive result of more people being insured came with the negative of more people facing problems associated with narrow insurance networks.

To solve some of this problem, the ACA also required that insurers cover a certain amount of out-of-network emergency department costs. Since this cost in the past would be passed along to patients; the ACA also required that deductibles and out-of-pocket maximums for emergency services at out-of-network facilities remain the same, as if those services took place in-network. This prevents insurers from being able to use out-of-network as an excuse to deny claims for emergency services. Rather than force insurers to pay in-full for these services and lose the incentive of networks entirely, the ACA created standards that require insurers pay a fair price in

these situations. Rather than make the insurer or member entirely responsible for unpredictable emergency care, these standards ensure that both members and insurers are treated fairly.

Prior to the ACA when a hospital provided care for someone who had private insurance but was considered out-of-network, the insurer was often not held responsible to cover the cost of that visit. The ACA has provided a way for providers to do more than just bill the patient out-of-pocket and hope that they get their money. It gives providers more confidence that they will be reimbursed for most of the care that they provide and allows patients to be more secure when under the stress of an emergency. The ACA also helped to get more people insured, which makes it more likely that providers will get reimbursed for all their patients including out-of-network patients. It did not solve the out-of-network dilemma, but it took a step in the right direction.

5.3 STARs

The Medicare STARs program is used to determine how well health plans and providers perform using member satisfaction, health outcomes and plan operations information. This information is then used to help determine reimbursement levels for providers and health plans. If a provider or health plan receive 4 stars or higher, they receive their full reimbursement. The STARs program has had a significant impact on Medicare services in MCOs. However, STARs have also impacted and improved the quality of all services by insurers and providers. For example, if patients must pay closer attention to their care or must travel further due to in-network vs. out-of-network problems, this has an impact on the ability for both providers and insurers to reach a four-star or higher rating. This means that a low rating may prevent them from receiving the bonus payments associated with such a rating. Increasing the motivation of insurance companies to

improve their members' experience by providing a closer location or free Uber or another service to improve their experience. STARS naturally incentivize improving patients' health outcomes and overall experience.

The value-based system was not implemented to solve out-of-network costs, but the value-based system, including STARS, can unintentionally improve the situation. In the value-based system, patient health outcomes and patient satisfaction are more important than they have been in the past. This information is now tracked and is used to determine areas for improvement. Some insurance companies have responded to access problems by adding benefits that help patients get to their appointments. This helps patients chose to get the care they need when they need it. This improves their short-term and long-term health by decreases the likelihood of further complications. These results can even benefit the provider or insurer by improving health outcomes and patient experience which increases the reimbursement received. These situations have changed the prerogative of both provider and payer organizations to prioritize what is best for the patient because improved patient outcomes and patient experience is now what is best for everyone.

5.4 Current Policy Opportunity

The most commonly discussed policy approach to solve the out-of-network problem involves setting a price cap on how much hospitals can charge for out-of-network emergency care. The ACA set cost caps for people that buy insurance through government sponsored exchanges. These price caps have been effective and have reduced out-of-pocket costs for these people by 17% and reduced the risk of catastrophic cost by nearly one-third (Kendall, 2021). A recent study

by Health Affairs showed that setting a cap for out-of-network physician prices “would lower physician payments for privately insured patients by 13.4 percent and reduce health care spending for people with employer-sponsored insurance by 3.4 percent.” (Fonkych, 2020) This is a significant amount of money that healthcare providers would have a hard time losing. It would be important to find a middle ground that would allow providers to maintain their ability to negotiate with insurance companies over in-network prices while still bringing down these costs.

6.0 Recommendations

The problem with some of the solutions to the existing network system is that they come with unintended consequences. For example, if you require that insurers provide for their patients travel to see their physicians, they may just pass that cost on to their patients in the form of higher premiums. This would defeat the purpose of the benefit. As a result, any successful intervention will need to be able to both alleviate the patient burden without hurting other parts of the healthcare experience/system that can pass that burden back to the patient. This may come in the form of lower quality care or higher prices.

A large-scale change to the healthcare system could potentially solve the problem. This change would include creating a regulatory body that forces the dissolution of networks but requires all insurers and providers to maintain the cost reductions of such networks. This would most likely come in the form of setting price caps for physicians and minimum payments for insurers. Any plan that dissolves networks would need to ensure providers and payers are both equitably and adequately reimbursed. While this plan seems nice in theory, there is no guarantee that a system could be set up to support the numerous entities involved. There would need to be massive amounts of research and buy in required to implement this plan on any scale.

