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COMPETITION IN HEALTH INSURANCE MARKETS

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ABSTRACT

The United States relies primarily on private health insurance markets, yet these markets are highly concentrated and becoming more so over time. We document concentration across commercial, Medicare Advantage, and Medicaid markets. We then examine how asymmetric information—particularly adverse selection—interacts with market power to shape premiums, plan design, and consumer welfare. Empirical evidence confirms that insurer consolidation raises premiums. We discuss how antitrust enforcement, risk adjustment, regulation, and informational interventions shape competition and consumer welfare in these markets.

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The United States relies on markets for the majority of its health insurance system. Approximately 238 million Americans — 78 percent of those with health insurance and 70 percent of the total population—obtain their health insurance from a private health insurance company. Most of these are people receiving private health insurance through their employer, but an increasing share of consumers receive private health insurance that is publicly-subsidized – for example, more than half of all Medicare enrollees participate in the Medicare Advantage program, in which the federal government pays premiums to a private insurance company to provide Medicare coverage. However, the data clearly suggest that each of these health insurance markets in the US is highly concentrated, and that these markets appear to be becoming more concentrated over time.

Why is this the case? One reason is that health insurance, like many US industries, has experienced a rise in concentration in the past several decades (for example Autor et al. 2020; Covarrubias et al. 2020; Ganapati 2021)¹. Beyond general economy-wide trends, health insurance markets may exhibit natural tendencies toward concentration (Dafny 2026), due to the inverse relationship between size and risk, economies of scale in claims processing, the impact of rising fixed and sunk costs, size advantages in contracting, and asymmetric information. Insurers with larger numbers of enrollees bear less risk and can spread risk over a larger number of policy holders, since sample variance declines with sample size. Larger insurers can spread fixed administrative costs across a broader enrollment base. Fixed and sunk costs may also be increasing due to the cost of investments in information technology, which are particularly important in health insurance (for example, Berry et al. 2019; Sutton 1991). If so, then insurers with a large customer base will be better able to make these investments and defray the costs. Larger insurers may also achieve better negotiating positions with hospitals and physicians, either via better management/negotiation skills or simply by their sheer size, creating cost advantages that smaller competitors struggle to match. Increases in concentration may also occur due to mergers fueled by the desire to reduce competition and increase market power.

What does this mean for consumers? The benefits of markets flow from the incentives that arise when competitive sellers face pressures from buyers for lower prices and improved quality. In health insurance markets, these incentives are muted, which could mean higher premiums and less generous coverage. Indeed, insurers seem to be able to exert market power (Dafny 2010; Starc 2015) and prices rise following mergers (Dafny, Duggan, and Ramanarayanan 2012).

In this paper, we argue that the US health insurance system will work only as well as the health insurance markets that underpin it. But the challenges of policy support for a competitive health care market go beyond straightforward questions of a concentrated market. Health insurance, along with the health care industry as a whole, is beset by issues of imperfect information, particularly adverse selection. For insurance companies, these issues create a number of incentives to behave in ways that undercut the performance of markets – for example, structuring insurance policies that tend to attract healthier-than-average enrollees; finding ways to stint on care in ways that may be difficult to observe; cutting prices in the hope of attracting healthier-than-average enrollees; and more. As concentration rises in commercial and government-sponsored markets, the resulting dynamics of

¹ For an alternative view and measures see Benkard et al. (2023).

competition in the context of imperfect information are critical for premiums, coverage, plan choices, and ultimately consumer welfare. Much remains to be done in formulating “rules of the road” to usefully guide competition in health insurance markets.

Market Structure

We begin by discussing concentration in US health insurance markets. Figure 1 summarizes the sources of insurance for Americans in 2023 (the latest year for which comprehensive data are available). Nearly half of the population had private employer-sponsored (commercial) insurance. Most of the remainder were covered by the two large public insurance programs -- Medicare (14.7 percent) and Medicaid (21.2 percent). Individual and military coverage were less common, and approximately 7 percent of Americans remained uninsured. We begin with the commercial market, categorizing it into three main groups: large (employer) group, small (employer) group, and individuals. We then turn to government-sponsored insurance programs. We also provide some evidence on vertical integration.

Commercial Health Insurance Markets

Americans with private health insurance mainly obtain it through their employers. As of 2024, about 54 percent of American companies offered employer-sponsored insurance. These plans covered approximately 178 million people, accounting for around 60 percent of the non-elderly population or 63 percent of working-age adults (KFF 2024a; US Census Bureau 2024). Large-group employer-sponsored health insurance plans are generally “self-insured,” meaning the employer pays medical claims directly, while the insurer provides claims processing and connections to a provider network for a fee. In contrast, small-group employer sponsored insurance plans — often provided by businesses with fewer than 50 employees — are typically “underwritten,” meaning the insurer bears the risk and pays claims. The small-group plans tend to incur higher administrative costs per enrollee and exhibit greater variability in plan choices, which can result in higher premiums and reduced coverage options for workers in smaller firms (KFF 2024b).

For individuals without employer-sponsored coverage, such as the self-employed or those who are unemployed, individual health plans from the state-level Marketplaces established by the Patient Protection and Affordable Care Act of 2010 (ACA) are the primary private insurance option. Marketplace plans are regulated and subsidized based on income, making private insurance more affordable. The Centers for Medicare & Medicaid Services (CMS 2025) reported in January that nearly 24 million people had enrolled in Marketplace plans for 2025.

To characterize concentration in the commercial market, we rely on data reported by the Kaiser Family Foundation. Because health insurance is regulated at the state level (and thus data on market

shares are most readily available by state), we report statistics on market structure at the state level.² In the large group market, the average market share of the largest insurer in 2023 was 64 percent. The analogs for the small group and individual markets are 65 percent and 53 percent, respectively. When expanding to the top three insurers, the analogous percentage for the large group market is 91 percent, the small group market is 94 percent, and the individual market is 79 percent (89 percent). By any metric, commercial markets are highly concentrated (KFF 2025a).

In addition, there is little entry of new health insurance firms – the market is dominated by a small number of firms that have been in the market for years. New entrants attract enrollees and grow by offering low premiums. However, new entrants are unable to negotiate favorable rates with health care providers because they have relatively few enrollees to direct to providers (as a *quid pro quo* for offering lower rates). As a consequence, new entrants have higher expenses than established firms, and are unable to offer low premiums without losing money. This makes *de novo* entry into health insurance exceedingly difficult.

There is also heterogeneity across states, as shown in Figure 2, which displays the combined enrollment share of the three largest insurers in each state for individual, small group, and large group markets, respectively. Each state is shaded according to the percentage of the market these top insurers control. Darker shades represent states where the top three insurers have a higher market share, sometimes exceeding 80 percent or even 90 percent of the market. Lighter shades show areas with more evenly distributed market shares among insurers. The maps indicate limited potential competition, especially in the small group market. These maps provide a quick overview of market concentration differences across states and segments. The market share of the largest insurer in the large group market ranges from 17 percent in New York to 94 percent in Alabama, where Blue Cross/Blue Shield has a *de facto* monopoly. While the cross-state variation is nontrivial, the vast majority of states have market shares concentrated among a small number of insurers.

