

Barriers to Price and Quality Transparency in Health Care Markets

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Preface

Consumers of health care in the United States often lack information on the actual prices of the care they receive and can also lack access to information about the quality of their care. In part, this can be attributed to the complexities of a system in which multiple payers often pay different prices for the same services. In June 2019, President Donald Trump signed an executive order called *Improving Price and Quality Transparency in American Healthcare to Put Patients First* in an effort to give consumers information about the price and quality of health care services to promote informed decisionmaking. To facilitate improvements in price and quality transparency, the administration is interested in informing policymakers and the public of ways in which the government and the private sector can aid or impede price and quality transparency.

This report summarizes the results of an environmental scan designed to gather information on how health care prices are set, price variation in health care markets, barriers to price and quality transparency for consumers, and the extent to which price and quality information is used in marketing efforts. The report should be of interest to federal policymakers and stakeholders as they consider various price transparency initiatives, including recent federal rulemaking related to hospital and insurer price transparency. This work was conducted between October 2019 and December 2019.

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Summary

In most markets, buyers know the price of goods or services before they purchase them. In the U.S. health care market, prices are generally opaque to consumers and not often known to them before they receive care. This is partially due to the fact that the U.S. health care system is complex, with multiple payers paying different prices for similar services and negotiated rates between commercial insurers and providers that are not publicly disclosed. A further complication is that consumers do not usually pay the full price of their care; instead, they typically pay a flat fee (copay) or a portion of the price (coinsurance), based on their health insurance coverage.

In June 2019, President Donald Trump issued an executive order called *Improving Price and Quality Transparency in American Healthcare to Put Patients First* with the intention of promoting consumer price and quality transparency initiatives in health care to facilitate better-informed consumer decisionmaking. As part of this effort, the administration sought to inform policymakers and the public about how prices are currently set in health care markets, how the government and private payers can aid or limit price and quality transparency, and the extent to which providers can use advertising to promote price and quality information.

To that end, the Office of the Assistant Secretary for Planning and Evaluation asked the RAND Corporation to conduct an environmental scan to synthesize existing knowledge on these topics.

How Are Health Care Prices Set?

Physicians and Hospitals

Public payers, such as Medicare and Medicaid, typically set prices for physicians and hospitals prospectively; providers have little direct bargaining leverage other than deciding not to serve these patient populations. The majority of care provided to veterans covered by the Veterans Health Administration is provided in Veterans Health Administration facilities, which are federally funded and employ salaried health care providers. Commercial health plans, in contrast, negotiate with physicians and hospitals to determine prices, including prices for their Medicare Advantage or Medicaid managed care plans. Some research has shown substantial variation in negotiated prices, while other research suggests more moderate variation in some markets. Insured consumers rarely pay the full negotiated price of their care, typically paying a smaller copayment or coinsurance amount. Although the government does not directly affect prices paid by commercial health plans, commercial prices tend to be positively correlated with Medicare fee-for-service prices.

Pharmaceuticals

In the case of pharmaceuticals, Medicaid receives mandated rebates from drug manufacturers for dispensed prescriptions, and the Veterans Health Administration negotiates prices in exchange for including a manufacturer's drug on a limited formulary. Commercial health plans, including those that cover Medicare Part D enrollees, negotiate both the prices paid to pharmacies and any discounts and rebates received directly from drug manufacturers. Self-pay prices faced by consumers in pharmacies (either because of uninsurance or because of full prices on a high-deductible plan) are set by individual pharmacies. Big-box stores (e.g., Walmart, Target) and pharmacy chains (e.g., CVS, Walgreens) can use heavily discounted prices of certain generic drugs to drive traffic to their stores.

Medical Devices

Most medical devices are not purchased directly by Medicare, Medicaid, or private insurers. Rather, these items (ranging from latex gloves to expensive imaging equipment) are purchased by providers and considered in the price of bundled or fee-for-service payments. For durable medical equipment, such as crutches or blood sugar monitors that are generally used by patients at home, Medicare uses a competitive bidding process to determine prices.

Price and Quality Transparency Initiatives

Recent federal consumer transparency efforts have focused primarily on hospital price transparency. A 2018 federal rule requires that hospitals release their chargemaster data for all items and services in a machine-readable format, and a 2019 final federal rule requires hospitals to disclose payer-specific negotiated rates for all items and services and to disclose payer-specific negotiated rates in a consumer-friendly manner for “shoppable” services, which are those that can be scheduled in advance by a consumer. The government also issued a final rule in 2020 that requires commercial insurers to provide online price transparency tools to their members and to disclose negotiated prices for all covered services. The federal government also promotes quality transparency by providing quality information about physicians and hospitals to consumers via the Care Compare online tool (previously known as Physician Compare and Hospital Compare).

State governments have also pursued various consumer price transparency efforts. In particular, a number of states have established or are in the process of establishing all-payer claims databases (APCDs). These databases form the basis for various price transparency tools intended for consumer use. One standout example is the state of New Hampshire, which has used its APCD data to create an extensive online price transparency tool that provides provider-specific pricing to consumers, taking into account their insurance status.

Most commercial insurers have also rolled out price transparency tools for their members to help estimate the costs of various services. However, these tools could be of limited value, as they can be difficult to navigate and do not always provide accurate pricing.

Barriers to Price and Quality Transparency

A key limitation of recent government consumer price transparency initiatives aimed at hospitals is that they have focused on charges and negotiated prices. Charges are the “list” price of care, and they are generally not related in any systematic way to the actual amounts paid by public or private insurers. Negotiated prices, in contrast, are much more relevant and represent the actual price of care paid by the insurer to the hospital. In price transparency efforts aimed at consumers of health care, the out-of-pocket (OOP) price paid by the consumer is probably the most relevant.

There are also some regulatory barriers to price transparency. First, in *Gobeille v. Liberty Mutual Insurance Company*, 2016, the Supreme Court determined that the Employee Retirement Income Security Act of 1974 (ERISA) preempts state APCD reporting requirements for self-insured employers. This undermines many state price transparency initiatives that rely on APCD data. Second, Statement 6 from the Federal Trade Commission and Department of Justice’s 1996 Statements of Antitrust Enforcement Policy in Health Care is intended to limit the sharing of price data for anticompetitive reasons, but it could be cited by those opposed to current price transparency initiatives to note that sharing price data could have anticompetitive effects in some markets. Finally, the Health Insurance Portability and Accountability Act protects patients’ rights to privacy over their medical information, but it makes the sharing and disclosure of health data (for transparency or other reasons) more cumbersome.

On the part of insurers and providers, a potential barrier to price transparency is contract language that prohibits the disclosure of negotiated prices. However, there are efforts in Congress to pass legislation that would disallow or limit the effect of such clauses in contracts. State and federal governments have also passed legislation to prohibit the use of “gag clauses” that prevent pharmacists from telling patients about lower-cost drug options.

Finally, consumer information on the Centers for Medicare & Medicaid Services (CMS) Care Compare website has some important limitations. Price and quality data are not explicitly linked, so consumers might assume that a higher price means higher quality. Price data on hospitals are very limited and are not included for physicians, and both price and quality data might not include enough variation to enable meaningful comparisons between providers.

Advertising Price and Quality Information

Our literature search identified only a handful of articles that addressed advertising price and quality information. The available literature suggests that hospitals and physicians do not typically include pricing and quality information in their advertisements. Data on the amount that

hospitals and physicians spend on advertising are lacking, as is information about the substance of advertising. One barrier to advertising price information could be clauses in provider-insurer contracts that prohibit the disclosure of negotiated prices. Furthermore, providers might be concerned that publicizing price data could lead to a “race to the bottom” on prices, in which all insurers demand the lowest prices offered by a provider.

Pharmaceutical companies conduct a substantial amount of direct-to-consumer advertising, but they have historically not advertised price or quality information. However, pharmaceutical advertisements do sometimes offer discounts or coupons, and, more recently, some advertising has directed consumers to pricing information via a web link.

The literature search did not identify any articles that addressed advertising by device manufacturers.

Conclusions and Recommendations

In an effort to help consumers make better-informed health care choices, federal policymakers sought to identify potential barriers to price and quality transparency. Findings of this environmental scan show that consumer price transparency is being pursued by federal and state governments, as well as by commercial insurance companies. The findings also highlight potential barriers to meaningful transparency that could be addressed:

- **First, policymakers could consider initiatives aimed at OOP price transparency** given the focus of federal price transparency initiatives on consumers. For example, policymakers can continue to pursue initiatives such as a 2020 federal rule that requires insurers to provide online price transparency tools to their members that would display OOP prices. Such efforts would also address shortcomings of existing insurer price transparency tools, which are offered by most private plans but do not always offer accurate pricing information.
- **Second, existing tools that promote quality transparency, such as Care Compare, could be improved upon to allow meaningful comparisons between providers.** In particular, CMS could consider the following:
 - presenting detailed, provider-specific pricing information for a wide range of services
 - presenting the full variation in quality scores rather than limiting information to differences from the national mean
 - explicitly linking detailed quality and price data by presenting both pieces of information together.
- **Third, policymakers can continue to pursue legislation that would limit or prohibit clauses in provider-insurer contracts that do not allow for the disclosure of negotiated prices.** Such contract language presents a key barrier to price transparency. Similar clauses in contracts between private insurers and pharmacies that prohibited pharmacists from informing patients when paying for a

drug out of pocket would be less expensive than paying the copay through their insurance are no longer permitted following 2018 legislation.

- **Fourth, the federal government could consider regulations that would require drug manufacturers to submit cost effectiveness or comparative effectiveness data** on their drugs in order for those drugs to be covered by Medicare, similar to requirements in other countries. This data could be made public to consumers to allow for more informed decisionmaking.
- **Fifth, states could work together with federal agencies, such as the Department of Labor (DOL), to address the issue of ERISA preemption undermining state APCDs.** The DOL could require the collection of APCD data from self-funded health plans. This would be a significant undertaking, however, as the DOL currently does not collect any data similar to APCDs.
- **Finally, states can work to improve price transparency and quality transparency:**
 - States that have not yet established APCDs could do so.
 - States that do have APCDs but do not have online price transparency tools for consumers can create them.
 - States that do have APCDs and online price transparency tools can work to improve the breadth and quality of the data provided.
 - States can provide consumers with detailed quality information on providers in conjunction with online transparency tools.

The barriers to consumer price and quality transparency identified through this work generally represented limitations of existing tools. Efforts to achieve price and quality transparency have the potential to allow consumers to make better-informed decisions about their health care, particularly if the challenges and barriers outlined in this report are addressed.

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Abbreviations

ACA	Affordable Care Act
AMP	Average Manufacturer Price
APC	Ambulatory Payment Classification
APCD	all-payer claims database
ASP	average sales price
ASPE	Office of the Assistant Secretary for Planning and Evaluation
CalPERS	California Public Employees' Retirement System
CBO	Congressional Budget Office
CMS	Centers for Medicare & Medicaid Services
DME	durable medical equipment
DOJ	Department of Justice
DOL	Department of Labor
DRG	diagnosis-related group
ERISA	Employee Retirement Income Security Act of 1974
FDA	U.S. Food and Drug Administration
FFS	fee-for-service
FTC	Federal Trade Commission
GAO	U.S. Government Accountability Office
GDDP	generic drug discount program
HCCI	Health Care Cost Institute
HMO	health maintenance organization
IPPS	Inpatient Prospective Payment System
MA	Medicare Advantage
MAC	Maximum Allowable Cost
OOP	out-of-pocket
OPPS	Outpatient Prospective Payment System
PhRMA	Pharmaceutical Research and Manufacturers of America
RVU	relative value unit
VHA	Veterans Health Administration
WAC	Wholesale Acquisition Cost

1. Introduction

In June 2019, President Donald Trump signed an executive order called *Improving Price and Quality Transparency in American Healthcare to Put Patients First*. The purpose of the order was to make consumers aware of price and quality of health care services to help them make more-informed decisions about health care use. To improve price and quality transparency, the administration wanted to inform policymakers and the public of the ways in which the government and the private sector could aid or impede price and quality transparency.