A less complex way of improving this situation would be by fighting the problems created by networks. One opportunity which has seen much growth during the pandemic has been improving telehealth capabilities. This will help improve access to in-network care for all patients. Setting up a system through insurance companies that only allows members to make telehealth appointments with in-network providers will eliminate the difficulty and need to determine if your physician is in or out-of-network. Furthermore, as we improve telehealth, physician visits will be

able to be replaced by telehealth visits removing barriers to access for more patients. In the short term, telehealth allows for basic physician consultations to be completed from the comfort of home. This makes it easier for almost all patients because finding access to a computer is generally easier than finding a way travel to a physician's office. While telehealth will never be able to replace more intense medical appointments like surgeries and necessary in-person appointments, it can make a significant difference in making a majority of healthcare services more accessible to patients nationwide. This ease of access will also improve the patient experience by eliminating travel entirely for these appointments

Another recommendation is to improve the mandate that insurers cover out-of-network emergency services which is already in place under the ACA. However, simply mandating it does not make it a good policy. It needs to include more specific rules for pricing within the mandate. It would not be fair or feasible to tell insurers that they are now required to cover these services without giving them anything in return. Without more refined rules associated with this mandate, insurance prices will rise over time. As a result, it would be important to also determine a fair price ceiling for providers to be able to charge for out-of-network services. This rate would have to take into account the need to pay the provider more than what they get for providing in-network care while simultaneously preventing significant over pricing. The mandate would improve patient experience by giving patient the peace of mind to know they will not have to pay obscene amounts of money for life-saving emergency care if it is received in an out-of-network setting.

Approximately 78% of Americans support the passage of federal legislation to protect patients from surprise medical bills (Pollitz,2020). Creating a system that allows insurance companies to check providers for "surprise billing". This is a more complicated issue than can be solved in the context of this paper, but it is something that should be noted. If we can somehow

eliminate surprise billing or at least discourage it, it would have a significant impact on the confidence patients have in the healthcare system. The rumors surrounding surprise billing in some cases have a more harmful effect than having to pay for a “surprise bill”. This solution will also improve the patient experience by eliminating extra fees and allowing those affected by it to pay less for their healthcare. It will be difficult to eliminate though because providers need to be able to pay their employees and a significant amount of revenue comes in through these means on an annual basis.

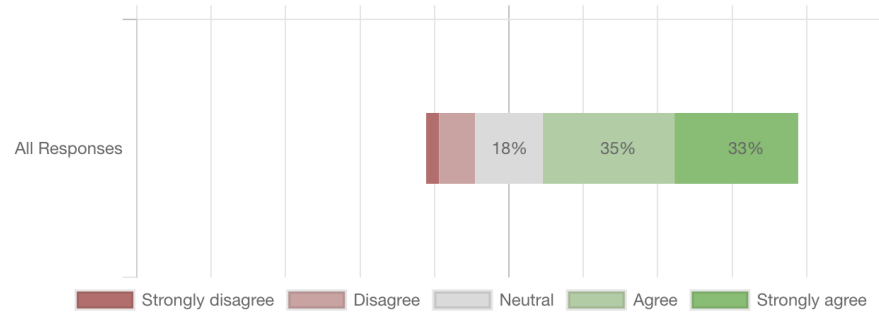
Continuing to implement a value-based system for reimbursement will continue to improve the patient experience on all fronts. Value-based care in principle will in the long-term work out all of the problems in healthcare. It motivates both payers and providers to find the problems in the patient experience and fix them knowing that it will get paid back to them in the long run. Value-based care is the future of healthcare and will effectively improve the patient experience for years to come.

7.0 Conclusion

The cost and concern associated with out-of-network charges creates unnecessary stress in Americans' lives, creating more expenses, and a worse patient experience. As we continue to develop our telehealth capabilities along with a continued transition towards a value-based reimbursement system we will see this problem begin to be solved. Telehealth will improve access to in-network care improving the patient experience while decreasing the prevalence of out-of-network charges. Value-based reimbursement will continue to put downward pressure on healthcare costs while improving the quality of care provided to patients. In emergency situations when out-of-network services cannot be avoided, value-based reimbursement will help improve the patient experience and have a role in finding a long-term solution to surprise billing. Finding the correct balance between insurer and provider risk burden will be essential in solving the problems associated with out-network emergency services. Mandating that insurers cover out-of-network emergency services and setting a cap that providers can charge that both allows them to make an increased profit compared to in-network patients while also preventing insurers from having to pay excessive costs.