Government-Subsidized Provision of Private Health Insurance

Publicly-subsidized health insurance operates through both federal or state programs. Medicare is a federal program for individuals aged 65 and older, as well as some individuals with disabilities or certain diseases who are younger than 65. By 2023, the Medicare program enrolled approximately 62.6 million Americans (US Census Bureau 2024). Traditional Medicare consists of hospital insurance in Part A and coverage for physicians, outpatient care, and other services in Part B. In 1997, Medicare Part C or Medicare Advantage was created, which allowed beneficiaries the option to enroll in a privately administered health insurance plan—with the federal government paying the premiums. In 2006, Medicare Part D was added, providing insurance coverage for drugs.

Medicare Advantage has become steadily more popular over time. Nearly 51 percent of all Medicare beneficiaries—about 35.7 million people—are projected to be enrolled in Medicare Advantage in 2025 (CMS 2024). In addition, most Medicare Advantage plans include integrated

² For purposes of analyzing the extent of competition by health insurers in states, we recognize that markets are not necessarily states, and are likely smaller. Among other reasons, health care plan provider networks are mostly local, making plans in different local areas poor substitutes.

prescription drug benefits, making them the main option for drug coverage under Medicare. Over half (57 percent) of all Part D enrollees are in Medicare Advantage drug plans, while standalone prescription drug plans account for about 43 percent (KFF 2024b).

For Medicare Advantage, the relevant geographic market is the county, as defined by the Centers for Medicare and Medicaid Services, the federal government agency which runs Medicare. For Part D prescription drug coverage, only private insurers sell plans; the relevant geographic market is a region.³

Geographic differences heavily affect plan availability and enrollment in Medicare Advantage. Beneficiaries in cities have many more options (45 plans on average) than those in rural areas (27 plans). For instance, some counties in Pennsylvania or Ohio offer over 50 Medicare Advantage plans, while some rural counties and Alaska may have very few or none. Enrollment rates mirror this pattern, with higher enrollment in urban areas. Major insurers, such as UnitedHealthcare, Humana, and CVS Health, are present in almost all counties (KFF 2025c; Medicare Payment Advisory Committee [MedPAC] 2025). Yet large national players play a disproportionately large role. We construct national market shares by insurer for health maintenance organizations, preferred provider organizations, and private fee-for-service plans within the Medicare Advantage program. Again, while this program is publicly financed, the program is administered by private insurers. As is shown in Figure 3, UnitedHealthcare captures nearly one-third of the market, and large players as a group hold over two-thirds of the market.

Both the Medicare Advantage program and the Part D drug insurance program have seen significant consolidation. The five largest plan sponsors cover about 73 percent of enrollees. The number of plans and sponsors has decreased, especially among standalone prescription drug plans. This concentration allows larger firms to charge prices higher due to less competition. Medicare Advantage plans can use rebates,⁴ so most of those who enroll in prescription drug plans via Medicare Advantage pay little or nothing for their Part D premiums. Part D prescription drug plans' premiums average \$39, while premiums for those who enroll in Part D plans via Medicare Advantage are around \$7 in 2025. This premium difference has contributed to the high market share of Medicare Advantage plans (KFF 2025c).

Consolidation and the resulting market concentration in Medicare Advantage has drawn the attention of antitrust enforcers. In 2016, the Antitrust Division of the Department of Justice challenged a proposed merger between the insurance companies Aetna and Humana (U.S. Department of Justice 2018). A central issue in the case was the extent to which Medicare beneficiaries treat Medicare Advantage and traditional Medicare as substitutes. The government alleged that they are not close substitutes – Medicare beneficiaries tend to choose one and stick with it – they are highly unlikely to switch from one to the other—which means that Medicare Advantage

³ There are 34 regions for Medicare prescription drug plans comprising one or multiple states (see <https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/downloads/PDPRregions.pdf>).

⁴ Medicare sets a “benchmark” rate for Medicare Advantage premiums in each county. Plans that set their premiums (called “bids”) below the benchmark rate receive a portion of the difference from Medicare. The plans are then required to use that to provide additional benefits to enrollees (e.g., coverage for prescription drugs, dental care, vision, hearing, and ancillary benefits) or to reduce the premium enrollees pay.

and traditional Medicare are separate markets. The court agreed, found that Aetna and Humana were close competitors in Medicare Advantage without other firms serving as significant alternatives, and blocked the merger (US Department of Justice, 2017).⁵

The Medicaid program provides health coverage to low-income individuals and families. Taken together, Medicaid and the Children's Health Insurance Program (CHIP) cover over 78 million people nationwide as of May 2025 (Medicaid.gov 2025). They collectively accounted for nearly one-fifth of national health care spending in 2022 (MACPAC). In most states, Medicaid beneficiaries are enrolled in Medicaid managed care plans provided by private firms. Beneficiaries may not always have a choice of plan, but private plans compete for contracts with the state Medicaid program via competitive bidding. As of 2022, approximately 85 percent of Medicaid beneficiaries were enrolled in some type of managed care plan in the United States (CMS 2023).

As also shown in Figure 1, there are two plans covering military service members. TRICARE is a health insurance program for active-duty service members, their families, and retirees, which often pays for care provided by civilian doctors. Veterans Affairs health benefits are provided in VA facilities and serve eligible veterans—and in some cases, their dependents (US Department of Veterans Affairs 2025).

Vertical Consolidation

Along with the horizontal consolidation of health insurance markets, vertical consolidation has become increasingly common, as insurers acquire physician groups, data firms, pharmacy benefit managers, and specialty providers. The largest insurance companies have assembled health care conglomerates with extensive ties across the care continuum (Brot-Goldberg, Che, and Handel 2022).

For example, UnitedHealth Group, through its Optum subsidiary, has significantly expanded its footprint in the US health care market over the past decade by acquiring numerous physician practices. A pivotal acquisition was Optum's \$4.3 billion purchase of DaVita Medical Group in 2019, an acquisition which was subject to review by the Federal Trade Commission and led to DaVita's integration into OptumCare, dramatically expanding Optum's reach in direct patient care. Subsequent deals, such as the \$236 million acquisition of Atrius Health in Massachusetts and the absorption of CareMount Medical, ProHEALTH, and Riverside Medical Group into the Optum Tri-State network, have further solidified Optum's presence in multiple regions (UnitedHealth Group 2019; Federal Trade Commission 2019; Japsen 2019; Healthcare Finance News 2022).