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) asked the RAND Corporation to synthesize existing knowledge on how health care prices are set in the United States, how the government affects prices, the level of price variation in health care markets, ways in which the government and commercial insurers can aid or impede price and quality transparency to consumers, and the extent to which health care providers advertise price and quality information to consumers.

In response to ASPE's request, RAND researchers conducted an environmental scan of existing literature to synthesize and summarize existing knowledge related to consumer price transparency and to highlight gaps in the literature. The purpose of the scan was to understand how U.S. prices are set in certain health care market segments, how government impacts prices, how providers market themselves to consumers, and how the government or commercial insurers could serve as barriers to price and quality transparency.

The environmental scan included four health care markets:

- health care professionals
- hospitals and other facilities
- pharmaceuticals
- medical devices.

For each market, we gathered information on three broad topics: how prices are set, the factors that influence the level of consumer price and quality transparency, and the extent to which providers advertise on price and quality.

This report proceeds as follows. In Chapter 2, we briefly describe how we conducted the environmental scan. In Chapters 3–6, we describe the results of the scan for each of the four markets. We begin each chapter by describing how we defined the market, briefly characterizing the size and quality of the relevant literature, and highlighting our key findings for this market. We then describe the results of the scan in more detail, organizing our discussion around the three broad topics mentioned above. In Chapter 7, we summarize our findings and discuss recommendations to policymakers suggested by our findings.

2. Methods

RAND researchers conducted an environmental scan of available literature from peer-reviewed sources and the gray literature (including consumer advocacy groups, research organizations, and state and federal agencies). The scan included four health care markets:

- health care professionals (physicians and nonphysicians)
- hospitals and other facilities (ambulatory surgical centers, skilled nursing facilities)
- pharmaceuticals (pharmaceutical companies and pharmacies)
- medical devices.

For each market, the scan gathered information on ten key policy issues related to cost and quality transparency. These issues can be grouped into three broad topics:

How are prices set?

- How are Medicare, Medicaid, Veterans Health Administration (VHA), commercial, and self-pay prices set in each market?
- What strategies do health plans use in determining prices they pay providers?
- How does the government impact the prices in each market?

What influences the level of consumer price and quality transparency?

- Government
 - What government actions limit price and quality transparency?
 - What government actions are beneficial for price and quality transparency?
- Commercial payers
 - In what ways do the design of federal health care programs and commercial health insurance produce incentives (or lack thereof) that serve as a barrier to price and quality transparency?
 - What contractual and noncontractual agreements between private actors serve as barriers to price and quality transparency, and how common are they?
 - How can the ethical codes of organizations and trade associations be barriers to price and quality transparency?
- Data availability: How does the availability (or lack thereof) of useful quality measures serve as a barrier to price and quality transparency?

What is the relationship between price, quality, and advertising?

- How do providers use advertising in this market?
- Are there regulatory or other barriers that impede advertising?
- How is price or quality information featured in health care provider advertising?
- What is known about successful advertising strategies in this market?

We summarize the results of the environmental scan in the context of these three categories. Given the nature of the available data and the scope of this work, we conducted a targeted

literature search to identify articles of relevance. We did not restrict the search to specific market segments; we included any articles related to health care and sorted the results by market segment after the fact. The appendix lists the search terms used for this work.

Our search of three databases (PubMed, Business Source Complete, and EconLit) identified 1,095 articles; we identified an additional 56 articles in the gray literature. Research assistants conducted an initial triage to identify articles of potential relevance based on the title and abstract. From the initial set of 1,151 articles, they identified 197 peer-reviewed articles and 56 articles from the gray literature as potentially relevant. The lead author of this report oversaw their work to ensure that their decisions were consistent with the goals of this work. The research team reviewed the initial list and abstracted information for 113 articles relevant to this task.

We supplemented the search with (limited) additions based on cited literature and searches of government webpages. In particular, the initial search turned up very few articles related to advertising of price or quality information by pharmacies, so we conducted additional targeted Google and Google Scholar searches focused on identifying information on pharmacy pricing strategies for self-pay patients. These searches also included specific searches for information on the generic drug discount programs (GDDPs) offered by pharmacies starting in 2006. We found relevant articles and employed a snowball search method to look at articles that cited relevant articles to identify additional relevant information. We also specifically searched for pharmacy advertising efforts, which we defined as efforts by pharmacies to market medication prices and quality directly to consumers.

This report cites 161 total sources based on our initial and supplemental literature searches.

3. Health Care Professionals

Overview

In this chapter, we summarize the results of our environmental scan of the literature on health care professionals. We defined the market segment “health care professionals” as providers who can bill Medicare directly for services: physicians, nurse practitioners, and clinical psychologists. We included several other categories who can also bill Medicare (clinical nurse specialists, clinical social workers, physical therapists, occupational therapists, and speech language pathologists; Medicare, undated-a). The literature focused primarily on physicians.

Our literature search identified a number of articles on pricing and price variation and a few on price and quality transparency in this market. However, the literature search did not identify any articles related to how physician organizations’ ethical codes might affect price or quality transparency.

We identified the following key findings from the environmental scan:

- Medicare fee-for-service (FFS) prices influence market prices for physicians in most fields.
- A number of articles suggest substantial price variation in the private market, although more-recent research suggests more-moderate variation.
- Medicaid prices are set by the state, but they are influenced by prices in the private sector.
- Prices in commercial plans respond directly to changes in Medicare prices.
- Federal regulations around Medicare affect out-of-network prices in Medicare FFS and Medicare Advantage.
- Major barriers to transparency include lack of physician pricing data in existing transparency tools and clauses in provider-insurer contracts that prohibit disclosure of negotiated prices. Physicians themselves lack incentive to disclose prices.
- Most websites that offer price information focus on inpatient care or surgeries.

How Are Prices Set?

Throughout this section, we distinguish among four key terms:

- *Prices* are the actual paid amounts received by a provider, typically through a combination of insurer and individual payments.
- *Billed amounts* are the prices charged by physicians.
- *Costs* are the amount incurred by the physician for providing a patient’s care.
- *Out-of-pocket (OOP) prices* are the amount paid by the consumer.

Pricing for physician services is opaque and varies from payer to payer. Insurance affects both the total payment for a care episode and also what the patient pays. In both the public and private sectors, there has been a move from FFS to bundled payments. Under a bundled payment model, providers or health care facilities are paid a single payment for all the services performed to treat a patient for a specific episode of care. The bundled price could vary retrospectively based on quality or other metrics, making it difficult to isolate the price of a specific physician service (Garfield, Orgera, and Damico, 2019).

Medicare

Medicare's FFS program pays physicians a fixed amount for each service provided, according to the Medicare Physician Fee Schedule. This schedule defines payments for thousands of services, using a system of weights determined by the nature of the work, the cost to the physician of providing it, and the liability associated with each service (Pelech, 2018a). The weight is then adjusted based on a number of additional factors and translated into dollar amounts (Clemens and Gottlieb, 2017; Feldman, Dowd, and Coulam, 2015).

The Medicare Access and CHIP Reauthorization Act of 2015 introduced two ways to reward providers for quality and clinical practice improvement: (1) an incentive payment of 5 percent for those who participate in advanced alternative payment models and (2) a positive or negative payment adjustment for those who do not, via the Merit-Based Incentive Payment System (MedPAC, 2019).

Medicare Advantage (MA) plans are an alternative to Medicare FFS. These plans are administered by private insurance companies and negotiate rates with physicians to provide care. MA plans tend to pay providers at rates at or close to Medicare FFS rates, as do Medicaid managed care plans (Berenson, Ginsburg, et al., 2012). MA plans negotiate lower prices for some of the services for which Medicare FFS has been found to overpay relative to commercial insurers, such as lab tests and medical equipment (Trish et al., 2017).

Medicaid

There are two kinds of Medicaid payment structures: FFS, in which the state pays providers directly for each covered service, and managed care, in which the state pays a managed care plan a fee for each person enrolled (MedPAC, undated). Although most Medicaid enrollees are in managed care plans (81 percent as of 2016), the majority of Medicaid spending (just over 50 percent) comes from FFS arrangements (MedPAC, undated).

Under FFS, states set their own reimbursement rates for physician services, based on input from a variety of stakeholders (Lollar, 2016). The prices are then specified in a Medicaid State Plan, which is a contract with the Centers for Medicare & Medicaid Services (CMS) explaining how the state will run its Medicaid program. Any subsequent changes need approval at the federal level, including changes to provider reimbursement (Medicaid, undated).

Even though the prices are set by the state, Medicaid prices are indirectly influenced by the private sector: If reimbursement rates are too low, Medicaid beneficiaries could lose access to providers (Reinhardt, 2013).

Veterans Health Administration

The VHA, the nation's largest integrated health care system, provides care to U.S. military veterans (U.S. Department of Veterans Affairs, undated-b). The VHA is funded through a congressional appropriation, and most of the health care is provided within the system by health care providers who are salaried employees of the federal government (U.S. Department of Veterans Affairs, undated-a; Nugent and Hendricks, 2003). More recently, VHA policy has expanded access to care from non-VHA facilities under the Veterans Choice Program, which was recently replaced by the MISSION Act (U.S. Department of Veterans Affairs, 2019b). Under the Choice program, providers are required to accept Medicare payment rates (Miller, Cullen, and Lushniak, 2018). In 2018, the VHA spent \$62.9 billion on services provided at VHA facilities and \$14.9 billion on services provided in the community (U.S. Government Accountability Office, 2019).

A study conducted in 1999 compared actual VHA costs at six VHA medical centers with the FFS costs for the same services that would have been paid by Medicare. The study found that the VHA provided care at a lower cost (Nugent et al., 2004). More-recent evidence is mixed; one study of dialysis prices showed higher prices at the VHA (Hynes et al., 2012).

Commercial Health Plans

As of 2013, almost 95 percent of private sector insurers still used an FFS model (Zuvekas and Cohen, 2016). Only about 5 percent of physicians are paid by capitation. In fact, although health maintenance organization (HMO) plans themselves are capitated, they still pay physicians primarily on an FFS basis; fewer than 20 percent of patient visits to physicians covered by HMOs are paid by capitation (Zuvekas and Cohen, 2016).

Health care prices for physicians in the private sector are set by negotiation between insurance carriers and providers, in markets with varying degrees of competition (Clemens and Gottlieb, 2017). As a result, prices paid by private insurers “can vary substantially, for ostensibly similar services, across both providers and insurers” (Clemens and Gottlieb, 2017). However, some recent work has found less variation in physician prices (Whaley, 2015).

Commercial plans have been shown to respond directly to changes in Medicare prices: Claims data suggest that for every \$1.00 increase in Medicare prices, commercial plans implement a corresponding \$1.16 fee increase in their prices (Clemens and Gottlieb, 2017).

According to a recent Congressional Budget Office (CBO) working paper, many private health plans use a relative value unit (RVU) system that is similar to Medicare's. RVUs are a measure of value used in Medicare's reimbursement formula for physician services. The plans

then negotiate with physicians about how to translate RVUs into dollars and can develop different conversion factors by practice, hospital, or even specialty (Pelech, 2018a).

Dyckman and Associates, a health care consulting and litigation firm, surveyed commercial health plans for the MedPAC Advisory Commission in 2003 and found that all 33 surveyed health plans used payment methods modeled on the Medicare physician fee schedule, including 20 with minimal modification (Pelech, 2018a; Feldman, Dowd, and Coulam, 2015; Dyckman and Hess, 2003). Similarly, a 2017 study using physician payments from a large private insurer found that three-quarters of services were benchmarked to the Medicare physician fee schedule (Clemens, Gottlieb, and Molnár, 2017).