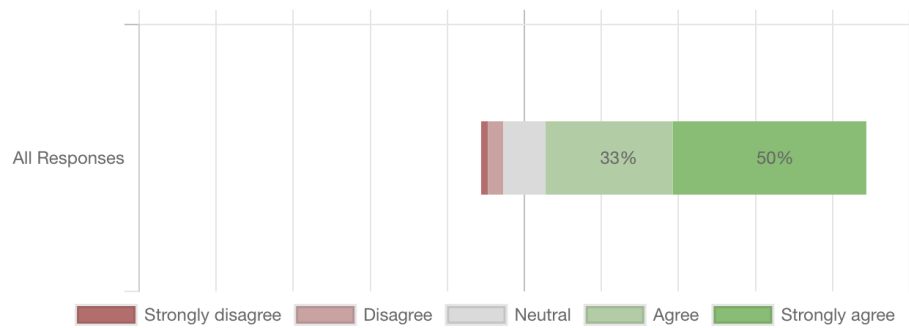
Appendix A

“ My patients have better access to care since our practice began using telehealth ”



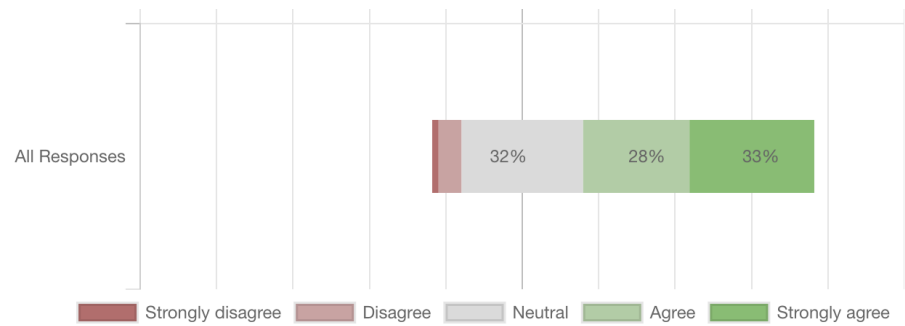
Appendix Figure 1 (MITRE, 2020)

“ Telehealth has improved the timeliness of care for my patients ”



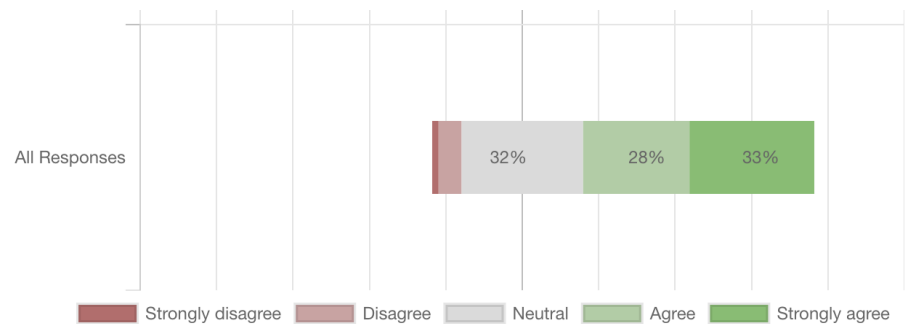
Appendix Figure 2 (MITRE, 2020)

“ Telehealth has improved the costs of care for my patients ”



Appendix Figure 3 (MITRE, 2020)

“ Telehealth has improved the costs of care for my patients ”