These physician practice acquisitions have not only fueled UnitedHealth Group's revenue growth — from \$130.47 billion in 2014 to over \$400 billion in 2024 — but also shifted the employment landscape for US physicians. By 2022, Optum was employing tens of thousands of doctors, contributing to an ongoing trend where independent physician practices have become

⁵ The demonstratives used by the governments' expert witnesses in their testimony for this case, particularly those of the economics experts Aviv Nevo and Richard Frank, are available at <https://www.justice.gov/atr/us-and-plaintiff-states-v-aetna-and-humana>.

increasingly rare. As recently as 2025, Optum was continuing its run of physician practice acquisitions.⁶

In addition to UnitedHealth Group, the largest health insurers in the country, Humana, Elevance Health (formerly Anthem), and CVS Health (with Aetna), have also increased their degree of vertical integration. Each organization has made significant acquisitions to combine insurance, pharmacy, care delivery, and home health services, as well as being major holders of health care data and providers of data analytics. Humana targeted the senior market and Medicare Advantage; Elevance Health expanded its presence in Medicare Advantage as well. CVS Health's \$69-\$77 billion acquisition of Aetna in 2018 was a major vertical merger. It combined CVS's retail pharmacy, MinuteClinics, specialty distribution, and Caremark pharmacy benefit managers with a major insurer. CVS also expanded care delivery by acquiring Signify Health (in-home clinical care for \$8 billion) and Oak Street Health (value-based primary care for \$10.6 billion) (CVS Health 2018, 2022, 2023).

On one side, these integrated models may offer the potential for enhanced efficiency by having everything “under one roof,” as well as by giving insurance companies greater leverage to negotiate for lower prices. But they also raise concerns. These huge conglomerates may lead to greater market power for them as insurers. They might also leverage control over related services (possibly the entire health care ecosystem), potentially foreclosing competition and extracting additional profits at the expense of consumers (Kanter and Gaynor 2025).

There is another aspect to this integration that stems from the Medical Loss Ratio (MLR) regulation on health insurance introduced by the Affordable Care Act. The MLR regulation requires insurers to have medical expenses that are at least a minimum proportion of premiums — 85 percent for large group plans. The fact that the MLR requires insurers to have a minimum proportion of medical expenses relative to premiums gives insurers an incentive to acquire medical providers and then inflate their payments to those providers. This enables an insurer to be in compliance with the MLR requirement, but without actually spending more money, since the additional amounts paid to providers owned by insurers are actually profits kept “in-house” at the firm.

Insurers then have an opportunity to exploit market power that they could not do if constrained by the MLR. To illustrate, consider an insurer with market power that is constrained by the MLR. This insurer cannot raise their price to exploit the market power they possess without being in violation of the MLR.⁷ However, if the insurer acquires providers and then inflates their payments, the MLR constraint is no longer binding (medical expenses have increased while premiums have not). The insurer can thus exploit their market power and increase premiums while being in compliance with the MLR. Insurer acquisitions of medical providers in order to exercise market power can thus constitute a form of regulatory evasion (see Baker et al. 2019).

Antitrust authorities have scrutinized several of these deals, occasionally imposing conditions aimed at preserving market competition. For example, the Department of Justice sued to block

⁶ In August 2025, Optum acquired Tennessee-based Holston Medical Group (Becker 2025).

⁷ If the insurer exploits their market power premiums will increase and the ratio of medical expenses to premiums will fall below the minimum required by the regulation.

UnitedHealth Group's acquisition of home health and hospice care provider Amedisys (US Department of Justice, 2024). The precise nature of the ownership structures of these large entities is often opaque and hard to ascertain, making analysis of, and policy toward, the impacts of ownership changes challenging.

Asymmetric Information and Competition

How Does Asymmetric Information Contribute to Health Insurance Consolidation?

Health insurance markets are fundamentally characterized by asymmetric information, which shapes how health insurance is structured and how markets for health insurance perform. The two types of information asymmetries are moral hazard and adverse selection.

The tradeoff between risk protection and moral hazard is key in designing insurance contracts (Zeckhauser 1970), especially in health insurance. On the one hand, insurance provides risk protection – it helps individuals avoid significant, unexpected financial losses. Good insurance allows people to manage expenses, avoid uncertainty, and lessen the hardship from bad events. On the other hand, moral hazard occurs as a matter of course, because insurance reduces the marginal cost paid for health care. Because individuals rationally consume to the point where marginal benefits equal the marginal costs they bear, lower effective prices lead consumers to use more services than is socially optimal. A (second-best) optimal contract must strike a balance between the additional risk protection from more extensive insurance coverage and the increased moral hazard that accompanies it.

It is unclear how competition affects insurance contracts in the presence of moral hazard -- in particular, does competition promote optimal contracts, or does it perhaps result in insurers offering excessive coverage in an attempt to attract consumers?⁸ The latter results in greater moral hazard than is optimal, driving up spending and excess utilization. If this is the case, then competitive health insurance markets will not result in optimal coverage. We do not know of research on this topic – both theory and empirics are needed to cast light on this important issue.

Adverse selection refers to a situation where one party knows something about themselves that affects relevant outcomes, but the other party does not. In health insurance, consumers are likely to have better knowledge than an insurance company how whether they have an idiosyncratic risk that is likely to lead to future health care expenses. Insurers know the expected health care expenses on average in the population, but not for any individual.

In this situation, markets can unravel or even fail to exist, in what is sometimes called an insurance “death spiral.” The scenario unfolds this way. Insurers need to set premiums for the health insurance policies they sell that cover the expected health care expenses of those policies (at a

⁸ We speculate that if firms take account of consumer responses to the coverage they offer, but do not (fully) account for other firms' actions that competitive markets will provide excessive coverage in equilibrium (e.g., Mankiw and Whinston, 1986; Gaynor, 2006). It may also be the case that consumers with employer sponsored insurance put much more weight on coverage than premiums, since they only pay for a fraction of premiums directly. This could also lead to a competitive equilibrium with supra-optimal coverage.

minimum). As a simple example, say that the insurer sets a single premium, which in a competitive market is equal to the average population's expected expenses.⁹ However, individuals with (private) information that their health expenses will be low will not purchase insurance at this average price. As a result, insurers' expected expenses end up being higher than the premiums they charge, because only people with higher expected expenses buy the insurance. Insurers then need to increase the premiums to cover the expected expenses of the portion of the population that purchases health insurance. But now, only a portion of that remaining population will find it beneficial to purchase health insurance at the new, higher, premium. This cycle can continue, with the market shrinking smaller and smaller, until it ceases to exist (i.e., a death spiral).

In this dynamic, adverse selection in the presence of competition can lead to missing markets, in which sellers become unwilling to participate in the market (Rothschild and Stiglitz 1976).¹⁰ Even when markets exist, plans are likely to be mispriced (Einav et al. 2010). Consider an insurer with some ability to set prices strategically, who is contemplating raising the price of an insurance policy by \$1. The insurer knows that it will lose some consumers, as is the case in any market with downward-sloping demand. However, the consumers the firm loses are not a random subset of the firm's consumers. They are those consumers with the lowest willingness-to-pay (or the most sensitive to price). Under adverse selection, these consumers are likely also the least costly to insure. As a result, adverse selection puts downward pressure on markups.

