



**trilliant**health

# A FIELD GUIDE

To Survive Healthcare's Negative-Sum Game

An essential resource for health economy stakeholders to compete seriously in healthcare's negative-sum game

# Table of Contents

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<b>FOREWORD: WINNING A LOSING GAME</b>	<b>4</b>
• The Challenge: Healthcare Is a Negative-Sum Game	5
<b>INTRODUCTION: KNOW YOUR CUSTOMER</b>	<b>8</b>
• Physicians: The Health Economy's Presumed Customer	9
• Physicians and Patients: The Antagonists of Health Insurers	9
• How Employer-Sponsored Health Insurance Shapes the Health Economy	11
• The Difference Between Value-Based Care and Value for Money	12
• The Uncomfortable Truth About Healthcare Quality	12
• Creating Value for Money for Your Customer	18
<b>CHAPTER 1: MARKET SHARE</b>	<b>20</b>
• Why Market Share Matters for Every Health Economy Stakeholder	21
• What Health Economy Stakeholders Are Doing Wrong, and Why	21
• The Questions Every Stakeholder Should Answer	23
• Use Case: Provider Market Share of Total Addressable Market (TAM)	24
• Use Case: Health Plan Market Share by Geography	28
• Use Case: Life Sciences Market Share Based on Surgeon Alignment	32
<b>CHAPTER 2: PHYSICIAN STRATEGIES</b>	<b>35</b>
• Why Physician Decisions Matter for Every Health Economy Stakeholder	36
• What Health Economy Stakeholders Are Doing Wrong, and Why	36
• The Questions Every Stakeholder Should Answer	37
<b>Physician Strategies for Healthcare Providers</b>	<b>38</b>
• Use Case: Physician Needs Assessment for Medical Cardiology	39
• Use Case: Network Integrity/Referral Leakage for Employed PCPs	42
• Use Case: Strategic Alignment With Independent Specialists	46
<b>Physician Strategies for Health Plans</b>	<b>49</b>
• Use Case: Identifying Underserved Markets	50
• Use Case: Managing Network Performance to Meet MLR Targets	54
<b>Physician Strategies for Life Sciences Firms</b>	<b>56</b>
• Use Case: Targeting Provider Organizations for Go-to-Market Strategies	57
• Use Case: Targeting Individual Physicians	62
<b>Physician Strategies for Employers</b>	<b>65</b>
• Use Case: Understanding Variance in Value Across Healthcare Providers	66

<b>CHAPTER 3: CONSUMER STRATEGIES</b>	<b>72</b>
• Why Consumer Decisions Matter for Every Health Economy Stakeholder	73
• What Health Economy Stakeholders Are Doing Wrong, and Why	74
• The Questions Every Stakeholder Should Answer	77
<b>Consumer Strategies for Healthcare Providers</b>	<b>78</b>
• Use Case: Prioritizing Service Line Growth	78
• Use Case: Developing Lead Plans for High-Margin Services	81
• Use Case: Improving Patient Communications and Network Development With Psychographics	83
• Use Case: Tracking Patient Loyalty and Retention	87
<b>Consumer Strategies for Health Plans</b>	<b>89</b>
• Use Case: Personalizing Member Communications to Address Low Primary Care Utilization	90
• Use Case: Identifying Unexpected or Inappropriate Care Utilization	94
<b>Consumer Strategies for Life Sciences Firms</b>	<b>96</b>
• Use Case: Measuring Current Demand in Local Markets	97
<b>Consumer Strategies for Employers</b>	<b>99</b>
 <b>CHAPTER 4: PRICING STRATEGIES</b>	 <b>101</b>
• Why Pricing Strategies Matter for Every Health Economy Stakeholder	102
• What Health Economy Stakeholders Are Doing Wrong, and Why	103
• Why Value-Based Care Is Not – and Cannot Be – a Pricing Strategy	106
• Why Health Plan Price Transparency Will Catalyze Novel Pricing Strategies	107
• The Questions Every Stakeholder Should Answer	108
<b>Pricing Strategies – A Primer on Value for Money</b>	<b>109</b>
• Use Case: Identifying Providers Delivering Value for Money	111
<b>Pricing Strategies for Employers</b>	<b>115</b>
• Use Case: Competing on Price and Convenience for Low-Acuity Care	116
• Use Case: Directing Employees Away from Lower-Value Settings of Care	116
• Use Case: Comparing Negotiated Rates Across Settings of Care and Health Insurers	117
• Use Case: Choosing a Health Plan on Value	118
 <b>CHAPTER 5: CAPITAL ALLOCATION</b>	 <b>121</b>
• Why Capital Allocation Matters for Every Health Economy Stakeholder	122
• What Health Economy Stakeholders Are Doing Wrong, and Why	123
• The Questions Every Health Economy Stakeholder Should Answer	125
<b>Capital Allocation Strategies for Healthcare Providers</b>	<b>126</b>
• Use Case: Investing in De Novo Growth: Eye and Ocular Services	127
• Use Case: Investing in Primary Care for Top-of-Funnel Growth	130
• Use Case: Investing in Urgent Care for Top-of-Funnel Growth	131
• Use Case: Analyzing Capital Allocation Across Markets and Service Lines	133
• Use Case: Capital Allocation for M&A	136
• Use Case: Using Similarity Models for M&A	142
 <b>CONCLUSION: WHAT IT TAKES TO WIN</b>	 <b>145</b>
• The Present	146
• The Future	149
• The Keys to Winning	150



## FOREWORD

# Winning a Losing Game

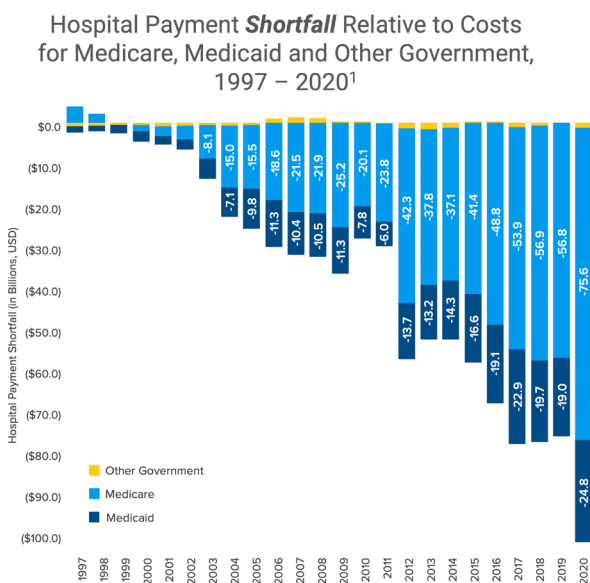
The rules of negative-sum games are immutable, which means that the status quo is unsustainable and, therefore, a losing strategy. In the words of General Erik Shinseki, “If you don’t like change, you’ll like irrelevance even less.” There is no way to win a losing game without competing, but there are several ways to compete effectively: winning key battles, cutting losses early, losing less frequently and losing by a smaller margin than the competition. However, winning more or losing less than the competition is virtually impossible without having – and acting upon – accurate and actionable information.



Despite the vast size of the U.S. health economy, changing demographics, shifting economic conditions, increasing patient deductibles and a burdensome regulatory environment have created myriad financial and operational challenges for health economy stakeholders. New market entrants like Amazon and Walmart have begun to disintermediate traditional stakeholders by deploying closed-loop business models offering consumers an array of choices for their healthcare needs, even as the supply of commercially insured patients – the very lifeblood of the U.S. healthcare system – is declining. The “silver tsunami” of 10,000 Baby Boomers who daily become Medicare-eligible are being “replaced” by half as many daily births to commercially insured women, and the U.S. birth rate has declined by more than 50% since 1950.

The combination of the secular decline in the number of commercially insured patients and the inability of most providers to generate positive operating margins from reimbursement for Medicare and Medicaid beneficiaries means that, in aggregate, the U.S. healthcare system is a negative-sum game. Because of the 75-year decline in the U.S. birth rate, healthcare will never again be even a zero-sum game, much less a positive-sum game. The repercussions of these trends have already begun to manifest in rural America, where 191 hospitals have closed since January 2005.<sup>1</sup>

## The Challenge: Healthcare Is a Negative-Sum Game



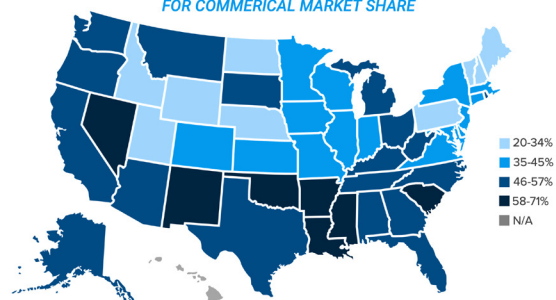
Source: Analysis of American Hospital Association Annual Survey data, 2020, for community hospitals.  
<sup>(1)</sup> Costs reflect a cap of 1.0 on the cost-to-charge ratio.

Declining Commercially Insured Population

In the U.S.  
**10K** people A DAY age into MEDICARE<sup>2</sup>  
 – while at the same time –



Percentage of Medicaid births by state<sup>3</sup>  
 CREATES A NEGATIVE SUM GAME  
 FOR COMMERCIAL MARKET SHARE



Source: Kaiser Health News

Increasing Supply



Stein's Law states that "if something cannot go on forever, it will stop."<sup>2</sup> At some point, the U.S. healthcare system will be incapable of ignoring the fundamental principles of economics: demand, supply and yield.

Demand for acute healthcare services has been declining since 2008, while demand for ambulatory healthcare services has been relatively flat throughout the past decade. The response by Federal, state and local governments to the SARS-CoV-2 pandemic simultaneously dampened demand for healthcare services while accelerating the migration of care delivery to lower acuity, lower cost settings. More recently, consumers report delaying care because of unaffordability, with almost half worried about their ability to pay deductibles.<sup>3</sup>

Supply has long been artificially constrained by medieval guild-like licensure and accreditation standards, and the combination of increased administrative burdens coupled with forced adoption of poorly designed electronic medical records has catalyzed increasing clinician burnout. Meanwhile, the recent expansion of large retailers into primary care services has increased the competition for a declining supply of providers.

Yield, in the form of both higher prices and higher average unit reimbursement, is imperiled by a declining mix of commercially insured patients as Medicare and Medicaid enrollment increases. Yield is also constrained by claim denials from commercial payers, estimated to be as high as 11%, and "payer takeback," estimated to be as high as 1.8% of debit accounts receivable.<sup>4</sup> With emerging evidence from health plan price transparency of wide intra-market price spreads that are not correlated with higher quality, the history of free market capitalism suggests that outlier rates will regress to the recently revealed mean. Even though the health economy is more fairly characterized as mixed capitalism, the fiduciary duties of employer CFOs obligate them not to waste corporate resources on healthcare benefits, which should ensure this regression to the mean occurs. A lawsuit recently filed by an employee of Johnson & Johnson may be a catalyst for employers to manage the cost of health benefits.<sup>5</sup>

Game theory is infrequently, if ever, discussed in the health economy, but nothing will have a more profound effect on the financial performance of health economy stakeholders in the next 20 years.

*"The most difficult problems are negative-sum situations, where the pie is shrinking. In the end, the gains and losses will all add up to less than zero. This means that the only way for a party to maintain its position is to take something from another party, and even if everyone takes his or her share of the 'losses,' **everyone still loses in comparison to what they currently have or really need.** This type of situation often sparks serious competition."*<sup>6</sup> (Emphasis added)

**In the coming decade, the losers of healthcare's negative-sum game will vastly outnumber the winners.**

The rules of negative-sum games are immutable, which means that **the status quo is unsustainable and, therefore, a losing strategy**. In the words of General Erik Shinseki, “If you don’t like change, you’ll like irrelevance even less.”

There is no way to win a losing game without competing, but there are several ways to compete effectively: winning key battles, cutting losses early, losing less frequently and losing by a smaller margin than the competition. However, winning more or losing less than the competition is virtually impossible without having – and acting upon – accurate and actionable information.

Negative-sum games are stressful, and stress reveals weakness, and weakness exposes vulnerabilities. Every health economy stakeholder who doesn’t know who their customers are, what those customers want and how to deliver **value** to those customers is imperiled. And every health economy stakeholder who doesn’t know the identities and vulnerabilities of their competitors will not win as many competitive battles as they could or should or desperately need.

This guide offers evidence-based strategies and tactics to win healthcare’s negative-sum game for every health economy stakeholder, whether a provider, payer, life sciences firm or employer. The guide is divided into chapters, and each chapter follows this framework:

- An overview of a key concept that applies to every health economy stakeholder
- The implications of the concept for specific health economy stakeholders
- The key questions that every stakeholder must answer
- Anonymized examples of actual use cases developed for Fortune 100 life sciences firms, U.S. News & World Report Best Hospitals, national payers and publicly traded ambulatory providers, among others

Because maintaining the status quo is septic, every stakeholder must think critically and act differently to survive.

Compete to win,



**Hal Andrews**

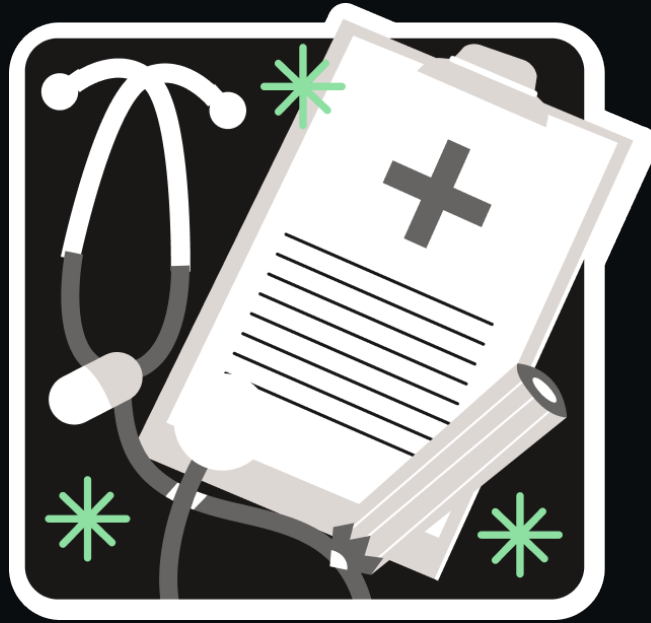
President and Chief Executive Officer

Trilliant Health

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#### Footnotes

1. <https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>
2. <https://www.cepweb.org/if-something-cannot-go-on-forever-it-will-stop/>
3. <https://www.kff.org/health-costs/issue-brief/americans-challenges-with-health-care-costs/>
4. [hospital-double-whammy-less-cash-in-more-cash-out-chc2305-001b.pdf](https://www.hospital-double-whammy-less-cash-in-more-cash-out-chc2305-001b.pdf) (crowe.com)
5. [https://www.trillianthealth.com/hubfs/Lewandowski%20et%20al.%20v.%20Johnson%20%26%20Johnson%29.pdf?\\_gl=1\\*1d2z-mcl\\*\\_ga\\*MTAxNzMINDg2LjE3MDgwOTcyMjQ.\\*\\_ga\\_YD9X5HOEQ-F\\*MTcxNDEONTQ2OC42OC4xLjE3MTQxNDY2MzguNjAuMC4w](https://www.trillianthealth.com/hubfs/Lewandowski%20et%20al.%20v.%20Johnson%20%26%20Johnson%29.pdf?_gl=1*1d2z-mcl*_ga*MTAxNzMINDg2LjE3MDgwOTcyMjQ.*_ga_YD9X5HOEQ-F*MTcxNDEONTQ2OC42OC4xLjE3MTQxNDY2MzguNjAuMC4w)
6. <https://www.beyondintractability.org/essay/sum>



## INTRODUCTION: **Know Your Customer**

Identifying a target customer is the first step in winning their business, but most health economy stakeholders don't know who their customer is.