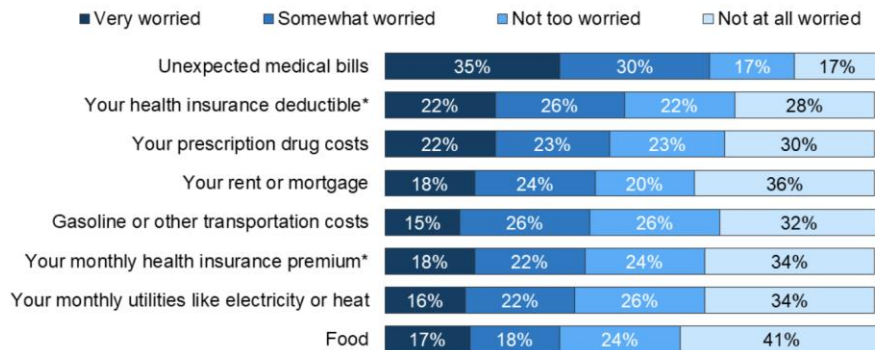
Appendix Figure 4 (MITRE, 2020)

Note: ©A significant portion of physicians have had positive experiences working with telehealth. These positive influences have been seen in access, cost, health outcomes among others. While the experience is not consistent across all physicians there is a significant majority of physicians that report positive outcomes because of increased use of telehealth appointments.

Figure 1

Unexpected Medical Bills Top List Of Public's Worries

How worried, if at all, are you about being able to afford each of the following for you and your family?



NOTE: *Asked of those who are insured.

SOURCE: KFF Health Tracking Poll (conducted February 13-18, 2020). See topline for full question wording and response options.



Appendix Figure 5 (Lopes, 2020)

Note: © It is important to keep in mind that public concerns have a strong impact on perception and general experience. Simultaneously, out-of-network charges contribute significantly to the number of unexpected bills a patient receives. It is important to note that fixing that problem will have a positive impact on the number one public worry among insured patients based on this KFF study.

Table 3									
National Health Expenditures; Aggregate and per Capita Amounts, Percent Distribution and Annual Percent Change by Source of Funds: Calendar Years 2012-2028									
Year	Out-of-Pocket Payments	Health Insurance ¹					Other Third Party Payers ³	Government Public Health Activities	Investment
		Total	Private Health Insurance	Medicare	Medicaid	Other Health Insurance Programs ²			
Historical Estimates									
2012	11.4	72.2	33.0	20.4	15.2	3.7	8.1	2.8	5.5
2013	11.4	72.3	32.7	20.5	15.5	3.7	8.2	2.7	5.4
2014	11.0	73.5	32.9	20.4	16.5	3.7	7.9	2.7	5.0
2015	10.7	74.2	33.2	20.3	17.0	3.8	7.6	2.7	4.8
2016	10.7	74.3	33.5	20.2	16.9	3.7	7.7	2.6	4.7
2017	10.5	74.3	33.7	20.2	16.6	3.8	7.7	2.6	4.8
2018	10.3	74.8	34.1	20.6	16.4	3.8	7.6	2.6	4.8
Projected									
2019	10.2	74.9	33.8	21.0	16.3	3.8	7.6	2.5	4.8
2020	10.1	75.2	33.8	21.4	16.2	3.9	7.5	2.5	4.7
2021	10.0	75.5	33.4	21.9	16.2	3.9	7.4	2.4	4.8
2022	9.9	75.7	33.2	22.4	16.3	3.9	7.3	2.4	4.8
2023	9.7	76.0	33.0	22.9	16.3	3.9	7.2	2.3	4.8
2024	9.6	76.3	32.9	23.4	16.2	3.9	7.1	2.3	4.7
2025	9.5	76.6	32.7	23.8	16.2	3.8	7.0	2.2	4.7
2026	9.3	76.9	32.4	24.2	16.4	3.8	6.9	2.2	4.7
2027	9.2	77.1	32.2	24.7	16.4	3.8	6.8	2.2	4.7
2028	9.1	77.4	32.0	25.2	16.4	3.8	6.7	2.1	4.7

¹Includes Private Health Insurance (Employer Sponsored Insurance and other private insurance, which includes Marketplace plans), Medicare, Medicaid, Children's Health Insurance Program (Titles XIX and XXI), Department of Defense, and Department of Veterans' Affairs.

²Children's Health Insurance Program (Titles XIX and XXI), Department of Defense, and Department of Veterans' Affairs.

³Includes worksite health care, other private revenues, Indian Health Service, workers' compensation, general assistance, maternal and child health, vocational rehabilitation, other federal programs, Substance Abuse and Mental Health Services Administration, other state and local programs, and school health.