Adverse selection can also shape market structure and competitive dynamics. In imperfectly competitive selection markets, insurers who lower prices to attract more customers will also disproportionately draw in healthier, lower-cost enrollees. A \$1 price cut can reduce an insurer's average costs by more than \$1, intensifying the incentive to undercut rivals. Indeed, this aggressive price competition can push prices below the level needed to cover the costs of insuring the entire risk pool. As a result, even with multiple potential entrants, the market may only be able to sustain a single firm. Layton, Kong, and Shepard (2024) discuss this dynamic and refer to it as an “unnatural monopoly.”¹¹ Essentially, adverse selection amplifies the impact of price sensitivity – the most price-sensitive consumers are also the healthiest, making price-cutting even more attractive and further reducing the equilibrium number of firms.

How Can Insurance Firms Respond to Information Asymmetries?

In the simple example above, health insurers set a single price for the market. But of course, insurance companies can set a variety of insurance prices (if allowed to do so by regulation) with variations based on factors like age, smoking status, and previous health history. This step will

⁹ For simplicity in exposition, we ignore insurers' cost of doing business or market power, and assume that premiums are set equal to expected expenses – what is called the “actuarially fair premium.”

¹⁰ A long literature highlights that selection can lead to “missing markets” (for an empirical example, see Cutler and Reber, 1998).

¹¹ They formalize this intuition using a Salop circle model with horizontal differentiation (Salop 1979). They use data from Massachusetts' health insurance exchange to test the model's predictions. They show that lower premiums attract healthier enrollees and reduce average costs nearly one-for-one. Simulations show that, without corrective policies, the market collapses to monopoly.

ameliorate the adverse selection dynamics, but may also end up leading to large differences in premiums. Indeed, the reason for the existence of the Medicare program is that, without it, health insurance would be priced in a way that would make it unavailable for many of the elderly.

Of course, pricing for a given policy is only one of the strategic tools insurers have at their disposal. Insurers can also design a menu of plans, seeking to screen consumers and exclude some consumers from the market. This outcome similarly leads to a deadweight loss, but one that is different in nature than an adverse selection “death spiral” in a perfectly competitive market.

When insurers control prices and contract menus, deadweight loss arises from two main factors: exclusion (where some consumers lack coverage) and screening (where insurers use more contracts to segment the market than is socially ideal). Using a graphical approach, Chade et al. (2022) show how to analyze multiple “levels” (or “margins”) of vertically differentiated insurance. Both the intensive (generosity) and extensive (coverage) margin have an impact on optimal regulation (Geruso et al. 2023). Analyzing plan menus is, therefore, critical, despite the theoretical challenges. If technical conditions are met, the Chade et al. (2022) approach suggests that a monopolist will exclude more consumers and offer a more detailed menu than a social planner.

Gottlieb and Moreira (2023) also examine how market power affects insurance coverage. They similarly demonstrate that market power leads to systematic exclusion. A monopolist typically leaves a portion of consumers without coverage, while competitive markets usually provide some (perhaps minimal) coverage for all. A monopolist can profit more by excluding low-willingness-to-pay customers and raising prices for those who value insurance more. By contrast, competitive firms, who are forced to fear the loss of customers to rivals, reduce coverage for high-risk consumers, but with the ability to offer certain menus and prices, do not entirely exclude them.

Finally, large consolidated insurers have some ability to wield monopsony power. Health care provider markets, including hospitals and physician practices, have also consolidated. Hospital mergers have raised prices, with little evidence of improvements in quality (Gaynor and Town 2012; Gaynor, Ho, and Town 2015). In recent years, consolidation among hospitals and physician practices has grown (Brot-Goldberg et al. 2024; Venkatesh 2024). In this context, negotiations between insurers and providers are key in setting prices. As consolidated insurers gain more bargaining power, they can negotiate lower payments to providers. If these savings are passed on, consumers could see lower out-of-pocket costs or reduced insurance premiums. However, whether consumers benefit depends on the structure of provider and insurer markets and various regulatory and contractual factors

The same lesson, that while insurer consolidation can sometimes result in lower provider prices, any benefits to consumers will depend on the economic context, emerges from the Ho and Lee (2017) study of bargaining between insurers, employers, and hospital in California's large-group employer-sponsored health insurance market. Using data from the California Public Employees' Retirement System (CalPERS), they model and simulate the effects of reducing the number of insurers in the market on consumer and overall welfare. Removing a major insurer, like Kaiser Permanente, often raises premiums for the remaining insurers, because as competitive pressure decreases, employers lose bargaining power. However, the impact on hospital prices varies – in some markets, prices increase, while in others, they decrease as remaining insurers gain more bargaining

leverage over providers. The study also points out that employer bargaining constraints, like those from large buyers such as CalPERS, help limit premium hikes.

Empirical Evidence

As a starting point, it's worth asking if insurers can price strategically and charge higher premiums to buyers willing to pay more. Using detailed data on large, multisite employers, and controlling for plan design, employee demographics, and local market conditions, Dafny (2010) documents higher growth in health insurance premiums for firms purchasing insurance for their employees that experience positive profit shocks. The effect is strongest in markets with fewer insurers. Premium increases are not due to changes in plan generosity or employee risk. Instead, she suggests they stem from insurers' ability to extract surplus from buyers with a higher willingness to pay. These findings challenge the idea that health insurance markets are highly competitive. It also suggests further work exploring the relationship between insurer competition and premiums.

Effects of Horizontal Consolidation

If insurers are not simply price takers, changes in market structure are likely to be associated with changes in premiums. For example, the 1999 merger between Aetna and Prudential was a national event that had different effects across local markets, based on each firm's presence in the local market before the merger. To address endogeneity concerns, like whether rising premiums attract mergers, Dafny, Duggan, and Ramanarayanan (2012) focus on the local market concentration changes caused by the merger. On average, large-group premiums in the markets most affected by the Aetna-Prudential merger rose by about 7 percent by 2007, compared to what would have happened without the merger. This increase was not just for the merged firm -- rival insurers also raised prices. Insurers also benefited from lower provider reimbursement rates, due to greater bargaining power. In markets with larger concentration increases, physician earnings growth slowed. Thus, in concentrated markets insurers may be able to exercise both monopoly and monopsony power.

A similar methodology can be applied to the decision by United HealthCare in 2014 to exit from the state-level individual insurance Marketplaces. Again, this business decision reduced competition across markets, but the effect was heterogeneous, depending on UnitedHealthcare's earlier market share. Dafny, Gruber, and Ody (2015) find that in markets where UnitedHealthcare would have been a major competitor, premiums for benchmark "silver plans" rose by 5 percent to 11 percent. These results align with those in the large-group market and highlight how crucial insurer competition is for controlling premiums.