Federal regulations around Medicare affect out-of-network prices in Medicare FFS and Medicare Advantage. Federal regulations require physicians to accept Medicare FFS rates as payment in full for out-of-network services received by MA enrollees. These policies affect in-network pricing as well: “limits on out-of-network prices in MA plans limit the prices that insurers can negotiate in network” (Pelech, 2018b; U.S. Department of Veterans Affairs, undated-b).

Out-of-Pocket Prices for Insured and Self-Pay Patients

Medicare, Medicaid, the VHA, and commercially insured patients typically pay a per-visit copay (a flat charge regardless of the price of the service) or coinsurance (a percentage of the price of the service) for physician care (after having met any applicable deductibles).

“Self-pay” patients, meaning those not using insurance, could be responsible for the full billed amount to receive physician services. Physicians often require that uninsured patients pay up front for services. Patients who cannot afford the full billed amount might be able to negotiate a discounted price or a payment schedule with the provider. They might also pay with credit cards or could be turned away from care (Garfield, Orgera, and Damico, 2019).

Variation

There is abundant evidence that physician prices in the private sphere vary widely across providers, insurers, and care settings (Clemens and Gottlieb, 2017; Dunn and Shapiro, 2014; Reschovsky and White, 2014). In one study on negotiated physician prices, the authors found less variation in primary care, where prices ranged from 85 percent to 135 percent of the Medicare rate, while specialist prices exhibited wider variation—more than 100 percentage points in some markets. These differences are not explained by any characteristics that have been measured, such as patient age or gender, physician specialty, place of service, whether the physician was in the insurer’s provider network, or type of plan. One study found that the geographic area of the practice explained about one-third of the variation but noted that additional research would be needed to explain the remaining variation (Berenson, Ginsburg, et al., 2012; Baker, Bundorf, and Royalty, 2013). Another study found that increases in physician market power, particularly via market consolidation, led to higher negotiated prices (Sun and

Baker, 2015). Other work found that physician services provided in hospital outpatient departments have prices that are often twice as high as those provided in community settings, even for identical services, such as magnetic resonance imaging of the knee (Reschovsky and White, 2014). Furthermore, there was substantial variation across geographic regions, suggesting that the differences cannot be attributed solely to hospitals' higher operating costs.

A CBO analysis found that the average ratios of commercial prices to Medicare FFS prices in the most expensive metropolitan statistical areas “were at least 70 percent higher for all services than the average price ratios in the least costly areas” (Pelech, 2018a). The average ratios comparing Medicare Advantage to Medicare FFS prices varied much less (Berenson, Ginsburg, et al., 2012).

Researchers at the University of Chicago found that physicians in more-concentrated markets charged higher prices. Their work indicates that consolidation caused a 14 percent average price increase from 2007 to 2013 (Scheffler, Arnold, and Whaley, 2018). The increase was higher for specialists than for primary care physicians (Scheffler, Arnold, and Whaley, 2018). Other work has similar findings (Dunn and Shapiro, 2014; Austin and Baker, 2015; Baker, Bundorf, Royalty, et al., 2014; Gaynor, 2018; Gaynor, Ho, and Town, 2015). When insurance markets are consolidated rather than provider markets, negotiated prices are lower (Scheffler and Arnold, 2017).

What Influences the Level of Consumer Price and Quality Transparency?

Government

Government has an important role in promoting transparency of prices because physicians otherwise have little incentive to make price data publicly available. In October 2020, CMS released a final rule with price transparency requirements that, while aimed at insurers, should result in greater transparency of physician and hospital prices (Keith, 2020; Internal Revenue Service, Employee Benefits Security Administration, and Department of Health and Human Services, 2020). The rule requires commercial insurers to provide cost-sharing estimates to members via online tools, as well as to disclose negotiated prices for in-network providers and allowed amounts for out-of-network providers.

The 2011 U.S. Government Accountability Office (GAO) report *Health Care Price Transparency: Meaningful Price Information Is Difficult for Consumers to Obtain Prior to Receiving Care* encouraged the U.S. Department of Health and Human Services to “determine the feasibility of making estimates of complete costs of health care services available to consumers” (Boerner, 2014; U.S. Government Accountability Office, 2011). The issue of transparency attracted media attention, and, as of 2018, 26 states had statewide cost databases. However, in 2017, the advocacy group Catalyst for Payment Reform gave only seven of these states a passing grade on the accessibility and clarity of these price data (de Brantes et al., 2017).

Some researchers have suggested providing better access to health care prices online, which some states have done by mandating that payers and providers make these prices available (Kratka et al., 2018). For example, New Hampshire has an online price transparency tool that provides negotiated prices and OOP prices for a number of health care services (Mehrotra, Brannen, and Sinaiko, 2014). Many states (including New Hampshire) require insurers to submit their claims data to all-payer claims databases (APCDs); these data can be used for price transparency initiatives. However, the Supreme Court’s decision in *Gobeille v. Liberty Mutual Insurance Company* stated that the Employee Retirement Income Security Act of 1974 (ERISA) preempts states’ authority to require APCD submission from self-insured employers, thereby undermining the completeness and utility of transparency tools that use APCD data (Fuse Brown and King, 2016). Federal legislation that passed in June 2019 would have established a federal APCD, which would not, in theory, be subject to ERISA preemption. However, an update to the legislation in December 2019 moved to use federal dollars to establish a grant program to help create and improve state APCDs (McIntire, 2019). The legislation was ultimately passed by Congress as the *No Surprises Act* and was signed into law in December 2020. The act establishes one-time federal grants to states to either establish or improve an APCD but does not address ERISA preemption (Hoadley, Keith, and Lucia, 2020; Fuchs and Hoadley, 2021).

Another example of a state initiative is a price transparency tool provided to enrollees by the California Public Employees’ Retirement System (CalPERS), which manages health benefits for state employees. The tool allows members to compare prices and OOP spending for in-network providers, including for common outpatient services (Desai et al., 2017). However, the New Hampshire and CalPERS tools are not yet the norm; even when prices are available, it is not always clear what they refer to, as most websites do not specify whether the price quoted is the consumer’s OOP cost (Kratka et al., 2018). Where they do exist, current state price transparency laws generally have not applied to outpatient settings (Saloner et al., 2017). There are also costs to laws that require providers to disclose the price of care before a service is provided. The laws could motivate providers to be more forthcoming about their prices; however, they also create new burdens for physician offices (Saloner et al., 2017). There could also be inconsistent compliance with such laws: For example, a report out of Massachusetts suggested poor compliance by the three biggest insurers in the state (Health Care for All, undated).

A recent effort to provide cost and quality information to consumers is Care Compare (previously known as Physician Compare), a CMS website designed for consumers to help them “make informed choices about the health care they receive through Medicare” (Medicare, undated-c). Mandated by the Affordable Care Act (ACA), the website was launched in 2010 and includes performance scores as well as whether the provider accepts Medicare payment rates. Care Compare does not include other price data, such as provider-specific negotiated rates or OOP amounts.

Commercial Payers

The peer-reviewed literature had limited information about the role of price transparency for commercial payers. A recent survey of commercial health plans found that the vast majority (94 percent) offered some online pricing tool, and 71 percent offered estimates for physician services (Higgins, Brainard, and Veselovskiy, 2016). However, only about 2 percent of plan members used these tools, suggesting that there could be limited knowledge that the tools exist or issues with ease of use (de Brantes et al., 2017). Insurers' online pricing tools might also be of limited use because they typically provide broad ranges of prices, and those prices are not always based on the most recent negotiated rates (Higgins, Brainard, and Veselovskiy, 2016). Although insurers have incentive to steer consumers to lower-cost providers, they might do so in other ways, such as tiered provider networks (Sinaiko, Landrum, and Chernew, 2017). These limitations of insurer-provided transparency tools highlight the need for government price transparency initiatives, such as federal initiatives that require hospitals to disclose negotiated prices and state regulations that require insurers to submit their data to APCDs.

The effectiveness of these tools is still uncertain. One analysis suggests that, in an environment of increasing transparency, finance leaders will have to “identify the practical steps and data analytics tools needed to develop accurate pricing information and to find ways to share that information with patients that are in keeping with organizational interests” (Whitehouse, 2015).

Data Availability

A major barrier to transparency is lack of information: Transparency cannot be provided when prices are not known. As noted by the Agency for Healthcare Research and Quality in the Consumer Assessment of Healthcare Providers and Systems (CAHPS) *Ambulatory Care Improvement Guide*, “Many providers do not even know the price of the services they offer (since each insurer has its own negotiated rates), and most do not know the prices of the tests and procedures they recommend and order for their patients” (CAHPS, 2016).

The ability to obtain price information can vary substantially. In a secret shopper exercise, trained interviewers posed as nonelderly adults seeking new patient primary care appointments and asked the price of such an appointment (Saloner et al., 2017). The callers presented themselves as holding different kinds of insurance. While 89 percent of uninsured callers received price information, only 62 percent of those with employer-sponsored insurance were quoted a price. The prices quoted varied by insurance status, type of physician office, and county-level uninsurance rate (Saloner et al., 2017).

When websites about prices exist, at least as of 2012, they focused on inpatient care for medical conditions (73 percent) or surgeries (71 percent). In systematic internet searches to identify publicly available, patient-oriented websites for price comparison, researchers found that information about outpatient services was available much less often (diagnostic or screening

procedures were available only at 37 percent of the sites, radiology at 23 percent of the sites, prescription drug costs at 15 percent of the sites, and laboratory tests at 10 percent of the sites; Kullgren, Duey, and Werner, 2013).

What Is the Relationship Between Price, Quality, and Advertising?

We identified few articles that examined physician advertising. Direct-to-consumer advertising for health care services has been increasing: A review looking at the two decades between 1997 and 2016 found that direct-to-consumer advertising for health services increased from \$542 million to \$2.9 billion. However, the largest increases were from hospitals, dental centers, cancer centers, mental health and addiction clinics, and medical services (Schwartz and Woloshin, 2019).

A lack of advertising on price in the legal industry could provide some parallels with lack of advertising by physicians. The legal blog *Above the Law* suggests several reasons why lawyers may not advertise prices: First, it is difficult to commit to a price in advance without knowing anything about the client; second, the work is unpredictable; and, third, advertising prices can lead to a “race to the bottom,” with attorneys trying to undercut one another on price (Chung, 2017). The same broad principles could be applicable to physicians: The type and amount of care can be difficult to predict before seeing a patient, and physicians might be concerned that posting prices could lead to increased competition on prices.

Our literature search did not identify any articles that assessed the extent to which physicians can advertise price or quality information. In addition to the principles noted above, physicians might not advertise on price due to clauses in insurer-provider contracts that limit the disclosure of negotiated pricing information. The literature primarily cited these clauses related to hospital-insurer contracts, but it is likely that they apply to physicians as well (Beck, 2014). Indeed, providers do tend to advertise on procedures that are largely not covered by insurance, such as laser eye surgery, in vitro fertilization, dental crowns, and cosmetic rhinoplasty. However, even in these markets, there is some evidence that there is limited price-shopping by consumers, despite the fact that they face the full price of the procedures (Tu and May, 2007).

4. Hospitals

This chapter summarizes the results of our environmental scan of the literature on hospitals and other facilities. We defined the market segment “hospitals and other facilities” to include inpatient and outpatient care provided in hospital settings, ambulatory surgical centers, and care provided in skilled nursing facilities.