# Physicians: The Health Economy's Presumed Customer

Since Benjamin Franklin co-founded Pennsylvania Hospital in 1751, most health economy stakeholders have implicitly or explicitly assumed that – and behaved as if – their customer was the physician. Although stakeholders have in recent years endorsed and promoted “consumer-directed care” and “patient engagement,” the inner workings of the health economy suggest that “consumerism” is simply a word that abounds in PowerPoint presentations.

For decades, hospital administrators have been taught that a happy medical staff is paramount, and physicians have skillfully leveraged this conceit in their demands for equipment purchases and operating room block scheduling and even the menu in the physician dining room. Life sciences firms are certain that their customer is the physician, or at least the logoed pen in the physician's hand, without which no implant or device or therapeutic would ever be ordered or prescribed.

This arrangement has largely persisted because the end users of services, the frequently cited “consumers,” have not objected to being treated as “patients” by hospitals and physicians. Until recently, patients have faithfully followed doctors' orders, particularly with respect to referrals for services. As a result, healthcare providers have not been required to market or sell their services to patients, the actual “consumers” of those services, to increase market share. The recent expansion by Amazon and Walmart into primary care now challenges that longstanding notion.

Unsurprisingly, life sciences firms have focused on developing (lucrative) relationships with physicians, knowing that the new implant or device or therapeutic requires a physician order and that patients most likely will consent to follow the physician's recommendation. To hedge their bets, pharmaceutical firms spend billions of dollars on advertisements showing idyllic, if bizarre, examples of happy patients living their best life after beginning a therapeutic regimen.

## Physicians and Patients: The Antagonists of Health Insurers

In contrast, physicians – and patients – are the antagonists of health insurers. Physicians are the root cause of MLR, i.e., medical loss ratio, the rather curious term that health insurers use to describe the claims paid to reimburse providers for rendering care to patients out of the pool of premiums the insurer received as revenue.

Who is the customer of the health insurer? Historically, anyone who will pay to access a provider network or for claims adjudication. Increasingly, pharmaceutical firms are a valuable customer for health insurers because of rebates that generate significant revenue, especially under Medicare Part D.<sup>1</sup>

Why isn't the employer the customer of the health insurer? In part, because health insurers long ago ceded control of the distribution channel to health insurance brokers and seem curiously loath to retake it. Ironically, employers believe that they are the customer of the health insurance broker, failing to realize that the health insurance broker is a mercenary, not a fiduciary.

Why are health insurers the customer of the brokers? Because health plans pay billions of dollars in annual commissions to brokers for the only steerage consistently occurring in healthcare.

Over time, health insurance brokers are the most endangered health economy stakeholder. If 21.3 million Americans can enroll in healthcare benefits via the Affordable Care Act (ACA) Marketplace and 33 million more can enroll in Medicare Advantage plans, the *raison d'être* for health insurance brokers is unclear.<sup>2</sup> The advent of health plan price transparency will increasingly implicate the fiduciary duties of employer CFOs to justify the need for lavishly remunerated middleman to provide a service that almost 55 million Americans access over the Internet.

Why isn't the consumer, i.e., the patient, the end user of healthcare services, the customer of the health insurer? Health insurers either underwrite the cost of healthcare coverage for employers, aka their "fully insured business," or they provide administrative services like network access, claims payment, etc., to self-insured employers, aka their "ASO business."

In the fully insured business, consumers, aka "members," are a cost center, in contrast to the rest of the economy where the consumer is a source of revenue. As a result, health insurers don't want "customers for life," unlike the rest of the economy. Whether that mindset explains the typical 100% churn of fully insured groups over a four-year period or whether the inevitable churn informs the mindset, health insurers have little incentive to focus on a "member" as a consumer or to invest in that member's "health and wellness" to create savings that a subsequent payer would realize.

In the ASO business, consumers are completely irrelevant to the health insurer, with their name, date of birth, gender and home address merely data fields in an electronic transaction that the health insurer is paid to administer. The indifference that legacy ASO providers have for consumers has provided an opportunity for "healthcare advocacy" firms like Accolade and Quantum Health.

Medicare Advantage is seemingly different because of the incessant direct to consumer advertising during annual enrollment. Fundamentally, however, Medicare Advantage is a fully insured business model, with the capitated amount per enrollee underwritten by the Federal government, in turn making hospitals, physicians and members the antagonists of every Medicare Advantage plan.

# How Employer-Sponsored Health Insurance Shapes the Health Economy



Nevertheless, the employer is and has been, if unknowingly, the primary customer of every health economy stakeholder for decades. It is axiomatic that “he who has the gold makes the rules,” and employer-sponsored health insurance is the fuel of the U.S. health economy. As health plan price transparency reveals the fact that price is not correlated with quality, every other health economy stakeholder should assume that employers will begin to reconsider how they are spending their gold.

A curious observer might ask why employers are even involved in the U.S. healthcare system, much less the participant with the most latent power. The answer? The War Board’s 1943 decision to exempt employer-sponsored health insurance from the wage freeze introduced by the Stabilization Act of 1942.<sup>3</sup>

Joseph Schumpeter stated that “history is a record of the ‘effects’ the vast majority

of which nobody intended to produce,” and there is no better example than employer-sponsored health insurance, the “elephant in the room” of the U.S. healthcare system. No part of the U.S. health economy better exemplifies the status quo than the way that human resource departments administer employer-sponsored health insurance. Peak status quo manifests annually during “open enrollment,” in which employers, relying on sensitivity analyses prepared by benefits consultants, shift as much of the ever-increasing cost of health insurance to employees without creating an insurrection.

This arrangement has largely persisted because the end users of services, the frequently cited “consumers,” have not objected to being treated as “patients” by hospitals and physicians. Until recently, patients have faithfully followed doctors’ orders, particularly with respect to referrals for services. As a result, healthcare providers have not been required to market or sell their services to patients, the actual “consumers” of those services, to increase market share. The recent expansion by Amazon and Walmart into primary care now challenges that longstanding notion.

*(Editor’s note: This chapter was published prior to Walmart’s announcement that it plans to shutter its 51 clinics, alongside its telehealth business. Despite shuttering its primary care and virtual care businesses, Walmart will continue to compete with traditional providers for high-margin services, like specialty pharmacy.)*



# The Difference Between Value-Based Care and Value for Money

In the last decade, numerous market forces have influenced how consumers access healthcare services. Physicians increasingly refer patients to a variety of ambulatory care settings, both for convenience and economic gain. Employers are more willing to consider limiting choice for employees to “narrow networks” in response to persistent increases in health insurance premiums. Consumers increasingly shop for care with rising expectations of an exceptional customer experience in response to unlimited information on the Internet, widely available decision support tools and increasing personal financial responsibility for utilizing healthcare. And, as noted above, large retailers like Amazon and Walmart have begun to offer a variety of low-acuity healthcare services at unimaginably low prices to complement their massive pharmaceutical distribution capabilities.

Employers are also slowly realizing **the difference between *value-based care*, which allows employers to cap financial risk, and *value for money*, which allows employers to reduce costs.**

Value in healthcare is like any other commodity, product or service, the combination of what you receive in exchange for what you paid and the likelihood that you will want it again. The elements of healthcare value include price, quality, efficiency, effectiveness, outcomes, process, experience and brand perception.

## The Uncomfortable Truth About Healthcare Quality

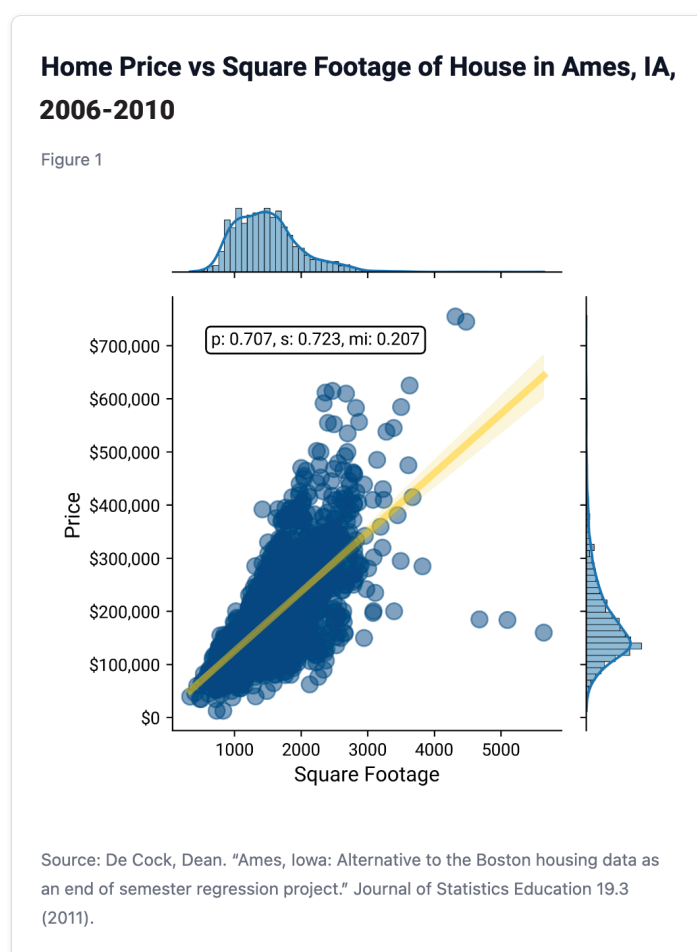
Quality in healthcare is an amorphous concept, a patchwork of process measures, patient perception and adverse events. Twenty-five years after the Institute of Medicine’s *To Err Is Human*, post-hospital discharge mortality is stubbornly high, and health system performance on quality measures is relatively average. More importantly, there is no observed correlation between price and quality in healthcare services at the national level.

To demonstrate this, we examined the correlation between common quality measures reported to Centers for Medicare and Medicaid Services (CMS) QualityNet and/or the Centers for Disease Control and Prevention (CDC) and the corresponding in-network rate paid by UnitedHealthcare for select high-volume DRGs.

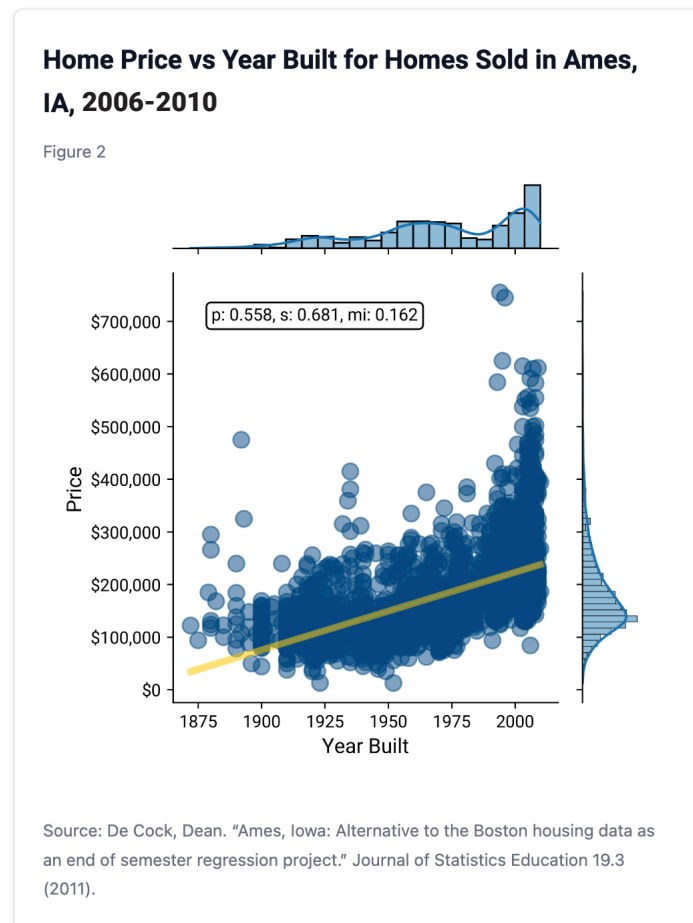
Correlation is a measure of the relationship, or lack thereof, between two things. For example, height and weight have a strong correlation; height and eye color do not. Our correlation analysis included the following common measures:

- Pearson's Product Moment Correlation Coefficient, which measures the strength of the linear correlation between two variables;
- Spearman's Rank Correlation Coefficient, which measures the strength of the monotonic correlation between two variables; and
- Mutual Information (MI), which measures non-linear relationships between two variables.<sup>4,5</sup>

Data scientists commonly use home sales data to illustrate the effectiveness of correlation measures. Analyzing a data source that contains housing sales in Ames, Iowa, from 2006–2010, it is clear from the Pearson (p), Spearman (s) and Mutual Information (mi) analysis that the strongest positive correlation ( $p=0.707$ ) is between housing prices and the square footage of the house, which is unsurprising. Logically, as the size of a house increases, the more it will cost.