Combined Effects of Selection and Competition

High medical costs, selection, and imperfect competition can all drive high premiums. How might these factors interact? The link between imperfect competition and selection matters both theoretically (as described above) and empirically. Consider a situation in which firms have different levels of market power, such that policies aimed at addressing one market failure can inadvertently exacerbate the other. Working with this model, Mahoney and Weyl (2017) find that risk adjustment can hurt consumer welfare and social surplus when firms have market power.

Risk adjustment is a process where a government entity adjusts the premiums insurers receive up or down, depending on the expected expenses of their enrollees. If an insurer's enrollee population is more expensive than average, their premium is adjusted upward to address the higher expense, while an insurer's premium is adjusted downward if their enrollees are less expensive. Thus risk adjustment removes incentives for firms to lower prices to attract low-cost consumers, thereby weakening competition. The authors apply their model to both health insurance and credit markets. In health insurance, typical risk adjustment policies often hurt employees and employers, while benefiting insurers. By contrast, in auto lending, competition can lead to excessive lending. In many settings, it is essential to incorporate the presence of selection into models that analyze insurer competition.

In the Medicare program, it is common for enrollees to purchase additional private insurance to cover health care costs or services that Medicare does not – for example, out-of-pocket costs that are part of Medicare plans, or certain hospital, hospice, or foreign medical care services. In a study of these supplemental or “Medigap” policies, Starc (2014) explores finds that while the policies are often contractually identical (after all, the policies cover the same gaps in Medicare), premiums can vary greatly across insurers. Furthermore, during the period of the study, two firms controlled about 70 percent of the market. There is also evidence of selection – sicker consumers tend to buy more expensive Medigap plans, especially from trusted brands. As a result, there is a strong link between premiums and claims. In addition, demand is not very responsive to price. The low elasticity, driven by brand loyalty and high search costs, allows insurers to keep prices high. These results suggest that imperfect competition, not just selection, drives high Medigap premiums.

Insurance companies that participate in the Medicare Advantage system have an incentive to find ways to make themselves attractive to enrollees who are more likely to have low health care costs. To push back against this selection problem, insurers that wish to participate are required to submit an estimate of the cost of covering a standard beneficiary for each individual plan (a given insurer can offer multiple Medicare Advantage plans). If this estimate is lower than the county-level benchmark cost, then the proposed plan receives a rebate; if higher, the plan must charge the extra amount to beneficiaries. The goal is to provide a financial incentive for enrollees to choose low-cost, high-quality plans that also accord with their preferences. Curto et al. (2021) estimate that this system generates significant economic surplus. Critically, their model incorporates both market power and risk selection. They emphasize that residual unobserved risk selection may still distort plan incentives and enrollment patterns. But while private Medicare Advantage plans can deliver cost savings over traditional Medicare, much of the benefit (about two-thirds) accrues to the insurers themselves. The authors then demonstrate that modifying market design – such as increasing the rebate pass-through

rate and reducing benchmark payments — can enhance consumer surplus and competition, without incurring additional taxpayer costs.

Other work on the interaction of adverse selection and competition involves the state-run individual health insurance ACA Marketplaces. In Massachusetts, the ACA Marketplace used a modified community rating system, which limits the potential for selection by also limiting how much more older consumers could be charged compared to younger ones. However, younger consumers respond to price changes more than older ones. Even with perfect risk adjustment, differences in preferences lead to different markups, giving insurers a reason to price discriminate. Ericson and Starc (2015) present simulations show that current age rating bands raise premiums for younger consumers by a significant amount. The effect is larger when insurers price strategically. Without a strong mandated requirement that young people must have health insurance, healthier, price-sensitive consumers might leave the market.

In the California ACA Marketplace, market power and adverse selection interact as well. Inertia, defined in this case as consumers sticking with their current plan, bestows insurers with significant market power (Saltzman, Swanson, and Polsky 2021). Switching costs amount to nearly half the annual premium, and four firms dominate the market. Removing inertia could lower average premiums and raise annual per-capita welfare substantially. However, this effect is negligible in markets without strategic pricing or risk adjustment. Ultimately, improving consumer welfare requires attention to both adverse selection and insurer pricing strategies, as well as the barriers that limit effective competition.

Competition can also influence the efforts of insurers to engage in “cream-skimming,” by minimizing their enrollment of those likely to have high health care costs. In the context of the Massachusetts Health Insurance Exchange, Shepard (2022) shows that competition in hospital networks is affected by adverse selection. Plans that exclude costly “star” hospitals attract healthier patients. These “star” hospitals often draw sicker, higher-spending patients, even with risk adjustment—and so for the insurance companies, this form of cream-skimming is profitable.

In a study of health insurance in Columbia, Serna (2024) uses a structural model to show that insurers' choices about network size balance risk selection and administrative costs. Insurers may exclude unprofitable patient groups by limiting access to costly services. In tightly regulated markets, some insurers offer broad networks due to cost efficiencies. This partially counters the exclusion effects of risk selection. Again, the intersection of competition among insurers and pressures for selection involves complex trade-offs.

Effects of Vertical Consolidation

Despite a well-developed literature on the effects of horizontal consolidation in the health insurance industry, there is less understanding of vertical relationships between insurers and providers. In seminal theoretical work on this topic, Ma (1997) models the impacts of vertical mergers between upstream and downstream firms when the upstream firms' products are differentiated. This applies to health care providers (upstream) and health insurers (downstream). He shows that a merger between a health insurer and a health care provider can lead to foreclosure—

that is, limiting access of other health care insurers to a full range of providers — harming competition in the downstream health insurance market and leaving consumers worse off.

However, in the US health insurance industry, these vertical relationships are, for the most part, relatively recent and data on the contracts are limited. Models that address the details of these for complex markets are still being developed, and empirical work is only now beginning to accumulate across a variety of health insurance contexts.

Most empirical studies about vertical integration between health care insurers and providers have examined how insurance design affects care delivery, with few investigating competitive dynamics. Among these, research on competition and vertical integration has mainly focused on pharmacy benefit managers—that is, companies that contract with insurance companies to manage pharmaceutical benefits, a task that includes both deciding what drugs will be available to consumers and negotiating prices with drug manufacturers. In a thorough overview of this research, Brot-Goldberg, Che, and Handel (2022) highlight the limited understanding of the vertical ties between pharmacy benefit managers, insurers, and drug manufacturers. However, the top three pharmacy benefit managers now cover nearly 80 percent of the market and are vertically integrated with major insurers. They argue that standard policy analysis tools fail in these multi-sided markets. In their preferred framework, the welfare effects of integration between pharmacy benefit managers and insurers are unclear and depend on factors like bargaining power, pass-through rates, and regulations. They also note that the current literature struggles due to data opacity, especially concerning rebates and contracts.