Literature on this topic focuses primarily on care provided in an inpatient hospital setting. Our search identified a number of articles describing how hospital prices are set and identifying price transparency initiatives. Very few articles addressed hospital advertising of price and quality.

We identified the following key findings from the environmental scan:

- Public payers set prices prospectively; private payers negotiate prices and discounts with hospitals.
- Medicare FFS indirectly influences rates paid by Medicare Advantage and commercial payers.
- A number of news sources noted recent federal efforts to improve hospital price transparency—specifically, federal rulemaking that requires hospitals to release chargemaster data and negotiated prices. A recent final rule also requires insurers to disclose negotiated prices.
- Limitations of government price transparency efforts include their focus on charges or prices that are not those paid by the consumer.
- Other barriers to price transparency include the extent to which it is feasible or legal for hospitals to release negotiated prices.
- Data on hospital quality are available to consumers primarily via CMS’s Care Compare tool (previously known as Hospital Compare) and through quality data from U.S. News. However, there are limitations on the extent to which consumers can make meaningful price and quality comparisons between hospitals.
- There appears to be little to no advertising of pricing information by hospitals; this could be driven by clauses in insurer-hospital contracts that prohibit prices from being disclosed and by hospital concerns that this could drive down prices.

How Are Hospital Prices Set?

Throughout this section, we distinguish among four key terms:

- *Prices* are the actual paid amounts received by a hospital, typically through a combination of insurer and individual payments.

- *Charges* are the list prices on a hospital's chargemaster, which are generally not related in any systematic way to the actual amounts paid by insurers (Reinhardt, 2006).
- *Costs* are the amount incurred by the hospital for providing a patient's care.
- *OOP prices* are the amount paid by the consumer.

Medicare

Medicare FFS sets rates for inpatient hospital care using the Inpatient Prospective Payment System (IPPS; Centers for Medicare & Medicaid Services, undated-a). Under the IPPS, each case seen by a hospital is categorized into a diagnosis-related group (DRG). Medicare's payment rate for each DRG is set prospectively, based on the average cost of treating patients in that DRG. Payments are adjusted based on the regional wage index, whether the hospital receives an adjustment for treating a disproportionate share of low-income patients, and whether it is a teaching hospital.

Medicare FFS pays for outpatient hospital services in a similar fashion via the Hospital Outpatient Prospective Payment System (OPPS; Reinhardt, 2006; Guidi, 2010). Under the OPSS, cases are categorized into Ambulatory Payment Classifications (APCs), and payments to hospitals are determined for each APC based on the average cost of services for the APC. Payments are adjusted based on the regional wage index. Medicare FFS prospectively sets rates for inpatient and outpatient care.

MA managed care plans are administered by private insurers to provide Medicare Part A, Part B, and sometimes Part D coverage to Medicare beneficiaries (Medicare, undated-c). Insurers and hospitals negotiate prices for hospital services for MA beneficiaries similar to the way in which prices are set for commercial insurance products, described in more detail below (Berenson, Sunshine, et al., 2015; McGuire, Newhouse, and Sinaiko, 2011). A number of recent studies have found that MA hospital rates are very similar to those paid by Medicare FFS, partially due to regulations that require out-of-network hospitals to accept payment at Medicare FFS rates for MA patients. Therefore, hospitals have little leverage to negotiate higher rates (Berenson, Sunshine, et al., 2015; Curto et al., 2019; Maeda and Nelson, 2018; Baker, Bundorf, Devlin, et al., 2016). Furthermore, based on interviews with senior personnel from health plans and hospitals, the authors of one study noted that negotiations between health plans and hospitals often include both commercial insurance products and MA and that negotiators are mindful of the rates negotiated for the other products.

Medicaid

Hospital payments by state Medicaid programs are a combination of a base payment and a supplemental payment (Cunningham et al., 2016). The base payment is the rate paid by Medicaid FFS or Medicaid managed care for care provided to Medicaid beneficiaries; supplemental payments are provided by the state and might or might not be directly tied to provided services.

Supplemental payments can include Disproportionate Share Hospital payments to hospitals that treat a disproportionate number of low-income patients, as well as state supplemental payments that are often financed through upper payment limits, intergovernmental transfers, or provider taxes (Cunningham et al., 2016).

Medicaid base payments can be considered the “price” of hospital care to Medicaid beneficiaries and can vary from state to state and between Medicaid FFS and Medicaid managed care. In general, Medicaid FFS programs pay for inpatient hospital services through prospective payments based on DRGs (similar to Medicare FFS) or by prospective per diem payments (Reinhardt, 2006). Outpatient services are largely based on fee schedules imposed by the state or on the APC system used by Medicare. Like MA plans, Medicaid managed care plans negotiate prices with hospitals.

Veterans Health Administration

The VHA is the nation’s largest health care system. Most of the health care is provided within the system by health care providers who are salaried employees of the federal government (Trivedi et al., 2011). A recent federal rule finalized that the VHA pays non-VHA hospitals, at most, the prospective payment rate set by Medicare (U.S. Department of Veterans Affairs, 2019a).

Commercial Health Plans

The way that commercial health plans pay hospitals varies, but prices are generally based on discounted charges, per diem payments, or episodes of care (i.e., DRGs; Reinhardt, 2006). The key feature that determines the prices paid to hospitals by commercial insurers is aggressive negotiation (Berenson, 2015). Regardless of the type of payment, hospitals and insurers enter into annual negotiations to determine the dollar amount per diem, the dollar amount per DRG unit, or the discount on charges (Reinhardt, 2006).

Prices in the hospital market vary substantially (Craig, Ericson, and Starc, 2018; Hsia and Akosa Antwi, 2014; Hsia, Akosa Antwi, and Weber, 2014; Hsia et al., 2014). A 2019 report found that hospital prices paid by commercial health plans ranged from 150 percent to more than 300 percent of Medicare rates across states and from 150 percent to more than 400 percent of Medicare rates across health systems (White and Whaley, 2019). Cooper et al., 2019, found that hospitals in monopoly markets had prices that were 12.5 percent higher than hospitals in more competitive markets. They found substantial variation in prices in competitive and noncompetitive markets even for services that were plausibly identical, such as magnetic resonance imaging.

A 2010 examination of health care costs and drivers by the Massachusetts Attorney General notes that “Price variations are not correlated to (1) quality of care, (2) the sickness of the population served or complexity of the services provided, (3) the extent to which a provider cares for a large portion of patients on Medicare or Medicaid, or (4) whether a provider is an academic

teaching or research facility” (Massachusetts Attorney General, 2010, p. 3; underline in original). Rather, price variations are correlated to “market leverage as measured by the relative market position of the hospital or provider group compared with other hospitals or provider groups within a geographic region or within a group of academic medical centers” (Massachusetts Attorney General, 2010, p. 4). A detailed discussion of existing work in the *Handbook of Health Economics* comes to the same conclusion that variation in prices is unlikely to be fully explained by underlying costs, quality, or demand and is largely linked to market power (Gaynor and Town, 2011).

Other research has found that higher hospital prices tend to be associated with larger hospitals, teaching hospitals, system membership with large market shares, the provision of specialized services, and smaller market share by health plans (White, Reschovsky, and Bond, 2014; Wu, 2009).

The government indirectly influences commercial prices through Medicare pricing. There are two schools of thought about how this influence works. Standard economic theory predicts that when Medicare reduces prices, providers will reduce their volume of Medicare patients and reduce prices to commercial insurers to attract more privately insured patients (Feldman, Dowd, and Coulam, 2015). Cost-shifting theory predicts that when Medicare reduces prices, providers increase prices to commercial insurers to make up the difference. While cost-shifting is commonly cited as the prime influence, a 2011 review of the literature found that the true extent of cost-shifting was limited (Frakt, 2011). Other work found that when Medicare reduced prices, commercial prices fell, supporting standard economic theory (White, 2013). Commercial prices remain substantially higher than Medicare prices in many markets, a finding that could be explained by price discrimination (Reinhardt, 2006). A recent paper found that up to 57 percent of hospital cases covered by private insurers had prices that were directly linked to Medicare’s prospective pricing (Cooper et al., 2019).

The government could also indirectly influence commercial prices via regulations such as antitrust policy. As noted above, prices vary substantially by the amount of market power a hospital has, so antitrust policy can influence prices by influencing the level of market concentration.

Out-of-Pocket Price for Insured and Self-Pay Patients

Medicare, Medicaid, and commercially insured patients typically pay a per-day or per-visit copay or coinsurance for hospital care (after having met any applicable deductibles). Most veterans receiving care at VHA facilities do not pay any OOP expenses for inpatient care.

Uninsured and other self-pay patients are generally billed the amount on the hospital’s chargemaster for services provided, even though those charges are generally well above what public and private insurers pay (Garfield, Orgera, and Damico, 2019; Reinhardt, 2006). Hospitals sometimes offer uninsured patients discounted prices based on their chargemasters, and some patients might receive care free of charge on a charitable basis. However, only about one-quarter

of uninsured patients reported receiving discounted or free care in 2015 (Garfield, Orgera, and Damico, 2019).

State Rate-Setting Models

The state of Maryland sets hospital rates at the state level. Beginning in the late 1970s, and most recently extended for an additional five years in 2019, Maryland has a Medicare waiver that allows it to require that all health care payers pay the same for inpatient and outpatient hospital services. According to Patel et al., 2015, the rate-setting eliminated any cost-shifting among payers and equitably distributed the costs of uncompensated care and medical education. However, it meant that Medicare paid higher rates for hospital services in Maryland than under the national payment program, costing roughly an additional \$500 million (Patel et al., 2015; Pauly and Town, 2012). Vermont has recently implemented a similar system (Centers for Medicare & Medicaid Services, undated-c). Other states have instituted similar models in the past, but they have ended, largely due to deregulatory pressure (Rocco et al., 2017).

What Influences the Level of Consumer Price and Quality Transparency?

In this section, we highlight the ways in which the government, private payers, and availability of relevant data aid or present barriers to price and quality transparency. However, we note here that in the past several years, hospitals themselves have increasingly made price transparency tools available online for a subset of common services (Cohen, 2019; Meyer, 2018b).

Government

Promoting transparency. State and federal governments can promote price transparency by creating or requiring price transparency initiatives. For example, in July 2019, CMS released the executive order *Improving Price and Quality Transparency in American Healthcare to Put Patients First*. In particular, CMS finalized a rule in November 2019 with consumer-friendly price transparency requirements for hospitals, including making available machine-readable standard charges for all items and services and disclosing the payer-specific negotiated prices for 300 common shoppable services in a consumer-friendly way (Commins, 2019; Wynne, LaRosa, and Cowey, 2019). In addition, CMS released a final rule in October 2020 that includes price transparency requirements aimed at insurers (Keith, 2020; Internal Revenue Service, Employee Benefits Security Administration, and Department of Health and Human Services, 2020). The rule requires commercial insurers to provide cost-sharing estimates to members via online tools, as well as to disclose negotiated prices for in-network providers and allowed amounts for out-of-network providers.

A number of state-based online price transparency initiatives also report prices for inpatient care (Kullgren, Duey, and Werner, 2013). Many states now have APCDs and use them for

consumer price transparency initiatives (Rocco et al., 2017). For example, Colorado uses APCD data to let consumers compare costs of procedures across hospitals, and New Hampshire uses APCD data to provide detailed online price and quality information for common health services. However, research shows that the impact of the New Hampshire tool has largely been due to changes in plan benefit design as a result of highlighting the variation in health care prices rather than directly through consumer price shopping (Tu and Gourevitch, 2014). Only 1 percent of New Hampshire residents accessed New Hampshire's online price transparency tool between 2011 and 2013 (Mehrotra, Brannen, and Sinaiko, 2014).