NOTE: Per capita amounts based on estimates that reflect the U.S. Bureau of Census definition for resident-based population (which includes all persons who usually reside in one of the fifty states or the District of Columbia, but excludes (i) residents living in Puerto Rico and areas under U.S. sovereignty, and (ii) U.S. Armed Forces overseas and U.S. citizens whose usual place of residence is outside of the United States) plus a small (typically less than 0.2% of population) adjustment to reflect Census undercounts. Projected estimates reflect the area population growth assumptions found in the Medicare Trustees Report. Numbers and percents may not add to totals because of rounding. Dashes (—) indicate "not applicable".

Appendix Figure 6 NHE Projections (U.S. 2021)

Number and Percentage of People by Health Insurance Coverage Status and Type: 2018 to 2020

(Numbers in thousands. Margins of error in thousands or percentage points as appropriate. Population as of March of the following year. Information on confidentiality protection, sampling error, nonsampling error, and definitions is available at <<https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar21.pdf>>)

Coverage type	2018				2019				2020				Change (2020 less 2019)	Change (2020 less 2018)
	Number	Margin of error ¹ (±)	Percent	Margin of error ¹ (±)	Number	Margin of error ¹ (±)	Percent	Margin of error ¹ (±)	Number	Margin of error ¹ (±)	Percent	Margin of error ¹ (±)		
Total	323,668	133	X	X	324,550	132	X	X	325,638	153	X	X	X	X
Any health plan	296,206	641	91.5	0.2	298,438	688	92.0	0.2	297,680	638	91.4	0.2	*-0.5	-0.1
Any private plan ^{2,3}	217,780	1,222	67.3	0.4	220,848	1,121	68.0	0.3	216,532	1,166	66.5	0.4	*-1.6	*-0.8
Employment-based ²	178,350	1,283	55.1	0.4	183,005	1,142	56.4	0.4	177,175	1,070	54.4	0.3	*-2.0	*-0.7
Direct-purchase ²	34,846	647	10.8	0.2	33,170	776	10.2	0.2	34,041	653	10.5	0.2	0.2	*-0.3
Marketplace coverage ²	10,743	428	3.3	0.1	9,716	417	3.0	0.1	10,804	439	3.3	0.1	*0.3	Z
TRICARE ²	8,537	508	2.6	0.2	8,534	522	2.6	0.2	9,183	579	2.8	0.2	*0.2	*0.2
Any public plan ^{2,4}	111,330	962	34.4	0.3	110,687	967	34.1	0.3	113,337	923	34.8	0.3	*0.7	*0.4
Medicare ²	57,720	401	17.8	0.1	58,779	409	18.1	0.1	59,844	393	18.4	0.1	*0.3	*0.5
Medicaid ²	57,819	891	17.9	0.3	55,851	927	17.2	0.3	57,921	893	17.8	0.3	*0.6	-0.1
VA or CHAMPVA ^{2,5}	3,217	182	1.0	0.1	3,221	188	1.0	0.1	2,979	175	0.9	0.1	*-0.1	*-0.1
Uninsured⁶	27,462	630	8.5	0.2	26,111	657	8.0	0.2	27,957	612	8.6	0.2	*0.5	0.1

* Changes between the estimates are statistically different from zero at the 90 percent confidence level.

X Not applicable.

Z Rounds to zero.

¹ A margin of error (MOE) is a measure of an estimate's variability. The larger the MOE in relation to the size of the estimate, the less reliable the estimate. This number, when added to and subtracted from the estimate, forms the 90 percent confidence interval. MOEs shown in this table are based on standard errors calculated using replicate weights.

² The estimates by type of coverage are not mutually exclusive; people can be covered by more than one type of health insurance during the year.

³ Private health insurance includes coverage provided through an employer or union, coverage purchased directly, or TRICARE.

⁴ Public health insurance coverage includes Medicaid, Medicare, CHAMPVA (Civilian Health and Medical Program of the Department of Veterans Affairs), and care provided by the Department of Veterans Affairs and the military.

⁵ Includes CHAMPVA, as well as care provided by the Department of Veterans Affairs and the military.

⁶ In the CPS ASEC, individuals are considered to be uninsured if they do not have health insurance coverage for the entire calendar year.

Source: U.S. Census Bureau, Current Population Survey, 2019 to 2021 Annual Social and Economic Supplement (CPS ASEC).

Appendix Figure 7 (Keisler-Starkey, 2021)

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