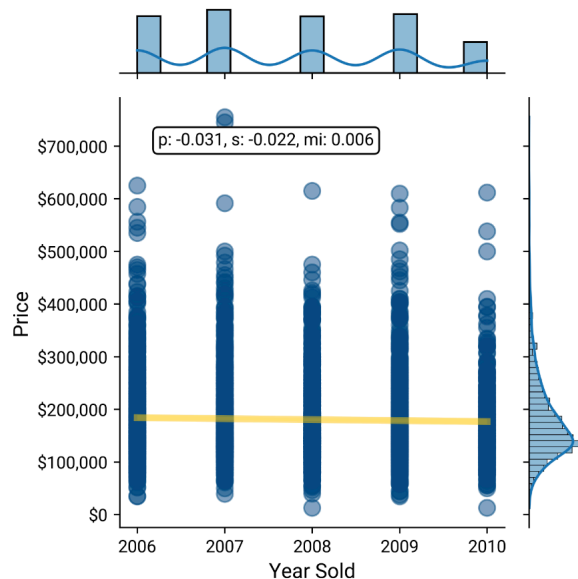
There is a slightly weaker but moderate positive correlation ( $p=0.558$ ) between the age of the house and its price, which is also logical since new homes generally cost more than old homes. At the same time, there are plenty of renovated homes, or older homes in desirable neighborhoods, that are expensive. So, while the age of a home is a good indicator of its price, it is not quite as good of an indicator as the square footage.



Finally, the relationship between housing prices and the year of sale between 2006 and 2010 reveals almost no correlation at all ( $p=-.031$ ). One might expect a slightly positive correlation due to inflation, but that doesn't seem to bear out in Ames, Iowa (likely due to the "Great Recession" of 2008-2009). Houses of all prices (inexpensive and expensive) are sold every year, so only knowing the year a house is sold gives you little information about the price.

### Home Price vs Year Sold in Ames, IA, 2006-2010

Figure 3



Source: De Cock, Dean. "Ames, Iowa: Alternative to the Boston housing data as an end of semester regression project." *Journal of Statistics Education* 19.3 (2011).

It is axiomatic that "you get what you pay for," and the analysis of housing data in Ames, Iowa seems to confirm that consumers get "more" – whether in square footage or newer construction – in exchange for a higher price.

Healthcare is a noticeable exception to the axiom since in healthcare customers and end users rarely know what they bought, what was delivered, what it cost or whether it was any good.

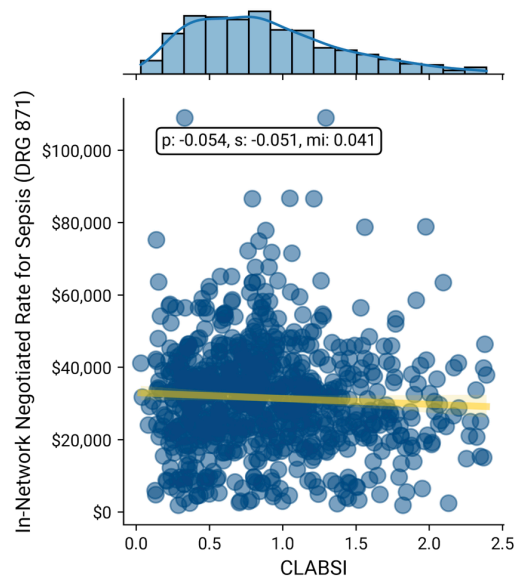
Using Pearson, Spearman and MI to compare common quality measures for high-volume hospital inpatient procedures and in-network reimbursement paid for those procedures reveals negligible correlation between cost and quality. In each of the correlation analyses below of in-network rate vs the applicable quality measure,

the X-axis represents quality, where a lower number is better. As a result, in these correlation analyses, the ideal correlation would be  $-1$ , which would demonstrate that as the rate increases, so does quality. Conversely, a correlation of  $1$  would demonstrate that as rate increases, quality decreases. In each example below, the slope of the regression line is "good," but the correlations are "weak."

It is well established that septicemia is a serious and sometimes fatal condition that is expensive to treat.<sup>6</sup> "A central line-associated bloodstream infection (CLABSI) is a laboratory-confirmed bloodstream infection not related to an infection at another site that develops within 48 hours of central line placement," and "septicemia is an infection that occurs when bacteria enter the bloodstream and spread."<sup>7,8</sup> Comparing the in-network negotiated rate for DRG 871 – Sepsis with CLASBI as a relevant measure of quality reveals a negligible correlation between price and quality.

## Negotiated Rate for Sepsis vs CLASBI

Figure 4



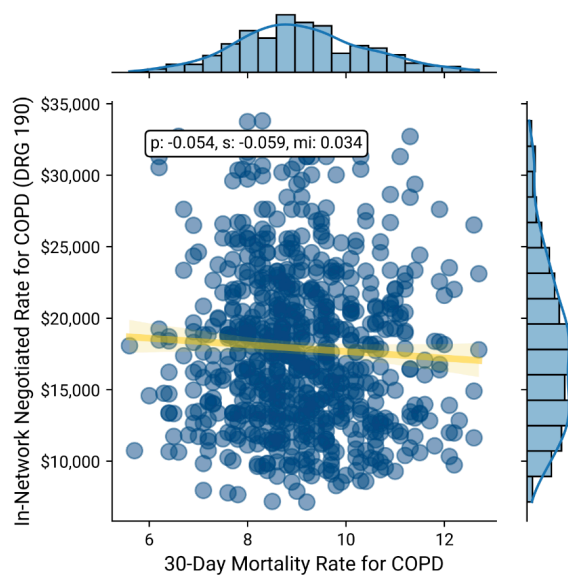
Analysis of 834 hospitals reporting CLASBI rates and a contracted rate with UnitedHealthcare for DRG 871

Source: Trilliant Health health plan price transparency dataset; CDC's National Healthcare Safety Network(NHSN).

Similarly, comparing the in-network negotiated rates with the 30-day post-discharge mortality for DRG 190 – COPD, DRG 193 – Pneumonia, DRG 280 – Acute Myocardial Infarction and DRG 291 – Heart Failure, respectively, reveals a negligible correlation between price and quality.

## Negotiated Rate vs 30-Day Mortality for COPD

Figure 5

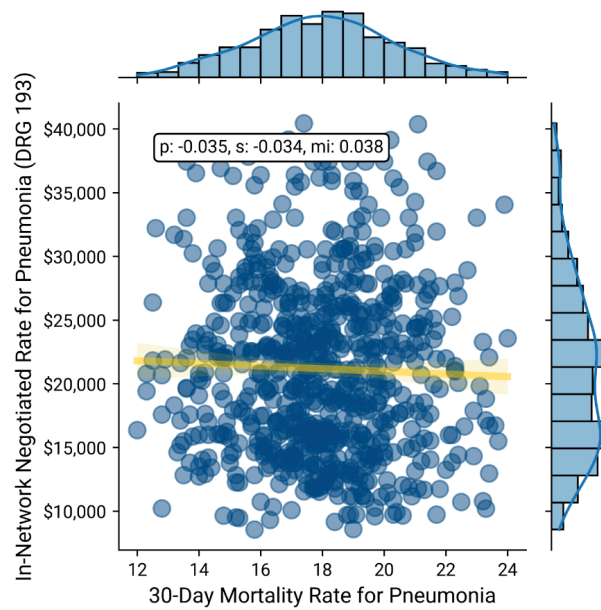


Analysis of 965 hospitals reporting 30-day mortality for COPD and a contracted rate with UnitedHealthcare PPO Select for DRG 190

Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

## Negotiated Rate vs 30-Day Mortality for Pneumonia

Figure 6

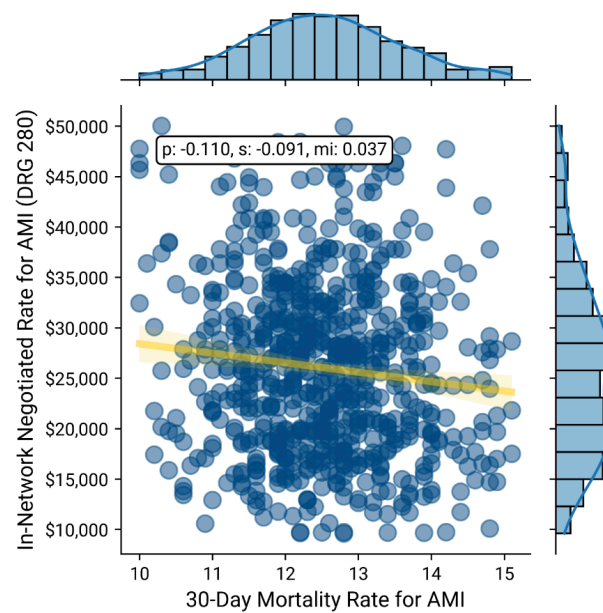


Analysis of 1,046 hospitals reporting 30-day mortality for Pneumonia and a contracted rate with UnitedHealthcare PPO Select for DRG 193

Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

## Negotiated Rate vs 30-Day Mortality for AMI

Figure 7

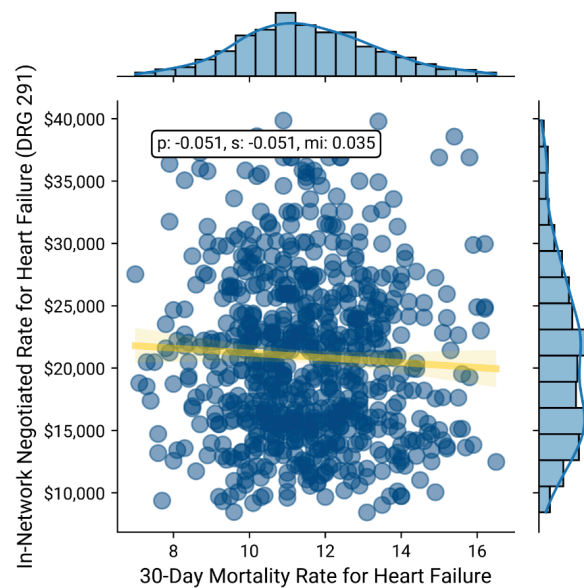


Analysis of 952 hospitals reporting 30-day mortality for AMI and a contracted rate with UnitedHealthcare PPO Select for DRG 280

Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

## Negotiated Rate vs 30-Day Mortality for Heart Failure

Figure 8



Analysis of 1,147 hospitals reporting 30-day mortality for Heart Failure and a contracted rate with UnitedHealthcare PPO Select for DRG 291

Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

Author's note: We are grateful to Edmund Jackson, Ph.D., for his insights in correlation analyses.

## Creating Value for Money for Your Customer

*Primum non nocere* – first, do no harm – is a foundational concept in medicine, if not part of the Hippocratic Oath.<sup>9</sup> The avoidance of harm is also foundational to delivering value for money.

According to the World Health Organization,

*“It is estimated that there is a 1 in 3 million risk of dying while travelling by airplane. In comparison, the risk of patient death occurring due to a preventable medical accident, while receiving health care, is estimated to be 1 in 300.”<sup>10</sup>*

The quality performance depicted above is depressingly dismal in aggregate, and stakeholders could dramatically increase the value for money in the U.S. health economy solely by reducing mortality.

Beyond improvements in the foundational quality elements of mortality and safety, analyzing in-network rates versus quality measures reveals **hundreds of examples in which the same quality outcome can be obtained at a wide variety of rates**. In each such case, value for healthcare products and services is completely dependent on comparative reimbursement rates rather than quality.



Health plan price transparency reveals a startling spread in pricing for healthcare services that begs for explanation, not rationalization or justification. As a result, health plan price transparency **should** inaugurate an era of unprecedented and frenzied competition to win the hearts and minds of the payer that keeps the current U.S. healthcare system afloat: **the employer**. If it does, the winners in healthcare's negative-sum game will be those who deliver value for money.

Having identified the true customer for every health economy stakeholder, we will now review **how to develop evidence-based strategies to deliver value for money**.

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#### Footnotes

1. <https://www.gao.gov/products/gao-23-105270>
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## CHAPTER 1: **Market Share**

Every health economy stakeholder fundamentally misunderstands market share because none of them know how many competitors exist.

# Why Market Share Matters for Every Health Economy Stakeholder

Market share is the most important metric of winning – or losing – in any competitive market. Measuring market share accurately is a best practice in a positive-sum market; it is mission-critical in a negative-sum market.

In healthcare, market share reveals a stakeholder's network performance and, in turn, the effectiveness of its strategic initiatives and operational execution. Every individual interaction between a patient and a physician affects the network performance of every health economy stakeholder, whether they know it or not. Physicians make referrals to other physicians or facilities, or not, and those referrals are made to "in-network" participants, or not. Physicians write follow-up orders or prescriptions, or not, and patients follow them, or not. A surgeon implants a manufacturer's device, or not.

As a result, the U.S. health economy is simply the aggregation of the millions of physician and patient decisions that are made, or not, every day. Every health economy stakeholder's network performance depends on how many of those decisions were favorable to their business model, or not.

**This chapter discusses how to analyze market share accurately to measure network performance.**

## What Health Economy Stakeholders Are Doing Wrong, and Why

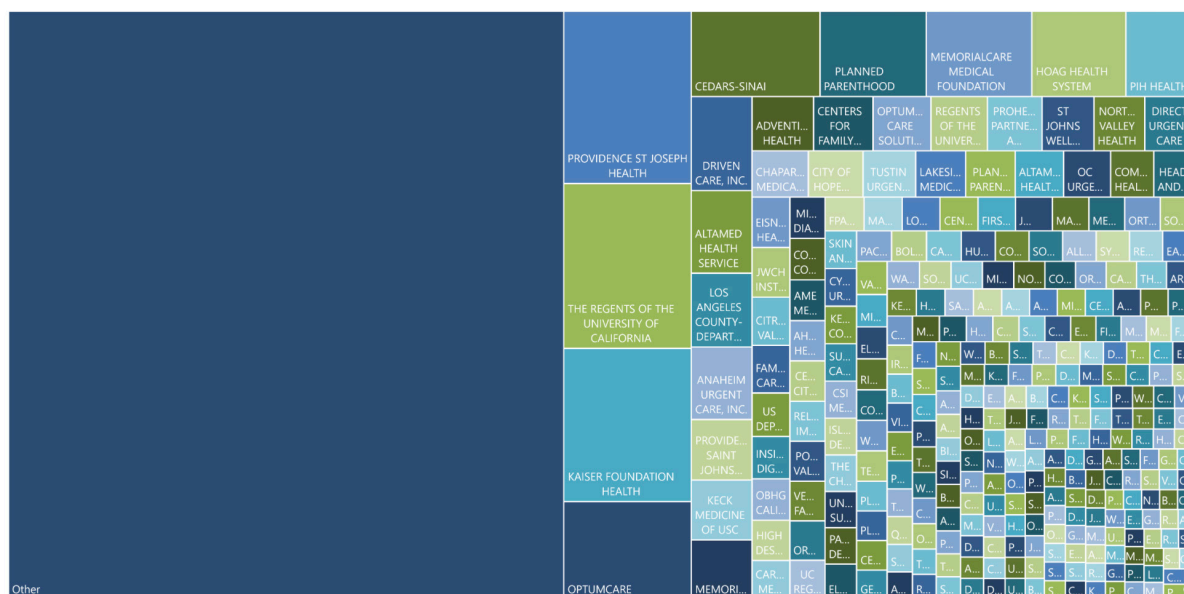
Competing effectively is impossible without understanding your competitors and their market share – who they are, where they operate and how much business they have. Therefore, measuring market share accurately requires knowing the number of competitors in the target market.