The key tool through which the federal government supports hospital quality transparency is the Care Compare website. Care Compare allows consumers to compare hospital performance on a number of measures related to patient experience, timely and effective care, complications, readmissions and deaths, use of medical imaging, and payment and value of care (Centers for Medicare & Medicaid Services, undated-b).

Limiting transparency. A key question for recent federal price transparency efforts is whether they actually make the relevant prices transparent. In 2018, CMS released the FY2019 Hospital Inpatient Prospective Payment Systems Final Rule, which included a provision requiring hospitals to release their chargemaster information annually (Centers for Medicare & Medicaid Services, 2018). However, using hospital charge data in price transparency efforts might not provide consumers with the most relevant data. A number of sources note that given the disconnect between hospital charges and prices (Reinhardt, 2006; Meyer, 2018a; Meyer, 2019; Whaley, 2018), chargemaster data do not reflect costs paid by most insurers or patients and, therefore, might not be particularly useful in price transparency initiatives (Reinhardt, 2006). The most recent federal rule on price transparency does require greater transparency of hospitals' negotiated prices, although there is less focus on the OOP prices, which are the prices actually paid by consumers. Similarly, the Care Compare tool also does not provide OOP price information (U.S. Government Accountability Office, 2014; Internal Revenue Service, Employee Benefits Security Administration, and Department of Health and Human Services, 2020).

Another barrier to price transparency is the extent to which it is possible for hospitals to provide useful price information to consumers. For example, California hospitals are required to provide price estimates to uninsured patients. However, based on a study that sent letters of inquiry to hospitals asking for pricing on one of three common procedures (laparoscopic cholecystectomy, a hysterectomy, or routine screening colonoscopy), only 28 percent of hospitals even responded to the letters, and of those, only 10 percent included both physician and facility fees (Farrell et al., 2010). Some hospitals have also argued that it is logistically and financially burdensome to post negotiated prices because a given hospital could have hundreds of contracts (King, 2019a).

An additional consideration is whether price transparency efforts should focus on employers in addition to individual consumers of health care. White et al., 2014, estimated that requiring all

private health plans to provide OOP pricing tools to consumers could save \$18 billion in health care spending over ten years; however, using state-based APCDs to provide hospital price information to employers and physicians could save \$61 billion over the same time period.

A few government decisions or regulations could act as barriers to price transparency. For example, in *Gobeille v. Liberty Mutual Insurance Company*, the Supreme Court determined that ERISA preempts state APCD reporting requirements for self-insured employers (Fuse Brown and King, 2016). This could substantially impact the accuracy of analyses based on APCDs, because 61 percent of individuals enrolled in employer-sponsored health insurance are enrolled in fully or partially self-funded plans (Kaiser Family Foundation and NORC at the University of Chicago, 2019). Federal legislation that passed in June 2019 would have established a federal APCD. A federally mandated APCD would not, in theory, be subject to ERISA preemption. However, the legislation was updated in December 2019 and no longer would establish a national APCD. It would instead use federal dollars to establish a grant program to help create and improve state APCDs (McIntire, 2019). The legislation was ultimately passed by Congress as the *No Surprises Act* and was signed into law in December 2020. The act establishes one-time federal grants to states to help create or improve state APCDs but does not address ERISA preemption (Hoadley, Keith, and Lucia, 2020; Fuchs and Hoadley, 2021).

Another example is the Federal Trade Commission (FTC) and Department of Justice (DOJ) Statements of Antitrust Enforcement Policy in Health Care, issued in 1996. The intention of Statement 6 on provider participation in exchanges of price and cost information was to limit the sharing of price data in cases where it might have anticompetitive effects, but it could limit price transparency as well. For example, the FTC encouraged Minnesota to focus on consumer price transparency initiatives while cautioning against making negotiated rates public in highly concentrated markets (Gudiksen, Chang, and King, 2019). Another (unintended) challenge to price transparency is the need to balance patients' rights to privacy under the Health Insurance Portability and Accountability Act versus making data easily available and shareable for transparency efforts (Institute of Medicine, 2009).

Commercial Payers

Promoting transparency. A number of commercial payers have recently rolled out online price transparency tools. For example, Blue Cross Blue Shield now provides a tool that supplies pricing information for common elective procedures based on its own claims data ("Price Check," 2011). UnitedHealth offers a tool that allows members to compare both negotiated rates and OOP costs, while Aetna and Anthem provide information on discounted prices to members (Higgins, Brainard, and Veselovskiy, 2016; Beck, 2014; U.S. Government Accountability Office, 2011). As of 2014, most plans (98 percent) provide online price calculator tools that allow plan members to calculate OOP costs, although only about 2 percent of members actually access them (Beck, 2014). These tools have important limitations, however, highlighting the need for government transparency requirements and initiatives. For example, less than half of

tools actually take the plan's current negotiated rates into account when providing price estimates (Higgins, Brainard, and Veselovskiy, 2016), and cases have been reported in the media of actual prices faced by consumers far exceeding the range provided by insurer price estimator tools (Gantz, 2019).

Another recent effort supported by commercial payers is the Health Care Cost Institute (HCCI). When it launched, HCCI partnered with Aetna, Humana, and UnitedHealthcare to develop an online tool for consumers with comprehensive market-level price and quality information (UnitedHealth Group, 2014). There are also other third-party price transparency tools, such as Castlight, but our literature search did not identify the extent to which they are used by commercial insurers.

Limiting transparency. A potential barrier to hospital price transparency is the concern that negotiated rates might not be permitted to be made public under some contracts. One industry news article noted that it will be difficult to comply with requirements to post negotiated rates because some contracts do not allow it. The same concern was noted by news articles, peer-reviewed articles, and government reports (Beck, 2014; Reinhardt, 2006; U.S. Government Accountability Office, 2011). Furthermore, the insurance industry is also pushing back against any policy that would require hospitals to release negotiated prices, noting that this could “hamper competitive negotiations and push healthcare prices higher” (King, 2019b). This concern was also noted by news articles, peer-reviewed articles, and government reports (Beck, 2014; Reinhardt, 2006; U.S. Government Accountability Office, 2011).

However, Congress is considering action on this issue: Bipartisan legislation voted out of the Senate Health Education Labor and Pensions Committee on June 26, 2019 (the Lower Health Care Costs Act of 2019), would outlaw clauses in contract language that forbid parties to price negotiations from revealing those fees (Blumenthal, Gustafsson, and Seervai, 2019). The legislation had not yet been voted on by Congress as of March 2021.

Data Availability

A critical concern regarding data on hospital quality is that they might not give consumers information with which to make meaningful comparisons between hospitals. For example, Care Compare, the CMS initiative that provides hospital quality information based on care of Medicare beneficiaries, provides only limited information to consumers on hospital performance measures. Care Compare presents scores only as summaries with one of three values: better than, no different from, or worse than the national mean. Dor, Encinosa, and Carey, 2015, noted, “These categories are determined according to the 95 percent confidence interval estimates produced by the underlying risk-adjustment model employed by CMS. The vast majority of hospitals fall within the confidence intervals of the ‘no different’ category, so there is little variation” (Dor, Encinosa, and Carey, 2015). CMS could consider presenting more-detailed quality score information, rather than simply whether scores differ from the national mean. Quality information based on experiences of non-Medicare beneficiaries is also limited.

The other major source of consumer-friendly hospital quality information is the U.S. News hospital ratings, which are based on four elements: patient outcomes, patient experience, other (hospital-level) care-related indicators, and expert opinion (U.S. News staff, 2019). However, similar to Care Compare, patient outcomes are based on Medicare data alone and might not be representative of other patient populations.

Another concern with Care Compare is the limited extent to which data about quality and pricing are linked. This is particularly important: Research shows that when shopping for health care services, almost one-quarter of consumers might consider high prices to signal high quality (U.S. Government Accountability Office, 2011; Phillips, Schleifer, and Hagelskamp, 2016; Schleifer, Silliman, and Rinehart, 2017). However, the Care Compare tool only provides very broad pricing information, including Medicare spending per beneficiary (displayed as a ratio, relative to the state and national averages) and whether payments for four conditions (heart attack, heart failure, hip or knee replacement, and pneumonia) are higher, lower, or no different from the national average (Centers for Medicare & Medicaid Services, undated-b). It does not include hospital- or insurer-specific pricing information. A 2014 GAO report noted concerns with how information is presented to consumers, citing lack of clarity in language and no option for consumers to customize results (U.S. Government Accountability Office, 2014).

What Is the Relationship Between Price, Quality, and Advertising?

Our literature search identified only two articles addressing the link between price and quality information and hospital advertising. The first, which investigated how advertising affected quality (as opposed to how quality affected advertising), found that hospital advertising predicted performance on Hospital Consumer Assessment of Healthcare Providers and Systems global measures in competitive markets (Huppertz et al., 2017). This was likely due to improved brand recognition, which is known to positively impact consumer opinions. The second study conducted a structured review of the websites of 10 percent of U.S. hospitals to examine the price and quality information available to consumers (Muhlestein, Wilks, and Richter, 2013). The study found that only 1 percent of hospitals advertised about pricing on their websites, and 6 percent advertised about quality. The authors found that the available information was not sufficient to provide meaningful comparisons between hospitals.

The lack of advertising of price information could also be linked to clauses in some insurer-provider contracts that prohibit negotiated rates from being made public (Beck, 2014; Reinhardt, 2006). Furthermore, hospitals might be concerned that disclosing price information could lead to a “race to the bottom” in which insurers demand the lowest prices offered (Wilde Mathews, 2019). The dearth of relevant articles in this area could be because hospitals tend not to advertise price and quality information, but it might also reflect lack of detailed data on content or spending for hospital advertising.

We identified a handful of lawsuits filed by the DOJ to address practices by hospitals or health systems that limited marketing. In these cases, the hospitals or health systems generally sought to use their market power to limit marketing for anticompetitive reasons. The first case involved a health system in Iowa limiting the types and amount of advertising by each member hospital (*United States v. Hospital Association of Greater Des Moines, Inc. . . .*, 1993). The DOJ alleged that this limited price and quality competition among the hospitals. The case ended in a settlement in which the health system and member hospitals agreed not to enter into any agreements amongst themselves related to the type of advertising or amount of spending on advertising. Another lawsuit involved a health system exercising its market power to limit insurers from encouraging consumers from seeking higher-value care from other providers and from sharing information about the cost and quality of competitors (*United States and the State of North Carolina v. the Charlotte-Mecklenburg Hospital Authority, d/b/a Carolinas Healthcare System*, 2019). Finally, two other lawsuits involved health systems and hospitals entering into agreements with other health systems or hospitals to limit marketing (*United States v. Charleston Area Medical Center, Inc., and St. Mary's Medical Center, Inc.*, 2016; *United States and State of Michigan v. Hillsdale Community Health Center . . .*, 2018). For example, in one case, two large medical centers had agreed to limit marketing to specific geographic areas to maintain market power in those areas (*United States v. Charleston Area Medical Center, Inc., and St. Mary's Medical Center, Inc.*, 2016). Given the anticompetitive nature of the agreements that brought about these cases, all of these lawsuits ended in settlements in which the hospitals or health systems were no longer permitted to limit marketing.

5. Pharmaceuticals

Overview

This chapter summarizes the results of our environmental scan of the literature on pharmaceuticals. We defined the market segment “pharmaceuticals” as all prescription drugs dispensed or administered to patients at outpatient pharmacies (such as CVS, Walgreens, etc.) or in a physician’s office.

There is minimal literature focused on the topics of price transparency, quality, and advertising in the pharmaceutical sector. The literature we identified in our search focused largely on pharmaceutical pricing. Only two articles specifically focused on direct-to-consumer advertising, and one focused on quality transparency. Additional searches for information on advertising of drug prices or quality did not generally return results, which can likely be attributed to the fact that pharmacy marketing generally focuses on attracting consumers to the store to purchase products other than medications. One important exception was the marketing efforts associated with the GDDPs, which were designed to ensure that consumers were aware of those benefits and came to the pharmacy specifically to take advantage of those discounts.