Gray, Alpert, and Sood (2023) provide additional, reduced-form evidence on vertical integration between insurers and pharmacy benefit managers. They track market outcomes before and after the major 2015 merger between UnitedHealth and Catamaran. By linking a unique dataset on contracts between insurers and pharmacy benefit managers to plan-level enrollment and pricing, they show that as vertical integration increased, non-integrated insurers using a rival's pharmacy benefit managers faced much higher premiums. Notably, they find no premium reductions for consumers of the merged firm. Their evidence suggests that as pharmacy benefit managers consolidate and integrate vertically, competitive harms to non-integrated rivals increase, while consumer benefits, in the form of lower prices, remain limited.

In Medicare Part D, enrollees are offered an optional drug benefit, in which people may purchase a drug insurance in exchange for a monthly premium (which varies by income and location), along with deductibles and copays. Insurance companies that offer such plans may work with or own a pharmacy benefit manager. Yde (2025) develops an empirical model of the Medicare Part D market. Using new data on relationships between insurers, pharmacy benefit managers, and pharmacies themselves, he finds evidence of “profit tunnelling.” The insurance companies that offer Part D plans face government rules that tend to limit their profits, including cost-sharing rules and “medical loss ratio” rules which require that a certain share of premiums paid be spent on benefits for enrollees. However, pharmacies owned by the insurance companies do not face such rules, and so the parent insurer has an incentive to shift profits from regulated insurance to less-regulated pharmacy operations. His simulations suggest that separating vertically integrated pharmacies could lower drug prices, slightly raise average premiums, and increase consumer surplus. In related work

using a vertical model of drug and insurance demand, Che (2025) shows that bargaining over drug rebates between pharmacy benefit managers and drug manufacturers can influence both level and dispersion of drug prices.

Chile has also experienced a wave of vertical integration between insurers and hospitals. Cuesta, Noton, and Vatter (2024) examine this and show that integrated insurers preferentially include their own hospitals in their networks and limit access to rival hospitals. They then offer more attractive insurance products, lowering cost-sharing and premiums, to attract patients. Non-integrated insurers respond by excluding integrated hospitals from their preferred networks, fragmenting the market and lessening price competition. While vertical integration does lead to some efficiencies (it reduces double marginalization¹ and in general gains in efficiency are expected from mergers of complements), the gains are offset by distorted plan design and decreased hospital competition, resulting in lower consumer welfare.

As a final example, a health care “platform” is the name given to entities that incorporate health insurers, health care providers of multiple types, health care data holding and analysis entities, and other related firms. As mentioned previously, Kanter and Gaynor (2025) raise the issue that such platforms hold the potential for serious harm to competition by substantially raising the costs of entry, creating (or expanding) strong incentives for self-preferencing, and expanding opportunities for exploiting market power via regulatory gamesmanship. Their discussion is related to concerns about tech platforms (for example, Stigler Committee on Digital Platforms 2019) — a rigorous exploration of these potential impacts is an important avenue for theoretical research.

Public Policies for Health Insurance: Rules of the Road?

Health insurance is fundamentally designed to mitigate uncertain and potentially catastrophic medical expenses through risk pooling and financial protection. In addition, health insurance is more than a financial instrument—it shapes access to care and can produce meaningful effects on health outcomes, both at the extensive margin (who gets insured) and the intensive margin (how much care is used) (Abaluck et al. 2020; Acquatella and Marone, 2025). In the United States health insurance in the United States is provided mainly through markets, and how competition functions in health insurance markets is a key factor in determining how well the US system of health care works.

However, these markets don’t work as well as they could, or should. The substantial market imperfections in this sector, both due to asymmetric information and due to market power, require significant monitoring and oversight to improve market performance.

Antitrust enforcement is one important policy tool to improve market performance. Recent years have seen extensive consolidation among insurers, both from horizontal mergers and vertical integration with provider groups, resulting in heavily concentrated health insurance markets. Antitrust enforcers monitor proposed mergers and acquisitions and seeks to prevent those assessed as harmful to competition. They also monitor and seek to prevent anticompetitive behavior: collusion, refusals to deal, exclusive dealing, tying, and so on. The purpose of antitrust enforcement

is intended to deter other firms from seeking to engage in actions harmful to competition, so the total impact is larger than just the specific cases where the antitrust authorities intervene.

In antitrust cases involving the health insurance industry, modeling the behavior of imperfectly competitive insurers is critical, as the nature of the welfare loss changes when firms price strategically, rather than taking the market price as given. A market with selection pressures will have different incentives for post-merger price changes than a market without. Thus, total welfare can be higher or lower under monopoly compared to competition. When insurers have market power, analysis and welfare implications are complex.

However, antitrust is only one element of public policy towards markets, especially health insurance markets. Regulatory policies that establish the “rules of the road” for insurance markets can attempt to reduce the potential for problems with competition and thereby minimize the need for antitrust enforcement. When determining the “rules of the road,” regulators must consider the strategic behavior of insurers – optimal market intervention might change if insurers are not perfectly competitive.

For example, earlier discussion pointed out that insurance firms with market power become more likely to use details of the menu design of their benefit package as a way of both holding down costs and also excluding customers who are more likely to incur high health care costs. Health care consumers and providers also face time-consuming and sometimes confusing administrative hurdles imposed by insurance providers, including billing, prior authorizations, and navigating networks. Some administrative burdens may help to contain costs or reduce unnecessary utilization. Yet it is often difficult to determine which are efficient and which are simply wasteful or harmful to patient welfare. It would be useful to have rules of the road that distinguish between menu choices that encourage cost-efficiency and allow a range of insurance plans for heterogeneous consumers, but that set limits on menu choices focused on selecting likelier-to-be healthy consumers. A possible approach to this is requiring standardized choices — a fixed menu of alternatives for all consumers. Standardizing and fixing choices has the virtue of making it easier for consumers to understand their alternatives, and of limiting attempts by insurers to obfuscate choice. Fixed menus are used in the market for private Medicare supplemental (“Medigap”) plans, ACA marketplaces, and in countries like the Netherlands and Switzerland. Of course, fixing the alternatives limits the ability of insurers to accommodate diverse consumer preferences – so this tradeoff has to be considered.

Risk adjustment is often proposed as tool for addressing selection issues. But as stated previously, an overly simple form of risk adjustment will eliminate incentives for an insurer to seek out cost savings that from greater efficiencies and healthier consumers.

Informational interventions may also be important. Insurance is complex, and various choice frictions can limit competition's impact. These frictions may be behavioral — such as inertia or limited attention — or may stem from a lack of information about benefits (Handel and Kolstad 2015). Such frictions may be exacerbated in imperfectly competitive markets. Well-functioning competition is disciplined by feedback from customers, but consumers may have limited information about the underlying quality of plans themselves. For example, Abaluck et al. (2021) argue that consumer willingness-to-pay for plan quality is strikingly low. In addition, consumers usually lack information about insurers' administrative performance when choosing health plans. Enhancing transparency

and aligning incentives for genuine quality improvement could enable healthcare markets to deliver better outcomes for beneficiaries.