The first thing to know about market share in the health economy is this:

**Every health economy stakeholder fundamentally misunderstands market share because none of them know how many competitors exist.**

## Evaluation and Management (E&M) Visit Market Share in Los Angeles, CA

Figure 1.1



Do you know every competitor in the market? If not, how can you know your market share?

Source: Trilliant Health Provider Directory and national all-payer claims database.

The second thing to know about market share is that every market has a **total addressable market (TAM)** of products and services. **Network performance** measures how well each health economy stakeholder maximizes its performance against its competitors within the TAM.

In the health economy, the **measure of network performance is different** for different stakeholders, but **the variables that impact network performance are the same** for each one: the series, and sequence, of interactions between physicians and patients.

A realistic understanding of market share is almost always sobering but will, for true competitors, catalyze change. A realistic understanding of market share almost always reveals that stakeholders don't know their customers as well as they think or, more importantly, as they should.

# The Questions Every Stakeholder Should Answer

To understand market share, every health economy stakeholder must be able to answer:

- What are the parameters of the market in which the stakeholder offers goods and services? Is the market national, regional, local or hyper-local?
- In how many markets does the stakeholder compete?
- What is the TAM of and general demographic trends in each market in which the stakeholder competes?
- For each target market, is the market expanding or contracting for the product or service offered by the stakeholder?
- Are current market trends evolving due to recently enacted policy, regulatory, reimbursement or technology changes?
- How many competitors offer similar or substitute products or services in each target market?
- What are the general and specific growth trends within each target market? Are competitors entering or leaving a target market?
- What is the stakeholder's market share percentage and trend by product or service for each target market?
- Does the stakeholder compete more effectively in certain markets? What are the characteristics of the stakeholder's most profitable markets in comparison to its least profitable markets?
- Having answered these questions, which products or services offer the stakeholder its best opportunity for market share expansion? Which products or services should be deemphasized or abandoned?

Only with a comprehensive understanding of the competitive dynamics in each target market can stakeholders effectively allocate scarce capital resources across their enterprise.

Note that the employer is the only health economy stakeholder who should **not** focus on the market share or network performance of other health economy stakeholders. Market share, particularly for health systems, is commonly viewed as a proxy for quality, which may or may not be true.

Additionally, the Federal government believes that market share is a proxy for higher prices, which is usually not true. Employers, which are ultimately the **source** of profitable market share for every other health economy stakeholder, should focus on the **value for money** that stakeholders offer, not their market share.

## Use Case: Provider Market Share of Total Addressable Market (TAM)

To calculate market share accurately, health economy stakeholders must first identify all competitors in the applicable TAM and then quantify the volume of services provided by each competitor.

This example uses provider directory data to define the market of physicians rendering orthopedic services in the Dallas–Fort Worth–Arlington, TX, Core–Based Statistical Area (CBSA). The Dallas–Fort Worth–Arlington, TX CBSA has more than 600 orthopedic surgery and sports medicine providers across more than 200 primary practice locations. Calculating the TAM of orthopedic volumes in the Dallas–Fort Worth–Arlington, TX CBSA requires identifying **who** provides orthopedic services and quantifying the volume and type of services rendered by each such provider. Calculating the market share of facilities delivering orthopedic surgeries requires knowing **where** the surgeries were performed.

### Orthopedic Surgery and Sports Medicine Providers in the Dallas-Fort Worth-Arlington, TX CBSA

Figure 1.2

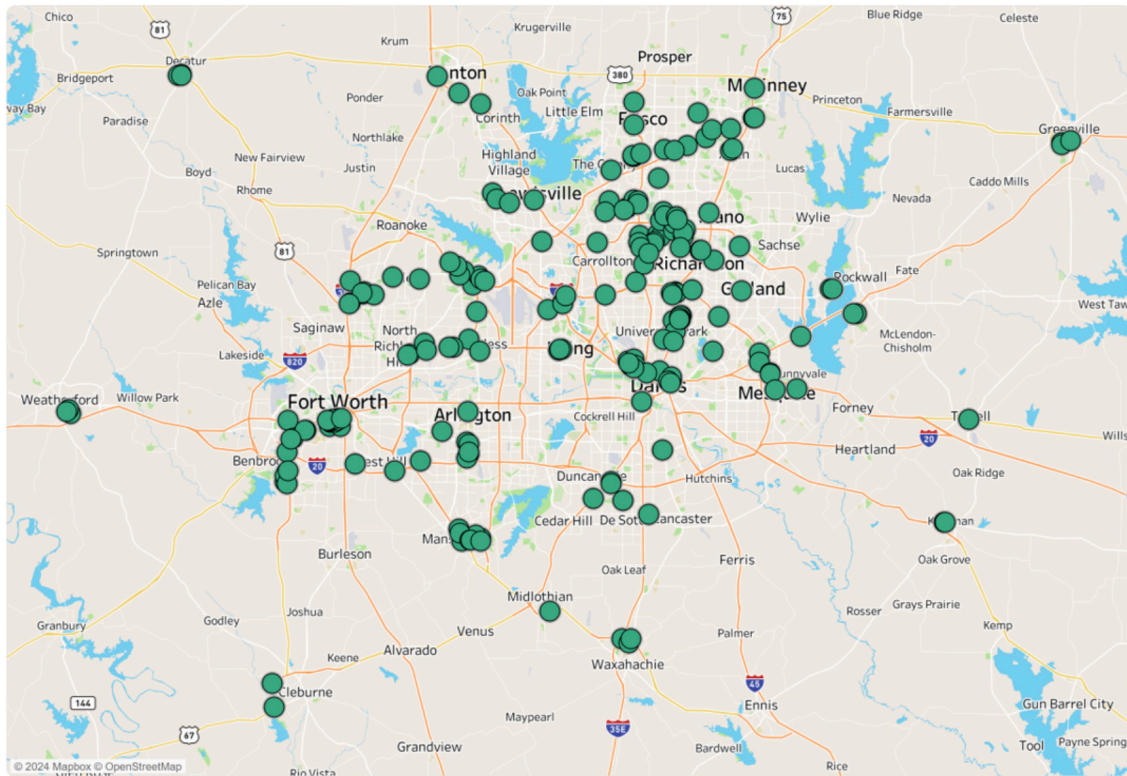
[See full list of 600+ providers.](#)

NPI	Provider Name	Specialty
1497072995	AARON SCHRAYER	Orthopaedic Trauma Physician
1417946831	ABBASS SEKHAVAT	Orthopaedic Surgery Physician
1619083326	ABRAHAM ABDO	Orthopaedic Surgery Physician
1649532078	ADAM BRECEDA	Orthopaedic Surgery Physician
1366862666	ADAM BREKKE	Adult Reconstructive Orthopaedic Surgery Physician
1255530002	ADAM CRAWFORD	Orthopaedic Foot and Ankle Surgery Physician
1942664453	ADAM GREEN	Orthopaedic Trauma Physician
1053606210	ADAM HINES	Orthopaedic Surgery Physician
1538152764	ADAM KOUYOUMJIAN	Orthopaedic Surgery Physician
1861454928	ADAM STARR	Orthopaedic Trauma Physician
1538579214	ADAM WRIGHT	Orthopaedic Surgery Physician
1306070479	ADEWALE ADENIRAN	Orthopaedic Surgery of the Spine Physician
1073785879	AIMEE SCHIMIZZI	Orthopaedic Hand Surgery Physician
1184671729	AJAI CADAMBI	Adult Reconstructive Orthopaedic Surgery Physician
1487682316	ALAN JONES	Orthopaedic Surgery Physician

Source: Trilliant Health Provider Directory.

### Orthopedic Service Line Access Map for the Dallas-Fort Worth-Arlington, TX CBSA

Figure 1.3

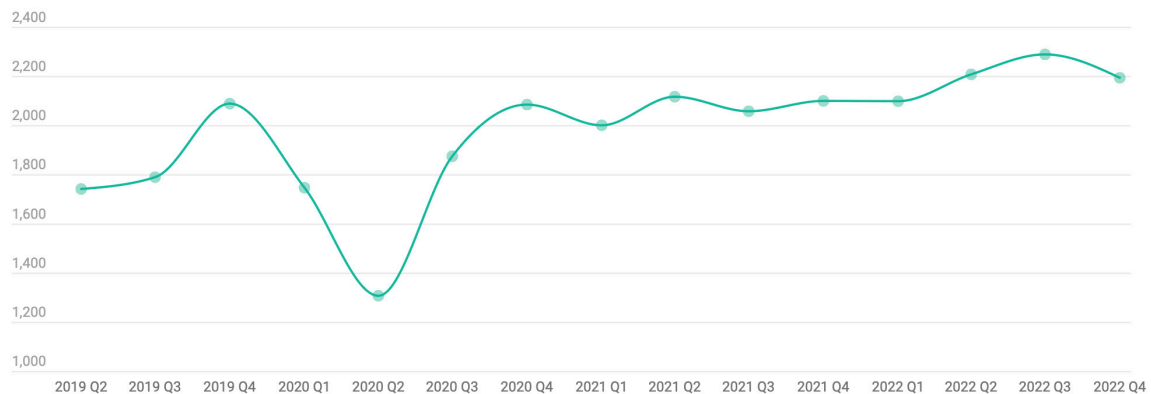


Source: Trilliant Health Provider Directory.

Having identified and compiled utilization data for all competitors in the market, healthcare provider organizations can then begin to understand growth trends, competitive dynamics and market share percentages. In this example, using a combination of provider directory and utilization data, market share for an example health system (“Health System A”) is calculated for the orthopedic service line across all outpatient care settings in a blinded market.

### Trended Outpatient Orthopedic Surgical Visit Volume

Figure 1.4

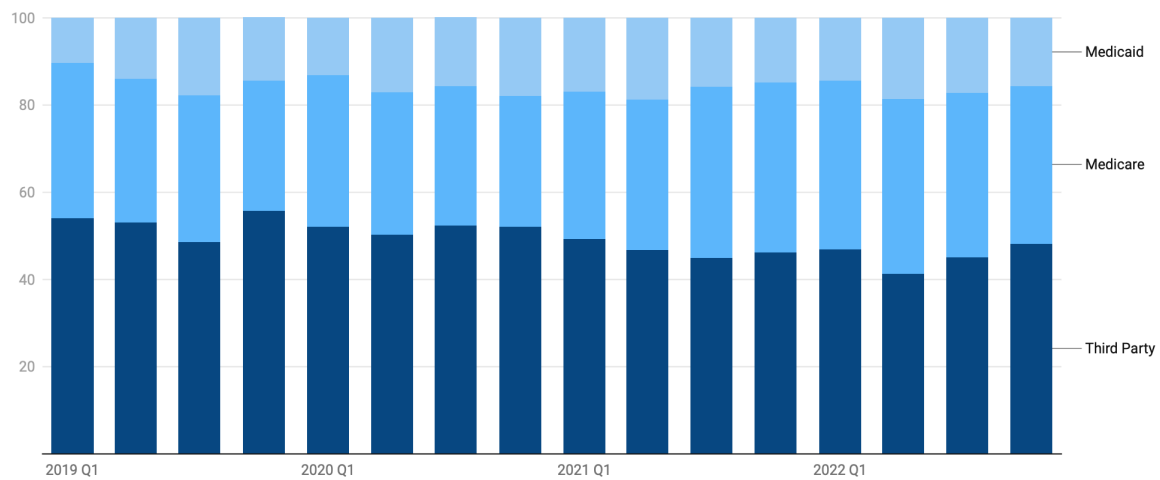


Source: Trilliant Health Provider Directory and national all-payer claims database.



## Trended Outpatient Surgical Visits by Payer Type

Figure 1.5

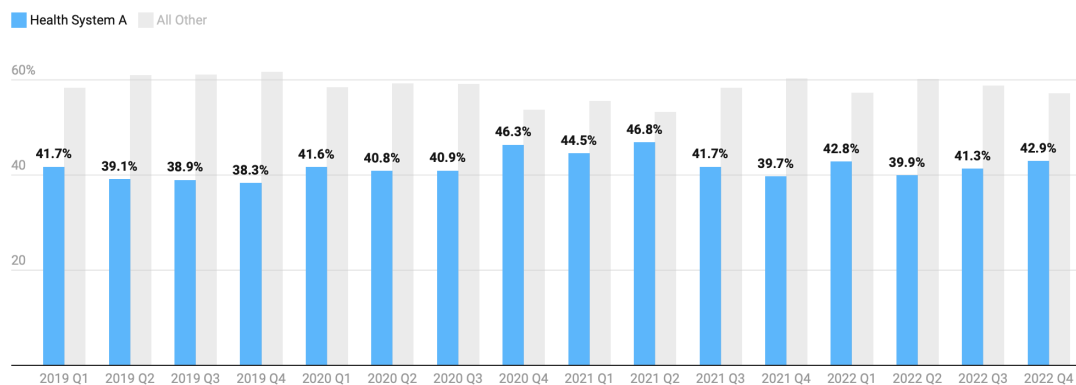


Source: Trilliant Health Provider Directory and national all-payer claims database.

Although the market for orthopedic surgeries has grown slightly quarter-over-quarter, after a significant drop in Q2 2020 due to COVID-19, the share of commercial visits has declined by 5.8 percentage points since Q1 2019, while the share of Medicaid visits has grown by 5.3 percentage points. This market is an example of a negative-sum market for commercially insured patients, requiring stakeholders to compete vigorously to maintain their market share of those patients.

## Health System Market Share of Outpatient Orthopedic Surgical Visits

Figure 1.6



Source: Trilliant Health Provider Directory and national all-payer claims database.