We identified the following key findings from our environmental scan:

- The net price, which is the final price paid for a given drug across all payers (including consumers), is generally not disclosed publicly due to agreements between payers and pharmaceutical manufacturers.
- Self-pay prices faced by consumers in pharmacies (either because of uninsurance or because of a high-deductible plan that charges full prices) are set by individual pharmacies.
- Consumer prices for pharmaceuticals are available via different tools, but the extent to which they are used to assist consumers in shopping for prices is uncertain.
- Opportunities exist for the government to encourage increased price and quality transparency for pharmaceuticals, such as emphasizing development of comparative and cost-effectiveness measures.

How Are Prices Set?

Pharmaceutical pricing, as with many other segments in the health care system, involves a complex set of actors and many different stages. For brand-name prescription drugs, which are usually the first product in either the class or for that particular drug to enter the market, pharmaceutical manufacturers establish a list price, which is the publicly stated price at which they expect to sell the drug. The list price is usually not the price paid by any downstream entities involved in the supply and use of the prescription drug.

Prescription drugs are sold by manufacturers to wholesalers, which are intermediaries that sell the drugs to pharmacies and physician offices (The Health Strategies Consultancy LLC, 2005; Joint Task Force on the Fair Pricing of Prescription Drugs, 2018). Wholesalers pay a price that is lower than the list price. This price is referred to as the Wholesale Acquisition Cost (WAC; The Health Strategies Consultancy LLC, 2005; Ohn and Kaltenboeck, 2019). Wholesalers in turn sell the prescription drugs to pharmacies and other entities that will dispense or administer the medications to patients.

Health care payers, which include health plans (Medicare Part D and commercial enrollees), pharmacy benefit managers (organizations that manage pharmacy benefits on behalf of health plans), the government (Medicaid, Medicare Part B, and the VHA), and sometimes patients themselves (via self-pay), reimburse pharmacies and other suppliers for the drug, plus dispensing fees. Reimbursement rates are based on factors that differ across payer type and across the setting in which the drug is dispensed and administered.

Health Plans

Health plans negotiate outpatient prescription drug reimbursement rates for Medicare Part D and commercial plan enrollees with pharmacies that belong to the health plan's network. Reimbursement rates for branded drugs are usually based on a benchmark price established through negotiation or based on the WAC. Generic drugs are reimbursed at the Maximum Allowable Cost (MAC). This is the maximum price at which a given health plan will reimburse pharmacies for dispensing generic drugs. The MAC is established via negotiations between the pharmacy and the health plan (The Health Strategies Consultancy LLC, 2005). If pharmacies are able to purchase the generic drug for less than the MAC, they retain the difference as additional revenue.

Health plans also negotiate with pharmaceutical manufacturers of branded drugs for rebates, which are reimbursements made from manufacturers to health plans in exchange for the health plan placing the drug on a lower cost-sharing tier, which makes the drug less expensive for patients, or for the health plan achieving a previously agreed volume-based milestone of drugs dispensed (The Health Strategies Consultancy LLC, 2005).

The final price for a given drug is the net price paid by the health plan, plus any cost-sharing paid by the patient, for the drug—this price takes into account pharmacy reimbursements and any manufacturer rebates. This net price, inclusive of rebates and other discounts, is generally never disclosed outside of health plans, reflecting a significant lack of price transparency (Kirchhoff, Johnson, and Thaul, 2018). However, health plans offering Medicare Part D coverage are required to pass rebates through to Medicare beneficiaries via lower premiums.

Government

A number of government entities have established pharmaceutical reimbursement rates for their respective health care programs. Medicaid programs have access to preferential

manufacturer rebates via the Medicaid Drug Rebate Program. As part of this program, Medicaid programs agree to cover all of a given manufacturer's prescription drugs in exchange for receiving rebates that are calculated based on whether the drug is branded or generic. Branded drug rebates are the greater of 23 percent of the Average Manufacturer Price (AMP), which incorporates discounts provided to other purchasers, or the difference between the AMP and the best price (the lowest price the manufacturer sold the drug for in the market; Baghdadi, 2017). Generic drug rebates are 13 percent off of the AMP. Medicaid programs are also able to negotiate supplemental rebates, in addition to the federally mandated rebates, via the creation of Preferred Drug Lists (Ohn and Kaltenboeck, 2019; Congressional Budget Office, 2019).

Medicare Part B, which covers physician services, reimburses providers for administering prescription drugs to patients in their offices or outpatient settings. Part B drugs are reimbursed based on a formula established by the Medicare Program, equal to the average sales price (ASP) at which the manufacturer sells the drug to the provider plus 6 percent (Danzon and Taylor, 2010).

The VHA negotiates prices for prescription drugs dispensed via its in-network hospitals, clinics, and pharmacies. The VHA has a national formulary and establishes contracts with manufacturers stipulating the price for each drug. For drug classes with therapeutic substitutes, the VHA negotiates with manufacturers for preferential inclusion on the formulary in exchange for lower prices and exclusion of other competitor prescription drugs. For some drugs, VHA prices are 35 percent lower than those paid by Medicare Part D beneficiaries (Huetteman, 2019).

Government reimbursement rates for health care programs can have a ripple effect on other payers. The Medicaid "best price" rule creates a floor for prescription drug pricing: Manufacturers are unwilling to offer lower prices to other payers for fear of triggering the best price clause and being required to offer the same pricing to Medicaid (Baghdadi, 2017).

The VHA is exempt from the Medicaid best price rule. However, the VHA represents a relatively low market share for the entire country, so its negotiated prices are unlikely to affect other payers.

The Medicare Part B ASP + 6 percent reimbursement approach has been generally adopted by other payers (Werble, 2017). In this case, the government led the way with pricing.

Pharmacies

Pharmacies also play an important role in establishing prescription drug prices. There are a number of different types of pharmacies, including independent pharmacies, grocery store pharmacies, big-box pharmacies (e.g., Walmart or Target), and chain pharmacies (e.g., CVS or Walgreens). Each type of pharmacy has different profit-making considerations as part of its business strategy in dispensing pharmaceuticals. For example, big-box and chain pharmacies might offer additional discounts on prescriptions because they expect customers to purchase other items while they are in the store (Choudhry and Shrank, 2010). Independent pharmacies

might focus more on the consumer experience to encourage repeat business for refill prescriptions.

As described above, pharmacies are reimbursed by health plans and government payers for dispensing covered prescription drugs to plan enrollees. Those reimbursement rates are determined via negotiations with the different payers.

Pharmacies also dispense prescription drugs to patients without health insurance or who are enrolled in high-deductible plans and who therefore might need to pay the full price of the prescription out of pocket. Prices paid by patients in these two categories are established by individual pharmacies and are therefore not based on a simple or straightforward formula. Previous studies have found that drug prices vary across pharmacies even within the same ZIP code or geographic area (Arora et al., 2017; Gellad et al., 2009; Hauptman, Goff, and Vidic, 2017; Rodwin, 2019), with one study finding up to \$52 of variation in price for a single drug within the same ZIP code (Arora et al., 2017). Variation in pharmacy prices is likely due to different discount programs or coupons offered or accepted by individual pharmacies.

Starting in 2006, big-box and chain pharmacies, including Walmart, Target, and Walgreens, began offering GDDPs. These programs offered very low prices (often \$4 for a 30-day supply) for a specific set of generic prescription drugs. These programs are offered outside of insurance coverage and are available to any customer who fills a generic prescription at the store, regardless of their insurance status (Choudhry and Shrank, 2010; Zhang et al., 2012). These programs therefore could have substantially reduced costs for patients, as the new price offered by pharmacies was generally substantially lower than the regular self-pay price and often was also much lower than the cost-sharing charged by commercial health plans (Zhang et al., 2012). Pharmacies were able to do this because of their purchasing power for included generic drugs and also because of the low costs of producing generic drugs. In addition, large pharmacies might have leveraged the program to bring customers into the store and sell other products at the same time (Choudhry and Shrank, 2010).

Out-of-Pocket Price for Insured and Self-Pay Patients

Prices for prescription drugs are also established for patients, both those with insurance and those who pay all costs out of pocket (self-pay). Health plans for both Medicare Part D and commercial insurance generally use a tiered formulary approach, in which patients have lower cost-sharing (often even \$0) for less-expensive generic drugs; higher cost-sharing for preferred-brand drugs (for example, \$42 is the median Part D plan copayment for a 30-day supply); higher cost-sharing still for non-preferred brands (for example, a median coinsurance of 38 percent of the cost of the drug for Part D plans); and 25 percent of the cost for specialty drugs for most Part D plans, which are often biologic products with few close substitutes (Cubanski and Damico, 2019). For specialty drugs, patient cost-sharing can translate into hundreds of dollars per month because of the 25-percent pricing rule.

Medicaid recipients usually have very low or no cost-sharing for prescriptions dispensed and covered by Medicaid. Veterans receiving VHA benefits also often have low or no cost-sharing (McCaughan, 2017). Medicare Part B patients pay 20 percent of the reimbursement rate for the prescription (ASP + 6 percent), but, in practice, more than 80 percent of Medicare Part B enrollees have supplemental coverage that further reduces cost-sharing (Cubanski et al., 2018).

Patients with no insurance, and many who are enrolled in high-deductible plans, pay the full cost of prescription drugs out of pocket. Those in high-deductible plans benefit from their health plan's negotiated pharmacy rate; they pay 100 percent of that rate while within the deductible's limits. Patients with no coverage at all pay the pharmacy's stated price, which varies by pharmacy. Patients who are prescribed expensive medications and do not have insurance could be eligible for pharmacy assistance programs, which are charities that help with OOP costs. Patients might also receive assistance from pharmaceutical manufacturers, which lower the cost of the prescription. Therefore, although the net price determines how much the health system overall paid for a given drug, patient cost-sharing and pharmacy prices are important markers for consumers who may need to fill prescriptions.

What Influences the Level of Consumer Price and Quality Transparency?

Price and quality transparency for pharmaceuticals rely on different considerations than for other sectors, such as hospitals and physicians. Price transparency for consumers can largely focus on increasing information about the price (cost-sharing or total pharmacy price) that the consumer can expect to pay to obtain the prescription drug. Quality measures for pharmaceuticals focus on comparative effectiveness, which provides information on the relative effectiveness of a given drug compared with another, and cost-effectiveness, which incorporates cost information with comparative effectiveness to establish an overall measure of the value of a given medication. These measures focus on different medications or types of treatment for a specific condition and provide information about the relative effectiveness and value of substitute therapies compared with one another. Information about these measures, as well as lower-cost therapeutic substitutes, might not be readily available to consumers. The government and health plans can both play important roles in price and quality transparency efforts, as discussed in this section.

Government

Government can play an important role in price transparency efforts by actively requiring increased transparency and also by targeting negotiated contract terms between different players that can reduce transparency. One example has been efforts to target gag clauses in contracts between health plans and pharmacies (Dabbous et al., 2019; Salazar, 2018; DeBenedette, 2018). Gag clauses prohibited pharmacists from informing patients when they could pay less out of pocket for a drug than what their insurance plan's copay would charge. The Patient Right to

Know Drug Prices Act, signed into federal law in 2018, prohibits such clauses in contracts between insurers or pharmacy benefit managers and pharmacies, and the Know the Lowest Price Act, also signed into law in 2018, does the same for Medicare Advantage and Medicare Part D plans (Coppock, 2018). A regulation implemented in Ohio requires health plans to tell patients the lowest price for a prescription and prohibits health plans from charging more than the cost of the drug when the drug price is lower than the copay (DeBenedette, 2018). Another approach to increasing transparency for pharmacies is to require health plans to regularly update their MAC pricing information, which is the price on which generic drug reimbursement is based; providing pharmacies with the most up-to-date reimbursement numbers available can help pharmacists know in advance what they can expect to be reimbursed for a drug (Salazar, 2018).