Another potentially promising arena for policy is the enabling and promotion of long-term health insurance contracts. Health insurance contracts in the United States are short term (usually one year) and as a consequence do not protect individuals against “reclassification risk”—that is, the risk that their health will decline and their health insurance premiums will therefore rise in subsequent years. Long term health insurance contracts cover an individual over a long period of time (potentially a lifetime) and therefore insure against this risk. Such contracts exist in Germany and Chile and are quite efficient (Atal, Fang, Ziebarth 2025). Understanding how those markets work and formulating policy to enable long term health insurance contracts for the United States seems like a promising and important area for policy.

Given the multiple issues with health insurance markets and the possible ways they can interact, having a single entity responsible for monitoring, oversight, and policy implementation in health insurance markets should be considered. Since insurance is regulated by the states, this likely means separate entities for every state (although the federal government is the relevant entity for health insurance for federal employees, such as the Federal Employees Health Benefits Program, “FEHBP”, or TRICARE for military service members and their families).

Others have proposed more creative solutions. For example, potential entrants in insurance markets face significant barriers to entry; lowering those barriers could improve market outcomes. This phenomenon has been noted in the context of the geographic expansion of integrated delivery systems like Kaiser (Ho 2009). More generally, low premiums attract consumers and help new companies grow. However, new entrants often start with low enrollments, making it hard for them to negotiate discounts with providers and offer low premiums without risking losses. One suggestion (from Leemore Dafny) is to have health care providers agree to accept payments from new entrants at the n th lowest market rate, with n set by a regulator. Other options include regulatory structures discussed by Einav and Finkelstein (2023). Under their proposal, all Americans would receive automatic, basic, and free universal coverage. Then, similar in spirit to the Australian and some European systems, there would be an option to buy additional, supplemental coverage. Such “out-of-the-box” reform proposals may provide a way to harness the power of markets to deliver coverage, provided they account for insurer incentives.

Because it is unlikely that competition alone will lead to socially desirable outcomes in health insurance market, effective regulation remains essential. Researchers are still developing a fuller understanding of the interactions between two sets of market failures in health insurance markets: firms large enough to wield market power in a setting of asymmetric information. But while a significant body of research examines competition and consolidation, major gaps remain, especially regarding insurer acquisitions of providers and the theoretical and empirical effects of these new industry structures.

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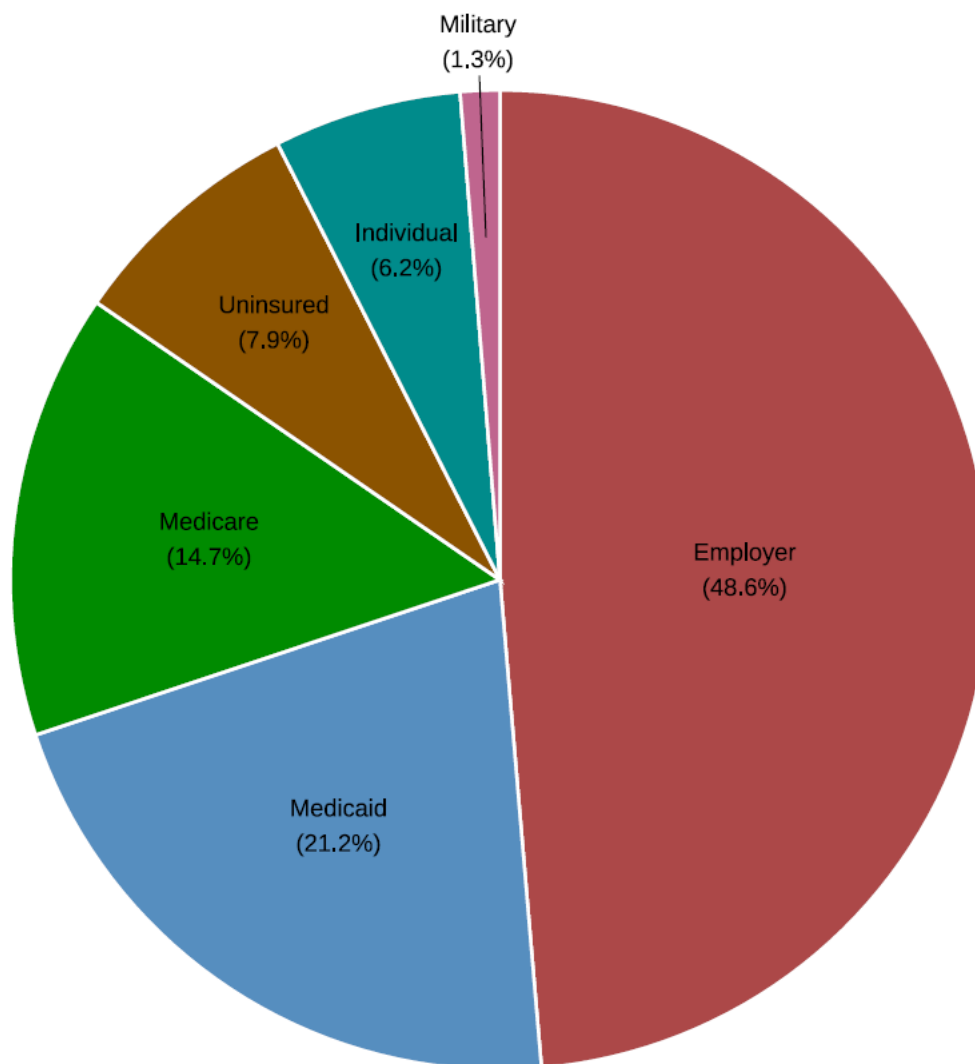
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Figures

Figure 1

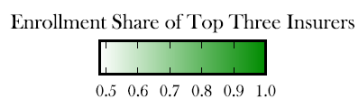
Health Insurance Share: Total Enrollment by Type