## Trended Health System Market Share of Outpatient Orthopedic Surgical Visits

Figure 1.7

HEALTH SYSTEM	2019-Q1	2019-Q2	2019-Q3	2019-Q4	2020-Q1	2020-Q2	2020-Q3	2020-Q4	2021-Q1	2021-Q2	2021-Q3	2021-Q4	2022-Q1	2022-Q2	2022-Q3	2022-Q4
Health System A	772	681	697	800	727	534	768	966	890	991	858	835	898	881	946	942
All Others	1,080	1,062	1,094	1,290	1,021	775	1,108	1,120	1,112	1,127	1,201	1,266	1,202	1,328	1,344	1,253
Market Share	41.7%	39.1%	38.9%	38.3%	41.6%	40.8%	40.9%	46.3%	44.5%	46.8%	41.7%	39.7%	42.8%	39.9%	41.3%	42.9%

Source: Trilliant Health Provider Directory; national all-payer claims database.

Health System A's market share for outpatient orthopedic surgeries has declined from a peak of 47% in Q1 2021 to 43% in Q4 2022. While Health System A, an academic medical center, has the highest market share in the market, it should develop strategies to defend its market position in an increasingly competitive market, given the significance of outpatient orthopedic surgical visits to the health system's financial sustainability.

## Steps to Calculate a Healthcare Provider's Market Share

### 1. Internal Planning

Collect internal information to understand the financial contribution of each applicable service line and market position of the provider. Document the impact that each applicable service line has on the provider, how that service line compares to others and how the service line might be improved.

### 2. Define the Market

Identify the geographic areas and demographic segments that define the primary and secondary service area for the applicable service lines, focusing on utilization-based service areas that reflect patient migration for the relevant services, whether inpatient, outpatient or both.

### 3. Curate Market Data

Configure external data sources around the defined service area. Normalize the data to align with internal service line definitions and classifications, which may involve mapping external categories or codes to internal service line categories. Determine key metrics for standard market share reporting, such as patient volume, procedures performed, revenue generated or market size for applicable service lines. Group providers by system affiliation and isolate target care settings for detailed reporting around inpatient and outpatient market share.

### 4. Calculate Market Share

Use the curated external data to calculate market share for each applicable service line. Market share can be calculated by dividing operating metrics (e.g., patient volumes, procedures, revenue, etc.) by the total market size for the applicable service line within the defined geography.

### 5. Visualize and Report

Present market share data in easy-to-understand visualizations such as charts, graphs or dashboards. Ensure that the reporting format is user-friendly and accessible to stakeholders involved in the strategic decision-making process. Apply easy-to-use filters so that key stakeholders can segment the data by procedure type, care setting and payer.

## **6. Identify Trends and Patterns**

Analyze trends and patterns in market share over time and across different demographic segments or service lines. Assess competitor market share, strengths, weaknesses and strategies to understand your competitive position. Based on the analysis, identify growth opportunities within the market and potential threats to system share.

## **7. Develop Strategies**

Develop strategic initiatives to capitalize on opportunities, address weaknesses and improve market share. Continuously monitor market dynamics, competitor performance and the effectiveness of strategic initiatives, and adjust strategies as needed to maintain or improve market share. By following these steps and leveraging comprehensive data sources, providers can gain valuable insights into market share and make informed decisions to drive growth and performance.

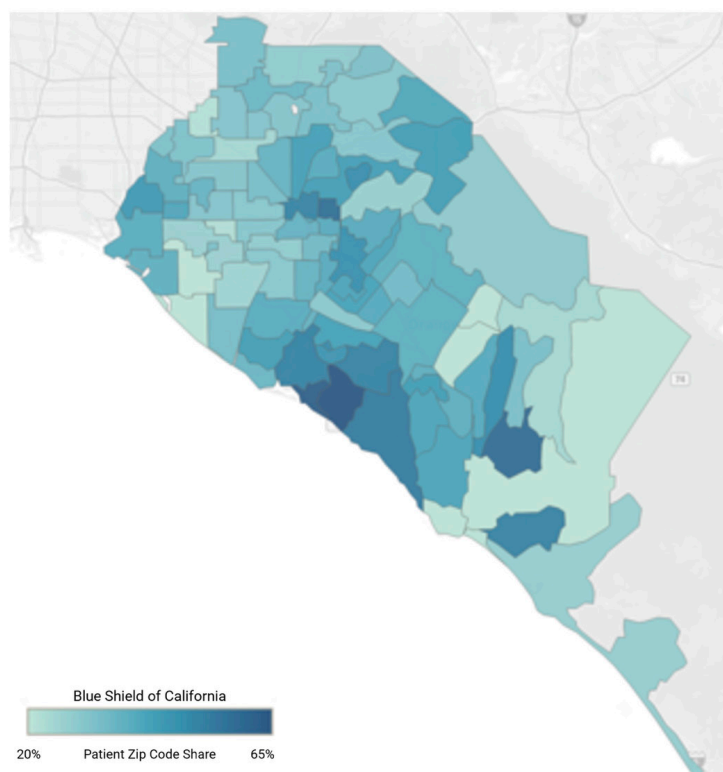
# **Use Case: Health Plan Market Share by Geography**

Payers can readily calculate total market share at the state level, but not within the individual markets within a state. Market share can and frequently does vary significantly in sub-markets within the defined market. By understanding market share within sub-markets, payers can use demographic data and utilization patterns to inform network adequacy at the neighborhood level. By understanding utilization patterns within sub-markets, payers can identify opportunities to reduce medical loss ratio (MLR) by directing care to lower-cost settings.

In this example, using utilization and consumer data, market share for Blue Shield of California is calculated as the number of distinct patients at the ZIP Code level based upon Trilliant Health's proprietary "patient personal service area" designation. While Blue Shield of California is the dominant health plan in the market, its market share varies across ZIP Codes in the Los Angeles Combined Statistical Area (CSA). Moreover, this example demonstrates that Blue Shield members utilize hospital outpatient departments for ambulatory surgery at a higher percentage than the market average in every ZIP Code.

## Blue Shield of California Market Share by Patient ZIP CODE

Figure 1.8



Source: Trilliant Health national all-payer claims database.

## ZIP Codes with Highest and Lowest Blue Shield of California Market Share

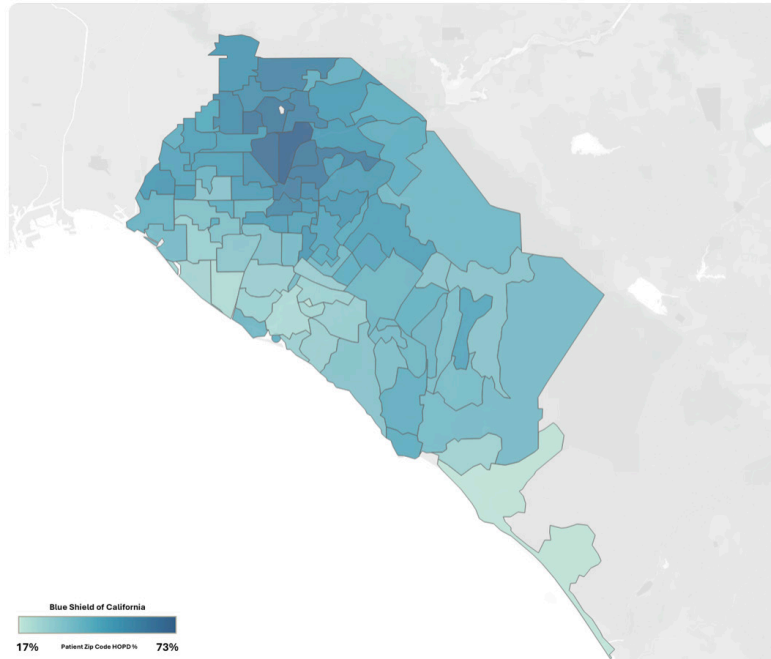
Figure 1.9

ZIP CODE	CITY NAME	POPULATION	▼ BS OF CA SHARE
92657	Newport Coast	10,327	69%
92625	Corona Del Mar	12,494	68%
92694	Ladera Ranch	23,406	65%
92866	Orange	14,899	65%
92651	Laguna Beach	26,162	63%
92660	Newport Beach	33,489	62%
92673	San Clemente	29,007	62%
92603	Irvine	19,381	62%
92868	Orange	24,935	62%
92692	Mission Viejo	46,229	60%
92679	Trabuco Canyon	32,176	47%
92844	Garden Grove	23,932	46%
92621	Buena Park	35,538	45%
92624	Capistrano Beach	7,403	45%
92629	Dana Point	26,095	45%
92647	Huntington Beach	57,196	45%
92630	Lake Forest	60,963	42%
92610	Foothill Ranch	9,274	40%
92648	Huntington Beach	45,029	36%
92675	San Juan Capistrano	35,535	35%

Source: Trilliant Health Provider Directory and national all-payer claims database.

## Blue Shield of California Utilization of Hospital Outpatient Department (HOPD) for Elective Surgeries

Figure 1.10



Source: Trilliant Health Provider Directory; national all-payer claims database.

## Blue Shield of California HOPD Utilization for Elective Surgeries in Select ZIP Codes

Figure 1.11

ZIP CODE	BS OF CA VISITS	▼ BS OF CA HOPD %	MARKET HOPD %
92806	5,116	73%	67%
92805	2,691	68%	54%
92867	3,310	64%	57%
92868	4,129	62%	57%
92866	3,101	58%	53%
92653	5,227	41%	30%
92618	4,521	40%	25%
92637	2,593	39%	29%
92656	2,517	36%	29%
92708	2,743	33%	27%
92603	6,050	29%	24%
92626	2,598	28%	24%
92627	3,730	27%	23%
92612	2,676	27%	22%
92660	10,077	23%	19%

Source: Trilliant Health Provider Directory; national all-payer claims database.

# Steps to Calculate a Health Plan's Market Share

## 1. Internal Planning

Collect internal information from each department to understand the contribution that each line of business makes to the health plan's financial sustainability and market position.

## 2. Define the Market

Identify the geographic areas and demographic segments that define the health plan's service area.

## 3. Curate Market Data

Configure external data sources around the defined service area. Determine key metrics for standard market share reporting, such as member population, utilization and MLR. Group individual providers based on affiliation/ownership and isolate target care settings for detailed reporting around inpatient and outpatient market share.

## 4. Calculate Market Share

Use the curated external data to calculate market share for each key line of business or service line. Market share can be calculated by dividing health plan performance metrics (e.g., member enrollment, member utilization by procedure type, member utilization by site of service, etc.) by the total market size for the line of business within the defined geography.

## 5. Visualize and Report

Present market share data in easy-to-understand visualizations such as charts, graphs, or dashboards. Ensure that the reporting format is user-friendly and accessible to stakeholders involved in the strategic decision-making process. Apply easy-to-use filters so that key stakeholders can segment the data by procedure type, care setting and payer.

## 6. Identify Trends and Patterns

Analyze trends and patterns in market share over time and across different demographic segments, lines of business or service lines. Assess competitor market share, strengths, weaknesses and strategies to understand your competitive position. Based on the analysis, identify membership growth opportunities and unit level cost opportunities at line of business level.

## 7. Develop Strategies

Develop strategic initiatives to capitalize on opportunities, address weaknesses and improve market share. Continuously monitor market dynamics, competitor performance and the effectiveness of strategic initiatives, and adjust strategies as needed to maintain or improve market share. By following these steps and leveraging comprehensive data sources, health plans can gain valuable insights into market share, utilization and cost trends and make informed decisions to increase membership, understand utilization trends and improve MLR.

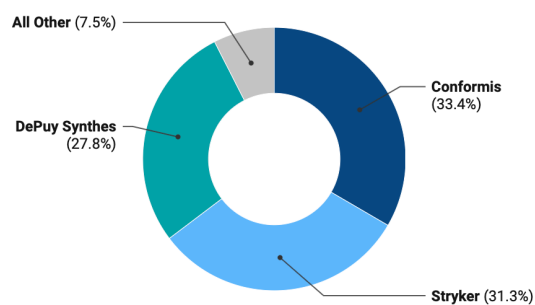
## Use Case: Life Sciences Market Share Based on Surgeon Alignment

For medical device companies, understanding market share within a target market is crucial for informing sales, marketing, product development and product launch strategies.

In this example, using a combination of provider directory, utilization and Open Payments data, the financial relationships between medical device companies and an example orthopedic practice in Nashville, TN are used to estimate each firm's market share. This orthopedic group specializes in adult reconstructive surgeries and receives payments from numerous life sciences firms, including Conformis (33.4% of total payments to the medical group), Stryker (31.3%) and DePuy Synthes (27.8%). However, for hand surgeries, this group is primarily aligned with Axogen (60.9% of total payments for hand surgeons).

### Medical Device Share for Example Orthopedic Group Performing Adult Reconstructive Surgeries

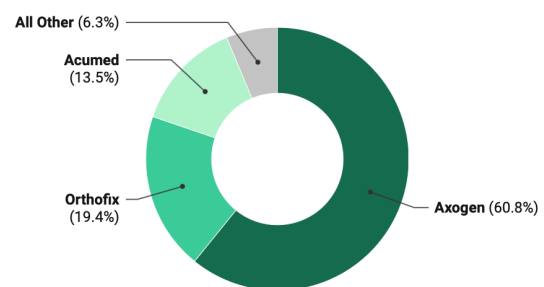
Figure 1.12



Source: Trilliant Health Provider Directory and national all-payer claims database; CMS Open Payments dataset.

### Medical Device Share for Example Orthopedic Group Performing Hand Surgeries

Figure 1.13








Source: Trilliant Health Provider Directory and national all-payer claims database; CMS Open Payments dataset.



Within the practice, surgeons have different levels of alignment to medical device firms. Some surgeons are highly aligned, with all reported payments coming from a single firm. Other surgeons have a lower degree of alignment, with payments from multiple medical device companies. By linking surgeon alignment to utilization, medical device companies can estimate their market share.

### Medical Device Share by Surgeon in Example Orthopedic Group Performing Adult Reconstructive Surgeries

Figure 1.14

PROVIDER NAME	2022 CASES	MEDICAL DEVICE ALIGNMENT	% OF PAYMENTS
Rubright, James	537		38%
Carpenter, William	397		89%
Langan, Justin	351		83%
Joyner, Kyle	448		100%
Kurtz, William	376		100%

TrSource: Trilliant Health Provider Directory and national all-payer claims database; CMS Open Payments dataset.

# Steps to Estimate a Life Sciences Firm's Market Share

## 1. Define the Market

Clearly define the geographic area and target service line segment. The geography could be a region, state, core-based statistical area (CBSA), healthcare facility or provider group. The target service line segment could encompass specific procedures such as joint replacement, sports medicine, spine surgery, etc.