The government also increases price transparency through the Medicare Plan Finder tool, which provides Medicare beneficiaries with information on the prices they can expect to pay for covered drugs under each Medicare Part D plan. Beneficiaries can enter the specific drugs they currently take and see how much they can expect to pay if they were to enroll in each Medicare Part D plan available for the year. This tool substantially increases transparency for consumers seeking information about OOP prescription drug prices; however, research has found that the tool could be too complicated and that further simplification of financial information could help Medicare beneficiaries make better plan decisions (McGarry, Maestas, and Grabowski, 2018). For example, displaying simple information on total costs alone, or total costs, premiums, and OOP costs, rather than displaying complicated plan benefit design details, has been shown to result in the selection of lower-cost plans by beneficiaries, without any reductions in plan quality on average in the chosen plans.

One government action that has had mixed effects on the ability of states to establish price transparency standards for pharmaceuticals is ERISA. ERISA is a federal law that governs the offering of employee benefit plans. States that have passed laws designed to require pricing data to be disclosed, as well as laws designed to require health plans to disclose their pricing methodology, have been challenged in the courts based on ERISA preemption. The lawsuits claim that states do not have the authority to establish requirements that apply to ERISA plans, because ERISA plans are subject to federal, and not state, law. Courts in different states have ruled differently; thus, ERISA preemption could limit the ability of states to establish price transparency requirements (Stecker, 2018).

Commercial Payers

The primary contractual agreement between private actors and insurers that serves as a barrier to price transparency is the fact that pharmaceutical manufacturers sell their products to different payers for different prices (Kirchhoff, Johnson, and Thaul, 2018). Because of negotiated rebates with manufacturers and reimbursement to pharmacies, only the health plan knows the final net price of a drug.

Consumers' ability to determine a given drug's price depends on multiple factors, including the health plan in which they are enrolled and their ability to determine whether a prescribed drug is a generic or preferred brand. Health plan enrollees might only learn the price they must pay for a drug when they fill the prescription. Pricing tools such as GoodRx and Blink Health exist to help consumers find information about anticipated OOP costs for a specific drug for their specific plan; however, evidence suggests that patients do not often use these tools (GoodRx, undated; Blink Health, 2021; Mehrotra et al., 2017). Although most commercial insurers offer pricing tools, 75 percent of nonelderly respondents to a survey noted that they did not price-shop because they lacked knowledge of where to obtain pricing information, so awareness of price transparency tools could be lacking (Mehrotra et al., 2017). Furthermore, consumers might be unwilling to change providers or pharmacies. GoodRx and Blink Health also offer coupons that consumers can use to purchase drugs at a lower cost from their local pharmacies without insurance, and Blink Health allows consumers to purchase drugs through its website; these drugs are then filled by pharmacists in its network. This allows consumers to know the price up front without considering deductibles or other plan benefit details.

Data Availability

Price and quality measures for pharmaceuticals generally focus on measures of comparative effectiveness (which does not take cost into account) and cost-effectiveness (which does incorporate cost). One study noted that manufacturers provide scant information on these topics for the prescription drugs they are selling (Danzon and Taylor, 2010). There is also some evidence that pharmaceutical prices fluctuate substantially, creating challenges for transparency (Elsevier Clinical Solutions, 2015; Wineinger, Zhang, and Topol, 2019). This dearth of information restricts the ability of health plans and consumers to make decisions based on more-complete information about the drug's effectiveness and costs. Requiring manufacturers to provide cost-effectiveness (as is the case in other countries, such as Canada) or comparative effectiveness information would serve to increase transparency and, by extension, might also provide incentives for manufacturers to establish prices that are in line with the health benefits provided by the specific medication. For example, the federal government could require drug manufacturers to submit cost or comparative effectiveness data in order for the manufacturer's drugs to be covered by Medicare; the government could then make this information publicly available.

What Is the Relationship Between Price, Quality, and Advertising?

Pharmaceutical manufacturers use direct-to-consumer advertising to increase awareness of their products among patients. The U.S. Food and Drug Administration (FDA) regulates advertising of pharmaceuticals, with specific requirements associated with the type of information that can and cannot be presented, including the risks and benefits of the medication

(Schwartz and Woloshin, 2019). Advertising can include coupons or discounts designed to reduce patients' OOP costs for the drug being marketed; these are often offered for very expensive drugs (e.g., specialty drugs) and for branded drugs for which there are generic competitors. Discounts and coupons raise concerns about patients using medications for which OOP costs are lower but for which alternatives with lower total costs are available (Schwartz and Woloshin, 2019; Dafny, Ody, and Schmitt, 2017).

Pharmaceutical advertising has not generally included information about price and quality; however, the Pharmaceutical Research and Manufacturers of America (PhRMA), which represents large manufacturers, has suggested that manufacturers direct consumers to websites where they can find pricing information (Moore, 2019). PhRMA's recommendation was issued around the same time as the Trump administration proposal requiring manufacturers to include prescription drug list prices as part of every advertisement (Weixel, 2019). However, hours before the rule was set to take effect, a federal judge blocked the administration from implementing it; a hearing on the administration's appeal was held in June 2020, and the prior ruling was upheld ("U.S. Appeals Court Rejects Rule Requiring Drug Prices in TV Ads," 2020).

In response to these proposals, at least one manufacturer set up a website with pricing information; another (Johnson & Johnson) provides list prices in advertisements for its drug Xarelto (a blood thinner; Moore, 2019). One study found that consumers were substantially less interested in an expensive prescription drug if the list price was included in the advertisement; their level of interest did not change for a low-priced drug (Garrett et al., 2019).

Our search for information on advertising by pharmacies did not yield many results. One study published in 2010 noted that seven of the ten largest pharmacy chains advertised GDDPs (Czechowski, Tjia, and Triller, 2010). Another study found that as of 2013, 10 percent of low-income residents surveyed in the area of Houston, Texas, were aware of GDDPs because of television advertisements (Omojasola et al., 2014). Although we did not identify articles that studied the extent and content of advertising (or lack thereof) in a detailed manner, the lower generic prices offered by different pharmacies starting in 2006 were clearly advertised and much-discussed by policymakers, consumers, and other stakeholders, and, therefore, advertisements likely played an important role in encouraging patient use of those lower-cost programs. It is possible that pharmacies do not advertise self-pay drug prices beyond GDDPs for a number of reasons: Norms of the industry, advertising of other products to attract customers to the store more broadly, hesitance to advertise certain prices when lower prices might be available through coupons or other discounts available through sites such as GoodRx, and the complexity of advertising prices for thousands of drugs (beyond those commonly taken generics often included in GDDPs) could all play a role. Furthermore, until 2018, pharmacies might have been concerned that advertising self-pay prices could violate gag clauses in contracts with commercial insurers. However, the literature largely does not address this question.

6. Medical Devices

Overview

This chapter summarizes the results of our environmental scan of the literature on medical devices. Although medical devices are a small part of the overall health care market, they are a large market unto themselves. The 2014 Medicare cost report data suggest that hospitals spent about \$10 billion on medical supplies and \$14 billion on implantable devices for Medicare-covered services that year (MedPAC, 2017). The total market was between \$120 and \$172 billion in 2013, or 4 to 6 percent of total U.S. spending on health care, and that percentage has remained stable since then (MedPAC, 2017).

The market segment for commodity items—surgical apparel, wound dressings, etc.—is relatively straightforward and competitive. In contrast, the market for high-technology devices, particularly implantable devices, is very different. The barrier to entry is higher, because of research and development costs, and there is more regulatory oversight. As a result, competition is more limited, and profits can be much higher (MedPAC, 2017). We focus on this segment of the market.

The literature on technologically advanced medical devices is limited. Our search identified three specific articles about price transparency and devices; to this we added a few other articles that were highly relevant. In general, the literature draws on data from claims, including the HCCI database, which contains information on commercial prices of durable medical equipment (DME).

We identified the following key findings from our literature scan:

- As with physician pricing, Medicare coverage decisions and pricing impact private insurance costs for devices.
- For DME, consumers can find out in advance what their cost will be before purchasing the item. However, that does not mean that the actual price paid by insurance is transparent.
- The market dynamics for commodity items versus high technology devices vary greatly. For items like surgical supplies, companies compete heavily on price; the market for high-tech devices like implantable defibrillators is less competitive, meaning that prices are often more opaque and higher (MedPAC, 2017).
- Hospitals could encounter barriers when trying to work with physicians around device prices—for example, confidentiality clauses and physician-manufacturer relationships (U.S. Government Accountability Office, 2012).

How Are Prices Set?

Medicare pays for most medical devices (other than DME), such as syringes or imaging equipment, indirectly, because they are components of the delivery of care. Therefore, providers are reimbursed for the devices they use in the course of caring for beneficiaries as part of their total bundled price (MedPAC, 2017). As a result, hospitals have an incentive to use lower-cost devices, because their share of the bundled payment will thus be reduced. In contrast, physicians themselves could have less incentive to use lower-priced devices, because they are not generally financially responsible for the cost of the device.

Medicare Part B covers DME prescribed for home use (such as blood sugar monitors or crutches); the patient pays a percentage of the price plus a deductible (Medicare, undated-b). Beneficiaries with supplemental coverage might have additional coverage of DME. CMS used a statutory-based fee schedule for DME until 2011, when it implemented a competitive bidding process. The initial years of the program produced prices comparable to those obtained, on average, by large commercial insurers—sophisticated purchasers that negotiated prices with suppliers of DME and similar items (Newman, Barrette, and McGraves-Lloyd, 2017). On average, the prices after the bidding were 35 percent lower than in 2010, before the program started. There is also evidence that the government’s competitive bidding program affected the overall market for DME and similar items, with high-cost suppliers leaving the market or reductions in prices by all suppliers or both (Newman, Barrette, and McGraves-Lloyd, 2017).

According to an analysis of claims data from 2007 to 2012, “for laboratory services and durable medical equipment, where commercial prices are lower than Medicare FFS rates, MA plans take advantage of these lower commercial prices” (Trish et al., 2017). This is somewhat similar to the case for hospital services, for which MA plans pay the same as or slightly less than Medicare FFS does.

What Influences the Level of Consumer Price and Quality Transparency?

Prices for high-technology devices cut into hospital profits, so hospitals and other parties are interested in lower, or at least stable, device prices and generally favor price disclosure (Pauly and Burns, 2008). The market for medical devices differs from the other market segments discussed in this report, because the purchasers of devices are not only consumers and insurers, but also health care providers.

Government

Our literature search did not identify any descriptions of government pushes for price or quality transparency of medical devices. In a 2010–2011 GAO survey about implantable devices, respondents said that “the price information they provided for at least one device did not account for all discounts and rebates obtained” (U.S. Government Accountability Office, 2012). GAO concluded that this lack of transparency could hamper the ability of hospitals to be “prudent

purchasers” of the devices: “The lack of price transparency for the IMDs [implantable medical devices] we examined makes it difficult to know whether hospitals are achieving the best device prices” (U.S. Government Accountability Office, 2012).

Commercial Payers

Transparency is sometimes explicitly forbidden in medical device contracts, and sellers often charge some buyers more than they charge others. Some device sellers have designed contracts that include language forbidding buyers from disclosing the final negotiated price to other buyers, or even to patients or insurers (Pauly and Burns, 2008). For example, in 2007, Boston Scientific brought lawsuits against data intermediaries, claiming that the intermediaries used pricing data that were submitted to them by hospitals to compile comparative pricing data (Robinson and Bridy, 2009). The lawsuits were settled out of court but led to legislation (which ultimately did not pass) that would have mandated that medical device manufacturers disclose their pricing information. As such, this type of contract language limits price transparency, although transparency of device prices (other than some DME) might be more directly relevant to providers than consumers.