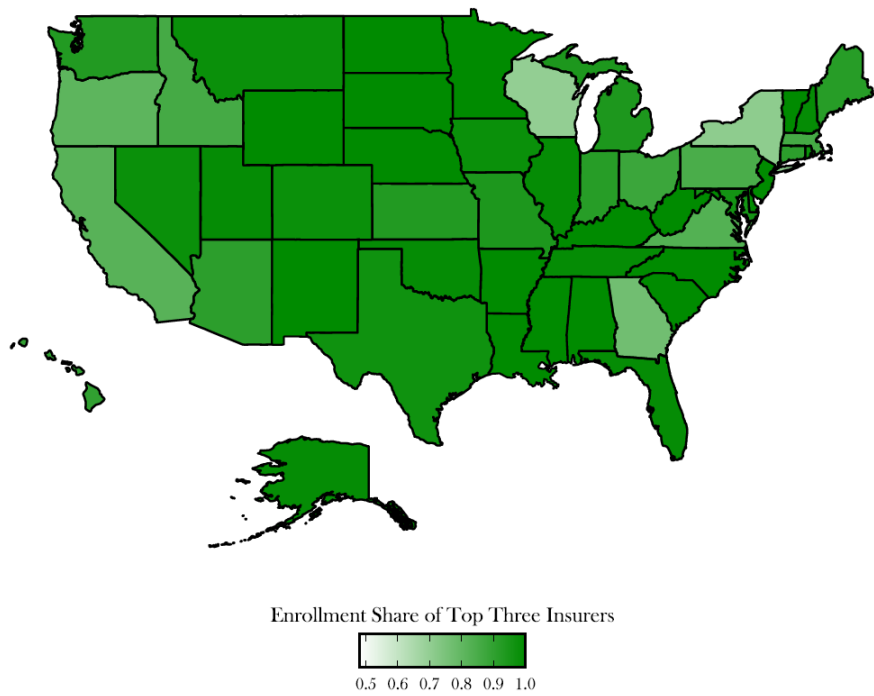
Source: KFF 2025a.

Note: This shows the total enrollment US share among different types of health insurance providers. Dual-eligible individuals are included in the “Medicaid” share.

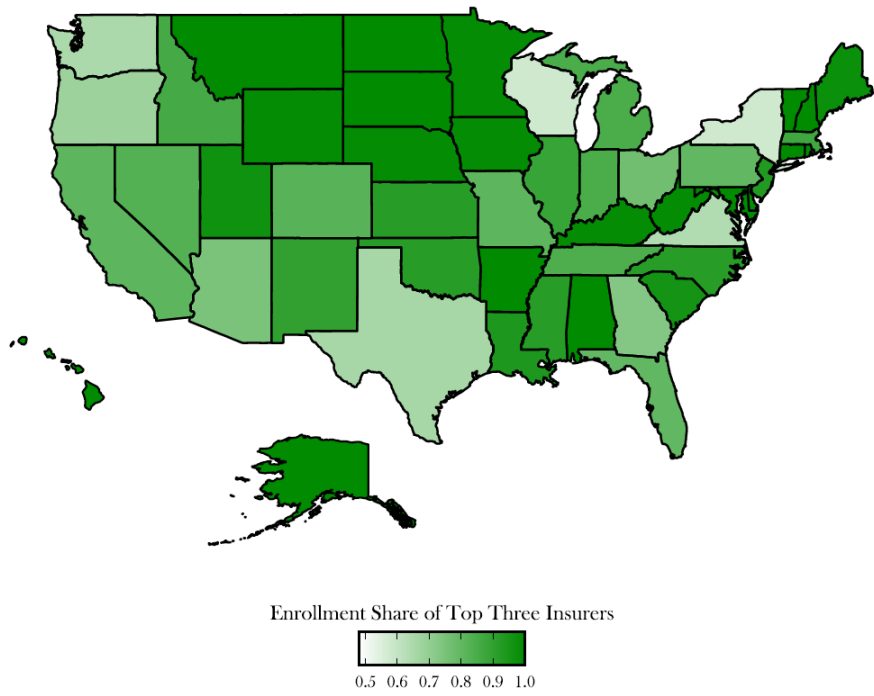
Enrollment Share of Three Largest Large-Market Insurers by State, 2023



Panel B: Small Market



Panel C: Individual Market

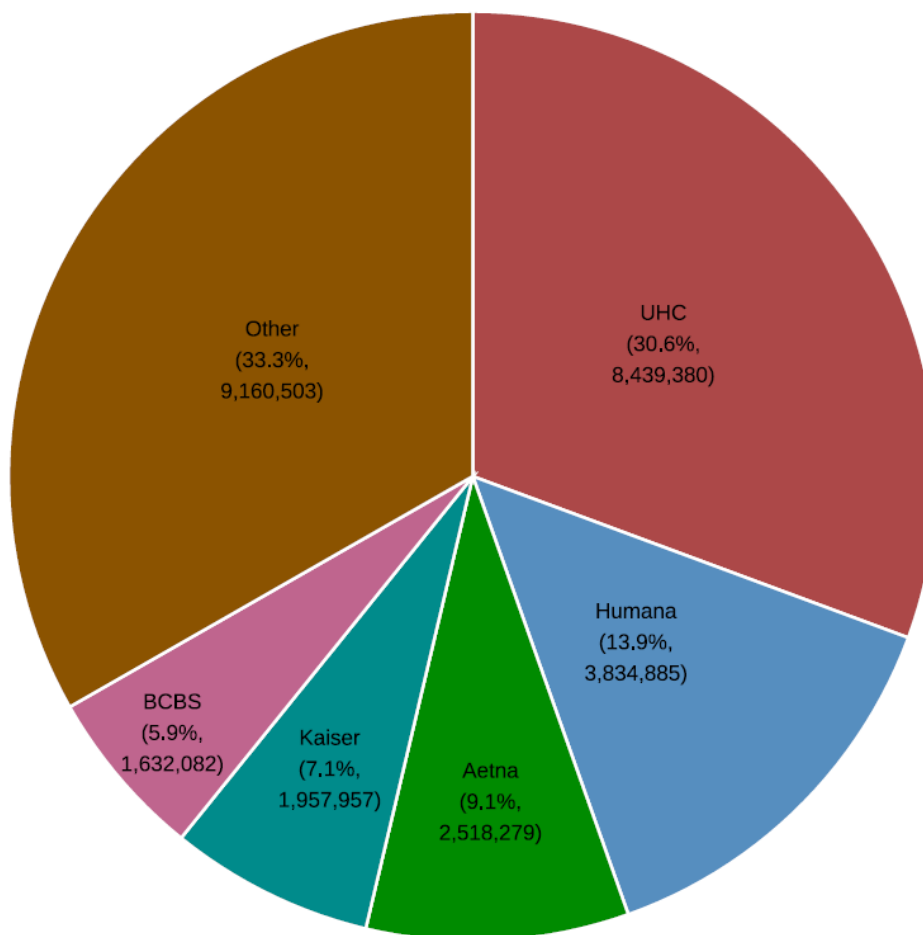


Source: KFF 2025b.

Note: These maps show the market share of the largest three insurers by cumulative enrollment for each state and market type.

Figure III

Medicare Advantage National Enrollment Totals, July 2025



Source: CMS 2025b.

Note: This chart shows the national enrollment totals of the largest Medicare Advantage insurers as of July 2025. The enrollment of subsidiary organization has been added to that of its respective conglomerate (e.g., Sierra Health and UnitedHealthcare). Chart includes only preferred provider organizations, health maintenance organizations, and private fee-for-service plans.