## 2. Targeting and Segmentation

Identify key decision-makers and influencers within the target market who order or utilize medical devices. Leverage external market data to identify high-value provider groups based on specialty, practice affiliation and payer mix. Research each provider to learn more about their background and medical training. Examine the service mix, competitive position and facility affiliation of each provider group.

## 3. Analyze Procedure Data

Configure external data sources around the defined service line segment using target procedure codes. Isolate target procedures to understand current demand within the defined geography and prioritize accounts strategically based on procedure volume at the individual provider level. Refine facility affiliation metrics based on where each provider performs target procedures.

## 4. Assess the Competitive Landscape

Assess the presence and activity of competitors within the defined market segment, identifying which providers are aligned with which medical device companies. Develop strategies and tactics to establish new provider relationships and/or opportunities to expand the current product mix. Analyze factors that may influence change in share, such as new product launches, pricing strategies or changes in provider preferences.

## 5. Develop Go-to-Market Strategy

Analyze trends and patterns in market share over time. Equip sales representatives to identify trends and optimize outreach efforts around high-value prospects, including refining product offerings, adjusting pricing strategies, enhancing provider support or expanding market reach. Continuously monitor changes in market dynamics, competitor activities and provider preferences. Adjust strategies accordingly to maintain or improve market position within the target market over time.



## CHAPTER 2:

# Developing Effective Physician Strategies

The foundation of every effective physician strategy is a comprehensive and dynamic directory that provides accurate information about locations, affiliations, specialties and practice status. For more complex physician strategies, the directory should be enriched with provider practice patterns, including their referrals, prescribing patterns, payer mix and patient panel size, as well as any available quality information.

# Why Physician Decisions Matter for Every Health Economy Stakeholder

The most expensive thing in healthcare is the physician's pen, or in modern times, access to a computing device equipped with electronic ordering capabilities. Nothing happens in the health economy without a physician decision, and there is little in the current – and still dominant – fee-for-service reimbursement system to limit what treatments, diagnostics or therapeutics a physician orders.

Physician decisions affect the performance of every health economy stakeholder. The volumes of every hospital, surgery center, imaging center, physical therapy clinic and life sciences firm depend on physicians to provide healthcare services for patients, to admit patients for inpatient stays, to refer patients for outpatient care, to implant medical devices and to write prescriptions. Likewise, the medical loss ratio (MLR) of every health plan and the healthcare costs underwritten by every self-insured employer are impacted by the products and services physicians provide or order, as well as those they forego.

**This chapter examines how every health economy stakeholder can develop more effective physician strategies to improve the design and performance of their provider networks.**

## What Health Economy Stakeholders Are Doing Wrong, and Why

At its core, the \$4.5 trillion health economy is the aggregation of billions of distinct encounters between physicians and patients. Effective physician-focused strategies require a detailed understanding of which physician rendered what services to a patient, how many times, where the physician delivered the care and where that patient went next.

Although Centers for Medicare and Medicaid Services (CMS) has documented that the vast majority of provider directories are outdated and unreliable, most health economy stakeholders are Scrooge-like when investing in provider information.<sup>1</sup> Instead of understanding that an accurate provider directory is table stakes, most stakeholders view it as an obligatory nuisance, which might explain why their physician strategies often fail.

The foundation of every effective physician strategy is a comprehensive and dynamic directory that provides accurate information about locations, affiliations, specialties and practice status. For more complex physician strategies, the directory should be enriched with provider practice patterns, including their referrals, prescribing patterns, payer mix and patient panel size, as well as any available quality information.

# The Questions Every Stakeholder Should Answer

To develop effective physician strategies, every health economy stakeholder must be able to answer:

- Who are **all** the healthcare providers operating in the target market, including facilities, physicians, allied health professionals, “payviders” and digital health firms?
- In the target market, how does the demand for services correlate with the supply of providers who are qualified to deliver those services, based on their specialties and credentials?
- How might physician supply evolve in the target market due to changes in the workforce, such as career change, graduation, retirement and shifts to part-time employment?
- How might the supply of facilities evolve in the target market due to demographic, economic, technological or regulatory changes?
- Which healthcare providers are aligned with the stakeholder’s provider network? Is that network adequate to meet the healthcare demands of the market?
- How can the stakeholder strengthen their network through alignment with physicians or facilities in the market, whether through employment, affiliation, strategic partnership or acquisition?
- How will current and future policy and payment trends influence growth opportunities for the stakeholder’s products and services in the target market?

Only with a comprehensive understanding of all healthcare providers in each target market can stakeholders effectively develop strategies that strengthen their organization’s network performance.

# Physician Strategies for Healthcare Providers

The supply of physicians is often inadequate to meet the demand for their services, not only in rural markets but also in suburban and urban communities. When designing provider networks, stakeholders need to attract, hire and retain physicians and allied health professionals based on current and future market needs. Longstanding workforce issues (e.g., an aging workforce, burnout) were exacerbated by the pandemic and ensuing “Great Resignation.” Traditional providers like health systems and physician groups must now compete for a shrinking pool of talent against digital health firms, life sciences firms, payers, consulting firms and, more recently, retail-based providers.

In addition to workforce planning and recruitment, provider organizations must continually evaluate network performance. While the terminology varies – network integrity, patient retention, referral leakage – the business goal is the same: to optimize the provider network by keeping referrals of commercially insured patients, especially by employed physicians, within the system. The more financial exposure the organization has to value-based reimbursement models, the more important that network performance becomes.

Stakeholders at provider organizations must answer the following questions to develop effective physician network strategies:

- Who are **all** the healthcare providers, including facilities, physicians, allied health professionals, “payviders” and digital health firms, operating in the target market?
- In the target market, how does the demand for services correlate with the supply of providers who are qualified to deliver those services, based on their specialties and credentials?
- How might physician supply evolve in the target market due to changes in the workforce, such as career change, graduation, retirement and shifts to part-time employment?
- How might the supply of facilities evolve in the target market due to demographic, economic, technological or regulatory changes?
- Is the stakeholder’s physician network adequate to meet the healthcare needs of its customers in the target market?
- Is the stakeholder’s physician network adequate – and aligned – to leverage its strengths and strategic objectives?
- What physician specialties are over-supplied in the target market? What physician specialties are under-supplied in the target market?
- What is the stakeholder’s share of all referrals from its employed or affiliated primary care provider network?
- Where do primary care providers refer patients for care outside of the stakeholder’s network? Are the specialists in the stakeholder’s network well-suited to manage referrals from its primary care provider network?

- Where do specialists in the stakeholder's network render care? What high-margin business is out-migrating to competitive hospitals, surgery centers or clinics? What about follow-up care?
- How can the stakeholder strengthen its network through alignment with independent physicians, whether through employment, affiliation or strategic partnerships?
- How well is the stakeholder's physician network aligned with value-based reimbursement models?
- How will current and future policy and payment trends influence the growth opportunities for the stakeholder's services in the target market?

## Use Case: Physician Needs Assessment for Medical Cardiology

Provider organizations should design their physician networks with an understanding of how demand for healthcare services correlates with the supply of physicians who are qualified to deliver those services, based on their specialties or credentials. With an accurate understanding of supply and demand in local markets, the provider organization can identify underserved areas and better align its network to meet the current and future needs of the population.

Calculating the shortage or surplus of physicians in a market requires an understanding of the area's total addressable market (TAM) for healthcare services (See Chapter 1: [Market Share](#)). The analysis can be conducted at a regional, local or hyper-local level.

In this example, using a combination of provider directory, utilization and consumer data, a physician needs analysis reveals a shortage of 7.54 medical cardiologists across the example health system's service area. However, access varies across markets in the service area, with Grand Rapids having the largest physician surplus, while Holland is most underserved.



## Physician Needs Assessment for Medical Cardiology in Select Markets, 2020

Figure 2.1

Market	Population	Market Share	Needed FTEs	Current FTEs	(Shortage)   Surplus ▲
<b>Total</b>	<b>1,881,475</b>	<b>20%</b>	<b>80.6</b>	<b>73.1</b>	<b>-7.5</b>
Holland	191,614	5%	8.2	1.7	-6.5
Allegan	53,368	10%	2.3	0.0	-2.3
Kalamazoo	48,273	3%	2.1	0.0	-2.1
Big Rapids	66,104	9%	2.8	0.9	-2.0
Ionia	56,034	10%	2.4	0.6	-1.8
Fremont	54,851	8%	2.4	0.6	-1.8
South Haven	36,482	51%	1.6	0.0	-1.5
Niles	68,873	21%	3.0	1.7	-1.2
Greenville	88,471	45%	3.8	2.6	-1.2
Hastings	38,729	12%	1.7	1.3	-0.4
Three Rivers	5,452	14%	0.2	0.0	-0.2
Ludington	39,575	2%	1.7	1.8	0.1
Benton Harbor	129,908	23%	5.6	8.0	2.4
Muskegon	203,956	28%	8.7	12.5	3.8
Grand Rapids	799,785	36%	34.3	41.5	7.2

Source: Trilliant Health Provider Directory, national all-payer claims database and national consumer database.

Markets with a surplus of medical cardiologists, such as Grand Rapids, are not ideal for expanding cardiology services, as the markets are already overserved and likely to be highly competitive.

In contrast, the Holland market is underserved for medical cardiology, with an additional 6.5 medical cardiologists needed to support the population. The health system has only a 5% market share in Holland, making it a compelling expansion opportunity. By understanding how healthcare supply aligns with demand for services at the local level, provider organizations can develop an action plan to address service gaps at the hyper-local level.

## Steps to Conduct a Physician Needs Assessment

### 1. Internal Planning

Clearly define the objectives and scope of the provider needs assessment, including the target specialties to be assessed and the definition of the primary and secondary service area. Gather feedback from service line leaders on current staffing levels and larger market need. Consider how new technology might change workforce roles and functions. Research benchmarking data to compare and predict organizational need against similar facilities and markets.

## 2. Curate Market Data at the ZIP Code Level

Gather external data sources that inform inpatient and outpatient demand and supply for healthcare services, including:

- Demographic data, with current-year population and five-year population projections
- Real-time utilization and prevalence of disease incidence rates by ZIP Code
- Current provider supply including specialty, age, panel size and full-time equivalent (FTE) breakout by location
- Benchmark provider-to-population ratios based on market similarity
- Patient loyalty and care migration patterns by medical specialty

## 3. Analyze Competing Networks

Analyze the competitive landscape for each medical specialty within the primary and secondary market, including competing healthcare systems, independent practices and other providers. Calculate provider alignment to better understand the downstream volume capture for key specialties.

## 4. Geospatial Assessment

Utilize geospatial data to map and visualize provider distribution and identify geographic pockets that are underserved or lacking access to certain medical specialties. Segment market access by medical specialty and facility type.

## 5. Identify Service Gaps

Analyze current population, utilization and provider-to-population ratios within the primary and secondary market to identify the demand for each medical specialty. Identify service gaps and areas of unmet need by calculating:

- Demand using census population and benchmark provider-to-population ratios
- Current supply (total FTE count) using actual volume by site of service (% of FTE)
- Patient loyalty by specialty

## 6. Create Action Plan

Prioritize market demand and service gaps based on patient care impact, strategic importance, profitability and feasibility. Develop an action plan to address the identified needs and service gaps, including strategies for recruiting and retaining healthcare providers, expanding services and enhancing support infrastructure.

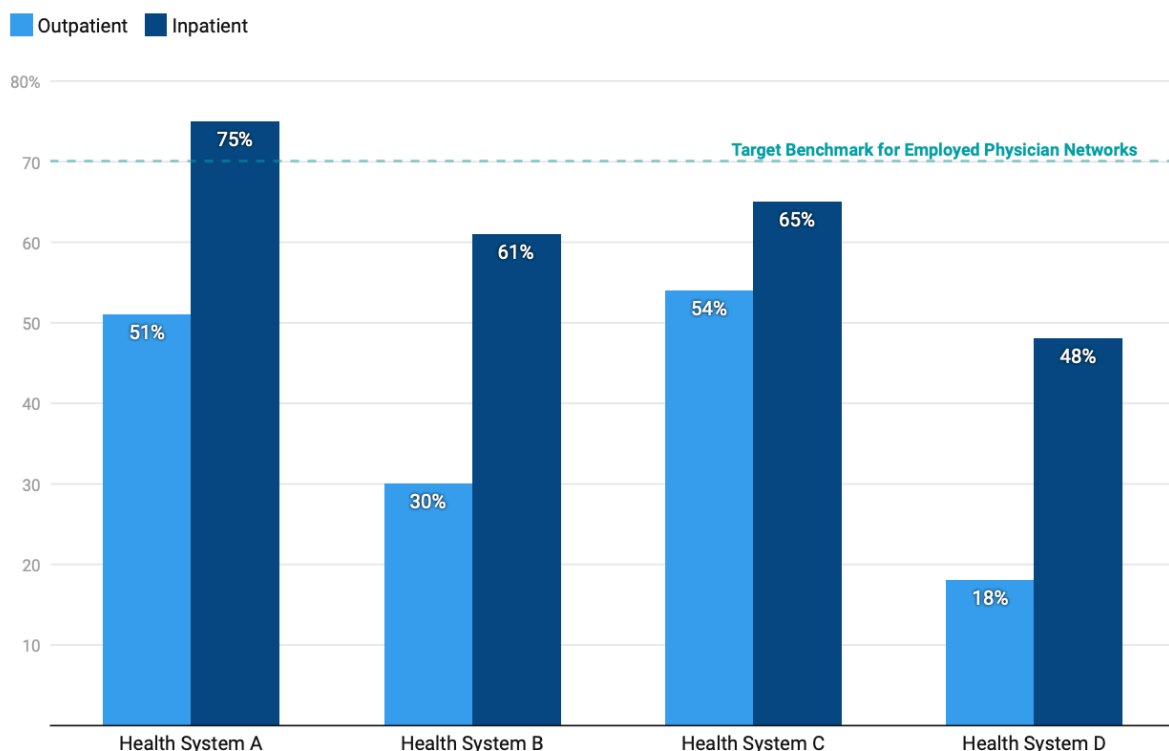
## Use Case: Network Integrity for Employed Primary Care Providers (PCPs)

Every provider organization with a network of employed or affiliated PCPs must understand how PCP referral patterns influence the organization's network performance. First, the stakeholder must know their share of all referrals from their provider network. High-performing networks retain more than 70% of downstream care in-network, with clinically integrated networks commonly outperforming the benchmark.

In this example, using a combination of provider directory and utilization data, an analysis of network integrity across inpatient and outpatient care reveals significant opportunities across all health systems in the market. Outpatient network integrity ranges from 54% at "Health System C" to only 18% at "Health System D," and inpatient network integrity ranges from 75% to 48%. Only "Health System A" performs above the 70% benchmark, but only for inpatient services.