Data Availability

There are some limited data on the quality of medical devices using adverse event information maintained by the FDA and device recall information (U.S. Food and Drug Administration, 2011). However, the major limitation of these data is that they are not created for the purpose of making comparisons; thus, in their current format, their utility could be limited.

What Is the Relationship Between Price, Quality, and Advertising?

From 1997 through 2016, spending on medical marketing of drugs, disease awareness campaigns, health services, and laboratory testing increased from \$17.7 billion to \$29.9 billion (Schwartz and Woloshin, 2019), but specific information about spending on device advertising was not available. The environmental scan did not yield any results regarding advertising and transparency of prices and quality for medical devices.

7. Discussion and Conclusions

In the physician and hospital sectors, prices are set in a similar way. Medicare FFS sets the prices it pays to hospitals and physicians, typically on a case or per-diem basis, while commercial insurers negotiate with physicians and hospitals to determine rates. There is substantial variation in prices paid by commercial payers, and prices are generally higher in markets with higher provider concentration.

The government does not directly affect prices paid by commercial payers, but it does have an indirect impact in several ways. First, MA prices are generally very similar to prices in Medicare FFS. In addition, although prices paid by commercial payers are generally substantially higher than Medicare prices, prices paid by commercial payers have been shown to decrease in response to reductions in Medicare reimbursement rates.

Outpatient pharmaceutical prices vary by payer; government payers either receive mandated and supplemental rebates (Medicaid) for dispensed prescriptions or negotiate prices in exchange for inclusion on a limited formulary (VHA). Commercial health plans, which also offer coverage for Medicare Part D enrollees, negotiate prices paid to the pharmacy as well as rebates and other discounts from manufacturers. Medicare negotiates prices for medical devices that are accessed directly by consumers, but costs for many devices are bundled into prices for episodes of care. Pharmacies set prices individually for self-pay patients.

Recent federal efforts toward consumer price transparency have primarily focused on hospital price transparency. A 2018 federal rule included a requirement that hospitals release their chargemaster data and update the information annually. A 2019 federal rule requires hospitals to disclose their standard charges for all services online in a machine-readable format and to disclose the rates that they negotiate with private payers in a consumer-friendly manner for 300 shoppable services. Additionally, a 2020 final federal rule requires insurers to create online pricing tools and to disclose negotiated rates for both in-network and out-of-network providers, as well as prices for prescription drugs (Keith, 2020; Internal Revenue Service, Employee Benefits Security Administration, and Department of Health and Human Services, 2020). There are various state price transparency efforts as well. Perhaps the most high profile is the establishment of state APCDs, which have been used to develop various price transparency tools for consumers. The primary mechanism through which the federal government promotes consumer quality transparency is the Care Compare tool, which allows consumers to view and compare quality measures for hospitals and physicians.

One limitation of many government price transparency initiatives is that they are generally not focused on prices faced by the consumer. For example, pushes for hospital price transparency have focused on charges, which are generally not the prices paid by any insurer or by the consumer, and, more recently, on transparency of negotiated prices. Although negotiated prices

do provide data that allow consumers to make meaningful comparisons between providers, these are still not the prices actually faced by consumers. However, OOP price transparency would be difficult to convey accurately, because any tool would need to know not only negotiated prices between plans and providers but also the specific plan benefit design information of each consumer's insurance plan and where the consumer falls in their benefit (for example, whether the deductible has been met).

The environmental scan did not identify any work related to how ethical codes of provider organizations affect price or quality transparency.

A key limitation of the Care Compare government quality transparency tool is that although it provides quality data in a simple way to consumers (i.e., better than, worse than, or no different from the national mean), there is little variation with which to make meaningful comparisons because the majority of providers fall into the category of being no different from the national mean.

Commercial insurers are also promoting price transparency, largely through online tools provided to their members to estimate costs of service. These tools have varying degrees of utility and accuracy. However, commercial insurance contracts can present a barrier to price transparency efforts because of contract clauses that do not allow disclosure of negotiated prices or, in the case of pharmaceuticals, net prices, and the insurance industry is pushing back against requirements for hospitals to release negotiated prices. The federal government is pursuing legislation that would disallow or limit the effect of such clauses in provider-insurer contracts, and federal legislation has been signed into law that disallows pharmacy "gag clauses" that prevent pharmacists from disclosing lower-cost drug options to patients.

Limited information was available about the extent to which providers, pharmacies, and device manufacturers use pricing and quality information in marketing efforts. It appears that hospitals and physicians do not commonly advertise price or quality information. Although pharmaceutical companies have historically not included price information in advertising, they have offered discounts or coupons as part of advertisements. More recently, efforts have been made to enable consumers to access information about pricing using a link or other information provided in the pharmaceutical advertisement. However, it is not clear whether this practice will be adopted across all pharmaceutical companies.

Policymakers are interested in initiatives that could reduce barriers to price and quality transparency, increase meaningful price and quality transparency for consumers, and improve consumers' knowledge and control of their own health care costs. To that end, the findings of this environmental scan are informative.

- **First, policymakers could consider focusing initiatives on OOP price transparency**, as federal price transparency initiatives have been aimed at consumers and OOP costs are likely most relevant for consumers. Policymakers could continue to pursue measures such as a 2020 federal rule that requires insurers to provide OOP prices to their members via online price transparency tools. Such efforts would help

to address the shortcomings of existing insurer price transparency tools, which are currently not required and do not always offer accurate pricing information.

- **Second, existing federal quality transparency tools, such as Care Compare, could be improved upon to allow more meaningful comparisons between providers.** In particular, CMS could consider the following actions:
 - Present detailed, provider-specific pricing information for a broader range of services.
 - Present the full variation in quality scores rather than limiting information to differences from the national mean.
 - Explicitly link detailed quality and price data by presenting both pieces of information together.
- **Third, policymakers could continue to pursue legislation that would limit or prohibit clauses in insurer-provider contracts that do not allow negotiated prices to be disclosed,** as they did with similar clauses in contracts between private insurers and pharmacies that prohibited pharmacists from informing patients when paying for a drug out of pocket would be less expensive than paying the copay through their insurance.
- **Fourth, the federal government could consider regulations that would require drug manufacturers to submit cost effectiveness or comparative effectiveness data** on their drugs in order for those drugs to be covered by Medicare. These data could be made public to allow consumers (and providers) to make better-informed decisions about prescription drugs.
- **Fifth, states could work together with federal agencies, such as the Department of Labor (DOL), to require self-funded health plans to submit data to a national APCD.** This would address the issue of ERISA preemption undermining state APCDs. This would, however, be a significant undertaking because the DOL currently does not collect any data similar to APCDs.
- **Finally, states can work to improve price transparency and quality transparency by taking the following actions:**
 - States that have not yet established APCDs could do so.
 - States that do have APCDs but do not have online price transparency tools for consumers can create them.
 - States that do have APCDs and online price transparency tools can work to improve the breadth and quality of the data provided.
 - States can provide consumers with detailed quality information on providers in conjunction with online transparency tools.

Efforts to achieve price and quality transparency have the potential to allow consumers to make better-informed decisions about their health care, particularly if the challenges and barriers outlined in this report are addressed.

Appendix: Search Terms for the Targeted Literature Review

Peer-Reviewed Literature

PubMed

2015–present; English

Pric*[tiab] OR payment*[tiab] OR reimburs*[tiab] OR rate-setting[tiab] OR “rate setting”[tiab]
OR “quality care”[tiab]

AND

Health plan*[tiab] OR healthcare plan*[tiab] OR health care plan*[tiab] OR US healthcare[tiab]
OR US health care[tiab] OR medicare[tiab] OR Medicaid[tiab] OR “veterans affairs”[tiab] OR
“veterans health administration”[tiab] OR health insurance[tiab]

AND

Negotiat*[tiab] OR bargain*[tiab] OR transparent[tiab] OR transparency[tiab] OR barrier*[tiab]
OR advertis*[tiab] OR quality measure*[tiab]

Results: 687

OR

PubMed

2009–2014; English

Pric*[tiab] OR payment*[tiab] OR reimburs*[tiab] OR rate-setting[tiab] OR “rate setting”[tiab]
OR “quality care”[tiab]

AND

Health plan*[tiab] OR healthcare plan*[tiab] OR health care plan*[tiab] OR US healthcare[tiab]
OR US health care[tiab] OR medicare[tiab] OR Medicaid[tiab] OR “veterans affairs”[tiab] OR
“veterans health administration”[tiab] OR health insurance[tiab]

AND

transparent[tiab] OR transparency[tiab]

Results: 64

NOT: (nigeria[ti] OR india[ti] OR kenya[ti] OR kyrgyzstan[ti] OR korea[ti]) OR (china[ti] OR iran[ti] OR australia[ti] OR ghana[ti] OR japan[ti])

Results: 649

Business Source Complete

2009–present; English

TI(Pric* OR payment* OR reimburs* OR rate-setting OR “rate setting” OR “quality care”) OR AB(Pric* OR payment* OR reimburs* OR rate-setting OR “rate setting” OR “quality care”)

AND

TI(Health plan* OR healthcare plan* OR health care plan* OR “US healthcare” OR “US health care” OR medicare OR Medicaid OR “veterans affairs” OR “veterans health administration” OR “health insurance”) OR AB(Health plan* OR healthcare plan* OR health care plan* OR “US healthcare” OR “US health care” OR medicare OR Medicaid OR “veterans affairs” OR “veterans health administration” OR “health insurance”)

AND

TI(Negotiat* OR bargain* OR transparent OR transparency OR barrier* OR advertis* OR quality measure*) OR AB(Negotiat* OR bargain* OR transparent OR transparency OR barrier* OR advertis* OR quality measure*)

Results: 444 – duplicates and non-U.S. results = 378

EconLit

2009–present; English; Academic Papers/Working Papers

TI(Pric* OR payment* OR reimburs* OR rate-setting OR “rate setting” OR “quality care”) OR AB(Pric* OR payment* OR reimburs* OR rate-setting OR “rate setting” OR “quality care”)

AND

TI(Health plan* OR healthcare plan* OR health care plan* OR “US healthcare” OR “US health care” OR medicare OR Medicaid OR “veterans affairs” OR “veterans health administration” OR “health insurance”) OR AB(Health plan* OR healthcare plan* OR health care plan* OR “US healthcare” OR “US health care” OR medicare OR Medicaid OR “veterans affairs” OR “veterans health administration” OR “health insurance”)

AND

TI(Negotiat* OR bargain* OR transparent OR transparency OR barrier* OR advertis* OR quality measure*) OR AB(Negotiat* OR bargain* OR transparent OR transparency OR barrier* OR advertis* OR quality measure*)

Results: 59 – duplicates and non-U.S. results = 21

Added some citations using the “similar articles” and “cited by” feature in PubMed.

TOTAL: 1,095

Gray Literature

Congressional Research Service

Healthcare pricing transparency

Health care price transparency

health payment negotiate

health payment barrier

health reimburse negotiate

Congressional Budget Office (via Advanced Google)

healthcare pric* transparency site:cbo.gov

health pric* transparency site:cbo.gov

health price* barrier site:cbo.gov

Government Accountability Office (via Advanced Google)

health price* site:gao.gov

health price* transparency site:gao.gov

Advanced Google

health pricing negotiations site:.gov filetype:pdf

health payment transparency site:.gov filetype:pdf

health payment transparency site:.org filetype:pdf

health payment negotiat* site:.org filetype:pdf

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