### Competitive Analysis of Network Integrity of Employed PCPs, 2022

Figure 2.2

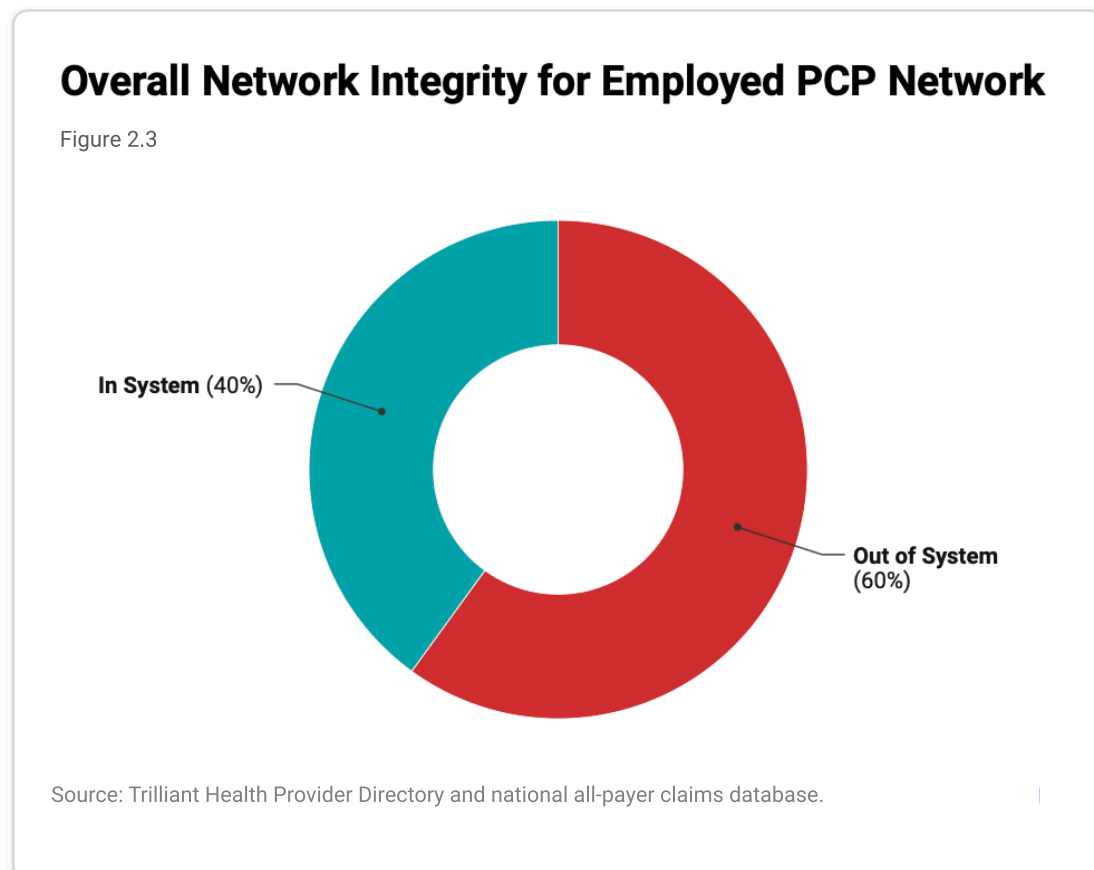


*Analysis of downstream referrals for employed physicians referring inpatient and outpatient services*

Source: Trilliant Health Provider Directory and national all-payer claims database.

Health systems can quantify the financial impact of improved network integrity by calculating lost revenue due to out-of-network referrals across markets, physician groups, service lines, procedures and settings of care.

In this example, using a combination of provider directory, utilization and health plan price transparency data, the health system retained only 40% of downstream services from their employed PCP group over a two-year period. By improving network integrity from the current 40% to the 70% benchmark, the health system could increase revenue by \$12 million.



The health system's network integrity varies across service lines, led by the OB/GYN service line (62% share of referrals). The health system's share of downstream care was lowest for Eye/Ocular (5% share), followed by ENT (24%), Male Reproductive System (26%), Heart/Vascular (33%), Endocrine (33%) and Orthopedic (34%).

For most health systems, Eye/Ocular is not a strategic priority because care is usually rendered in physician offices and outpatient centers. However, the root cause of low network integrity for orthopedic services should be investigated immediately, representing more than \$3.7 million in lost revenue in 2022.

## Network Integrity and Revenue Leakage by Service Line

Figure 2.4

	Service Line	In System %	2021 Lost Revenue	2022 Lost Revenue	% Change
1	Digestive System	48%	\$4,915,224	\$4,923,349	0.2%
2	Neuro/Spine	35%	\$4,206,280	\$3,887,118	-7.6%
3	Orthopedic	34%	\$3,466,319	\$3,701,076	6.8%
4	Eye/Ocular	5%	\$2,628,882	\$2,787,777	6.0%
5	Respiratory System	47%	\$2,080,770	\$1,827,947	-12.2%
6	Integumentary System	44%	\$1,863,777	\$1,621,962	-13.0%
7	OB/GYN	62%	\$1,546,333	\$1,583,982	2.4%
8	ENT	24%	\$1,189,160	\$1,310,465	10.2%
9	Urinary System	41%	\$797,098	\$715,696	-10.2%
10	Male Reproductive System	26%	\$415,144	\$410,994	-1.0%
11	Hemic/Lymphatic	57%	\$319,809	\$264,108	-17.4%
12	Heart/Vascular	33%	\$133,915	\$119,053	-11.1%
13	Endocrine System	33%	\$74,055	\$75,513	2.0%

Source: Trilliant Health Provider Directory and national all-payer claims database.

By conducting analysis at the physician level, provider organizations can deploy resources for direct discussion with physicians in their network to better understand the root cause of leakage. In this example, Physician A referred more than \$1.3 million in downstream surgical cases out-of-network. With an in-depth understanding of the physician's out-of-network referrals, physician liaison teams can solicit feedback from the provider, identifying opportunities to improve network performance.

## Top 10 Employed PCPs with Highest Revenue Leakage, 2022

Figure 2.5

Provider	Specialty	2021 Lost Revenue	2022 Lost Revenue	Out-of-System Facility	Service Line
Physician A	Internal Medicine	\$1,215,446	\$1,346,048	UCHealth University of Colorado Hospital	General Surgery
Physician B	Family Medicine	\$958,952	\$1,005,895	North Suburban Medical Center	Neuro/Spine
Physician C	Family Medicine	\$896,613	\$1,077,684	St Anthony Hospital	Neuro/Spine
Physician D	Family Medicine	\$866,475	\$969,347	Western Hematology Oncology	Oncology Services
Physician E	Family Medicine	\$849,363	\$618,927	North Suburban Medical Center	General Surgery
Physician F	Family Medicine	\$814,460	\$633,378	North Suburban Medical Center	Digestive System
Physician G	Internal Medicine	\$773,947	\$607,219	St Anthony Hospital	Neuro/Spine
Physician H	Family Medicine	\$772,540	\$756,649	Western Hematology Oncology	Oncology Services
Physician I	Family Medicine	\$740,120	\$701,612	Western Hematology Oncology	Oncology Services
Physician J	Family Medicine	\$708,569	\$933,065	UCHealth Longs Peak Hospital	Orthopedics

The "Out-of-System Facility" represents the physician's top out-of-system referral destination; Service Line represents the highest leakage service line for that provider.  
Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency dataset.

# Steps to Perform a Network Integrity/Referral Leakage Analysis

## 1. Internal Planning

Meet with service line leaders and key stakeholders to define specific metrics and goals related to the performance of the employed medical group, including establishing internal benchmarks for patient retention rates, standard referral pathways, referral leakage rates (patients seeking care outside the system) and patient satisfaction.

## 2. Curate Internal Data

Collect relevant data from internal sources such as employed physician rosters, referral tracking data and patient satisfaction surveys, including patient demographics, detailed provider information (name, National Provider Identifier (NPI), specialty, etc.) and patient feedback.

## 3. Curate External Market Data

Normalize external data to align with internal network definitions, including classifying physicians and facilities based on system ownership. Determine key metrics for standard network integrity reporting. Common metrics include referral capture, procedures performed and total downstream revenue capture.

## 4. Assess Network Performance

Analyze the collected data to calculate key performance metrics related to network integrity. Limit the initial analysis to the patients treated by employed providers. Track and monitor the longitudinal journey of each patient to identify gaps in the employed physician network and quantify the amount of patient outmigration across key services. This may involve calculating overall patient retention and referral leakage percentages by service line. Use statistical analysis to identify larger network trends and patterns in the data at the individual physician level.

## 5. Calculate Competing Network Performance

Analyze the collected data to calculate key performance metrics related to competing hospital-owned or employed medical groups that are similar in size and specialty mix, including groups within the primary service area or similar systems in the region or industry. Compare physician group performance metrics against competing networks, as shown in Figure 2. Analyze the differences and similarities in network integrity measures, such as patient retention rates and referral leakage by service line, as in Figure 4. Identify areas where network performance excels and areas for improvement compared to the competing networks.

## 6. Root Cause Analysis

Conduct a root cause analysis to understand factors contributing to network performance. This should include evaluating factors such as access to care, physician-patient communication, service line capability (robotic surgery, etc.), care coordination, physician engagement and external factors affecting patient choice. Based on the findings, develop strategic initiatives to improve care coordination and communication among physicians, expand access based on the needs of the community and strengthen relationships with referring physicians.

## 7. Monitoring and Continuous Improvement

Continuously track and analyze key performance metrics related to network performance to assess progress and make necessary adjustments to performance improvement initiatives. Foster a culture of continuous improvement within the system by regularly reviewing performance metrics, soliciting feedback from physicians and patients and identifying opportunities for further optimization of network integrity and overall performance.

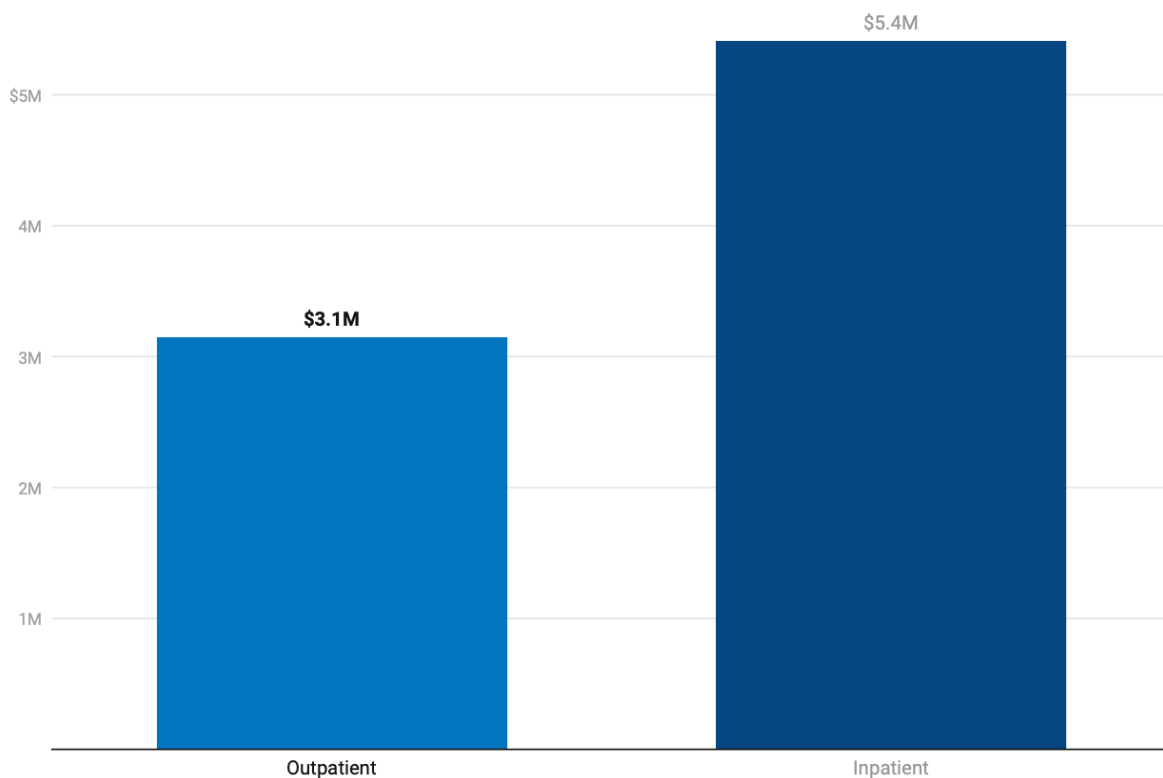
## Use Case: Strategic Alignment with Independent Specialists

Provider organizations can apply a similar framework to understand the alignment of independent specialty care practices.

In this example, using a combination of provider directory, utilization, and health plan price transparency data, an independent practice, Florida Sports Injury and Orthopedic Institute, is analyzed to quantify its share of downstream referrals. The target practice is one of the largest independent orthopedic groups in the Orlando-Kissimmee-Sanford, FL Core-Based Statistical Area (CBSA), generating over \$8.5 million in downstream surgical revenue in 2022.

### Practice Revenue Generation by Setting of Care, 2022

Figure 2.6



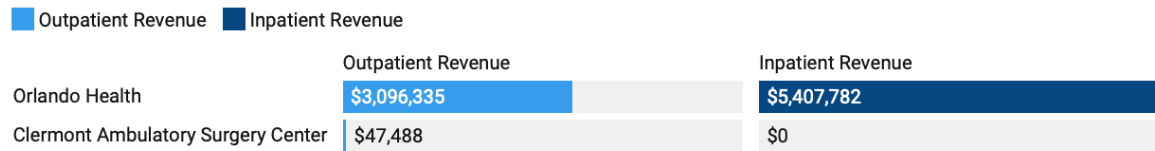
*Analysis of downstream surgical revenue for Florida Sports Injury & Orthopedic Institute*

Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency dataset.



## Practice Revenue Generation by Site of Service, 2022

Figure 2.7



Analysis of downstream surgical revenue for Florida Sports Injury & Orthopedic Institute

Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency dataset

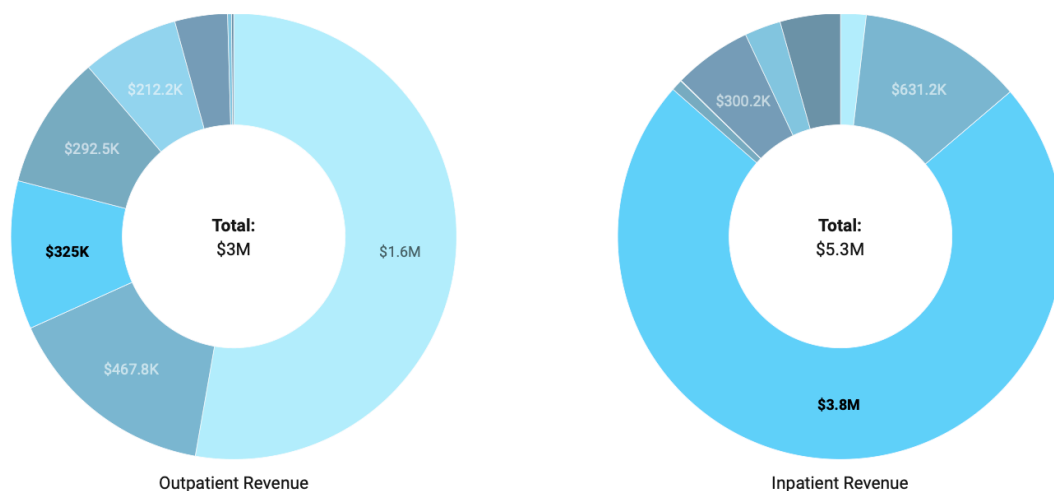
The target practice is highly aligned with Orlando Health, with more than 98% of downstream surgical revenue rendered at an Orlando Health facility. While the practice is not affiliated with Orlando Health, its referral patterns reveal a high level of satisfaction with that relationship, and other health systems may have difficulty overcoming the strength of the relationship with Orlando Health. Through in-depth analysis of the practice, competing health systems can assess partnership strategies that align with the independent provider group's priorities.

An analysis of the procedures performed by Florida Sports Injury and Orthopedic Institute suggests that the group focuses on hip and knee surgeries (Figure 8). Even though the group is highly aligned with Orlando Health, the increasing migration of joint replacements to outpatient settings, particularly for commercially insured patients, will potentially impact Orlando Health's revenue, as outpatient surgeries are reimbursed at lower amounts than equivalent inpatient surgeries.

## Practice Revenue Generation by Procedure Type, 2022

Figure 2.8

Endoscopy/Arthroscopy Procedures on the MSK System All Other Joint Replacement of Knee or Hip Surgery on Nerves and Nervous System  
Other Surgical Procedures on the Hand and Fingers Major Shoulder or Elbow Joint Procedure Procedures on the Pelvis and Hip Joint  
Repair Revision Procedures on the Femur



Analysis of downstream surgical revenue for Florida Sports Injury & Orthopedic Institute

Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency dataset.

## Market Share – Revenue Generation by Orthopedic Practice in Orlando-Kissimmee-Sanford, FL CBSA, 2022

Figure 2.9

	Physician Group Name	Type	Outpatient Revenue	Inpatient Revenue
1	Orlando Health Physician Group	Hospital Employed	\$34,962,484	\$90,620,765
2	Orlando Orthopaedic Center	Private Practice	\$24,076,216	\$22,621,968
3	Nemours Children's Specialty Care	Hospital Employed	\$6,028,176	\$30,390,283
4	Rothman Orthopaedics of Florida	Private Practice	\$7,448,351	\$28,179,179
5	Celebration Ortho & Sports Med Institute	Private Practice	\$7,239,439	\$18,043,190
6	Optimotion Orthopedics	Private Practice	\$13,034,587	\$11,913,631
7	AdventHealth Medical Group	Hospital Employed	\$4,700,289	\$14,419,568
8	Central Florida Orthopedic Associates	Private Practice	\$4,863,755	\$8,894,020
9	Advanced Orthopedics Institute	Private Practice	\$7,198,019	\$2,025,323
10	Florida Sports Injury & Orthopedic Institute	Private Practice	\$3,147,606	\$5,407,782

Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency dataset.

## Steps to Align with Independent Specialty Groups

### 1. Internal Planning

Work with service line leaders and key stakeholders to create an outreach plan that is tightly aligned with the long-term growth strategy of the organization. Analyze utilization data to identify service gaps or areas of high demand that align with the services offered by independent provider groups. Design initiatives and outreach around target service line expansion opportunities. Consider how new technology and recent service line investments might impact short-term opportunities to grow volume and increase alignment with key independent providers.

### 2. Curate Internal Data

To the extent available, collect relevant data from internal sources about volumes of care delivered by independent physician groups within and outside the network.

### 3. Curate External Market Data

Normalize the data to align with internal service line definitions and classifications. Segment the market based on provider specialties, geographical locations and provider group classifications, including classifying providers based on their ownership status (hospital employed vs. independent practice). Determine key metrics for standard reporting. Common metrics include physician loyalty and downstream revenue opportunity.

### 4. Analyze Practice Patterns

Identify large independent provider groups in the service area, including primary care physicians, specialists and other healthcare providers, and analyze physician loyalty patterns and predict

trends in behavior through the analysis of referrals and downstream alignment. Quantify the downstream revenue opportunity and identify areas of leakage where patients are referred to competing facilities.

#### 5. **Assess Provider Loyalty**

Evaluate the strength of existing relationships with independent provider groups, including referral capture, collaborative initiatives and satisfaction levels. Segment provider groups based on key alignment categories:

- **Highly Aligned:** Downstream Referral Capture >70%
- **Splitter:** Downstream Referral Capture Between 30% and 70%
- **Occasional User:** Downstream Referral Capture Between 10% and 30%
- **Not Aligned:** Downstream Referral Capture <10%

#### 6. **Prioritize Outreach Strategy**

Work with service line leaders and key stakeholders to create an outreach plan aligned with the organization's growth strategy. Prioritize outreach efforts towards independent provider groups with high referral potential and strong alignment with strategic priorities. Sophisticated evaluation identifies the best prospects for maximizing gains in volume and downstream revenue. Tailor outreach messaging around the specific needs, interests and concerns of each targeted provider group. Utilize various engagement channels such as in-person meetings, educational meetings, digital communications and referral management platforms to engage with independent providers effectively.

#### 7. **Monitor Outreach Performance**

Implement feedback mechanisms to gather insights from independent providers and continuously improve referral processes and support services. Solicit feedback from independent providers and adapt outreach strategies based on input and evolving market dynamics. Leverage external market data to monitor referral volumes, capture rates and trends over time to assess the effectiveness of outreach efforts. Continuously refine and optimize outreach strategies based on data-driven insights and feedback to maximize referral capture.

## **Physician Strategies for Health Plans**

Provider organizations can apply a similar framework to understand the alignment of Nothing impacts a health insurer's profitability more than their MLR, and nothing impacts their MLR more than the performance of their provider network. Traditionally, health insurers have focused primarily on network adequacy, i.e., whether the network has enough providers to deliver care, with less focus on the utilization and referral patterns of in-network providers. As healthcare inflation continues to increase and healthcare price transparency reveals wide variation in reimbursement rates from the same payer for the same service in the same market, payers need to focus on network performance, i.e., how efficiently do in-network providers perform?

**Payer stakeholders must answer the following questions to develop effective physician network strategies:**

- Who are all the healthcare providers, including facilities, physicians, allied health professionals, “payviders” and digital health firms, operating in the target market?
- What are the distinct utilization patterns, needs and preferences of the stakeholder’s members in the target market?
- Is the stakeholder’s provider network adequate to meet the healthcare needs of its members? What sites of care are over-supplied? What sites of care are under-supplied? What physician specialties are over-supplied? What physician specialties are under-supplied?
- Do the providers in the stakeholder’s network manage patient care similar to or different from the way they manage patient care for members of a competitor’s network?
- For care that can be rendered in an outpatient setting, what percentage of care do in-network specialists render in hospital outpatient departments versus ambulatory care settings?
- In the target market, what percentage of in-network providers render care that is below the expected value for quality measures?
- In the target market, what percentage of in-network providers are reimbursed above the market median rate?
- In the target market, what percentage of providers render average or above-average quality at rates that are at or below the market median rate?
- What role do “ghost networks” play in impeding access to care? Are all healthcare providers in the network available to see new members?
- How will current and future policy and payment trends influence provider network performance or MLR in the target market?

## **Use Case: Identifying Underserved Markets**

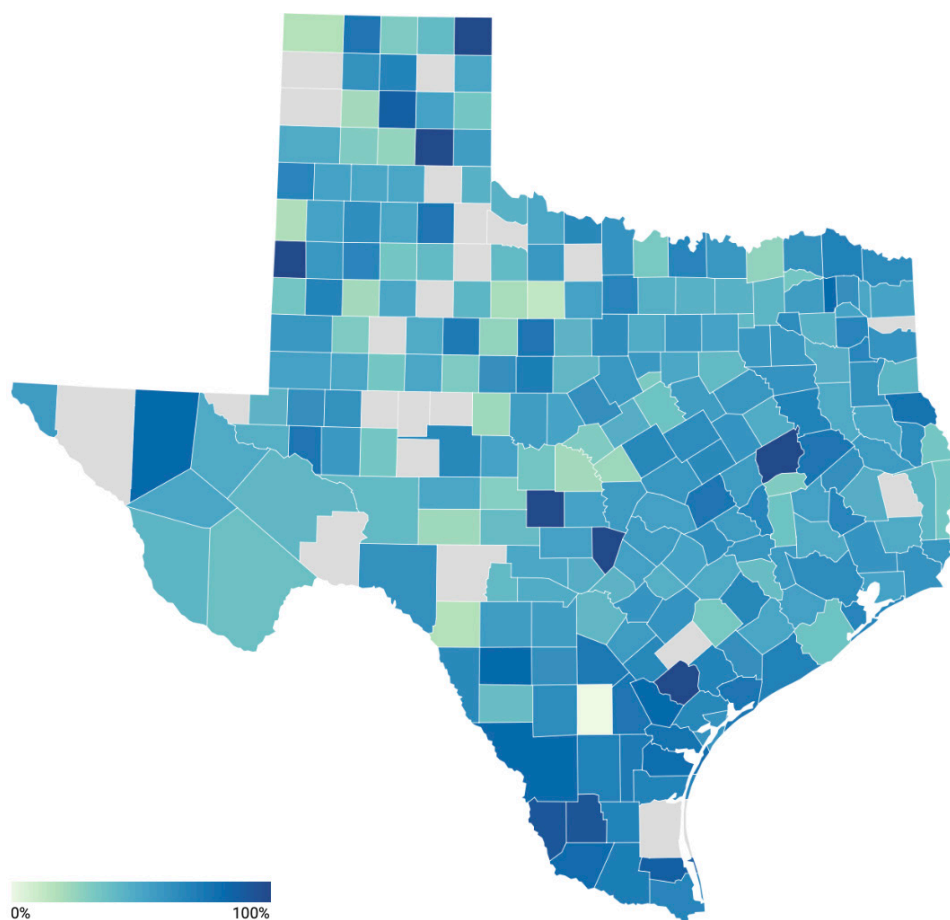
When designing a provider network, health insurers need to understand whether provider supply in the market is adequate to meet member demand for services.

The challenges that health plans face when measuring network adequacy are well-documented. Numerous policy efforts are underway to address “ghost networks,” which occur when a physician is listed in a health plan’s directory but is not accessible to members for various reasons, whether because a physician is no longer practicing, changed specialties, moved or is not accepting new patients. To assess their network adequacy accurately, health plans must utilize a current provider directory that includes all physicians and allied health professionals in the market, as well as their locations, practicing specialties, patient panel demographics and productivity.

In this example, using a combination of provider directory and utilization data, the supply of physicians treating Medicaid patients in Texas is calculated at the county level, revealing that physician participation in the Texas Medicaid program is highly variable across the state. By analyzing provider utilization patterns, health insurers can identify potential gaps in their network (e.g., ghost networks) to ensure their network can meet demand for services in the target market.

### Percentage of Providers Accepting Medicaid by County in Texas

Figure 2.10



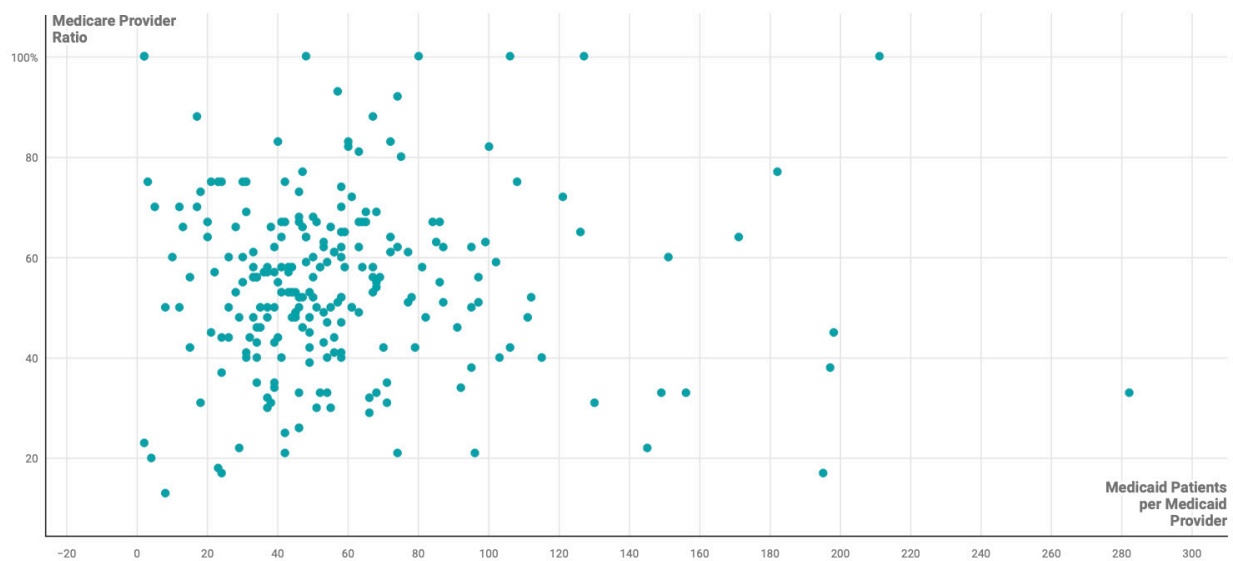
Source: Trilliant Health Provider Directory, and national all-payer claims database.

Health plans can also examine patient-to-provider ratios to assess whether the supply of healthcare providers in a market is adequate to meet demand from their members.

In this example, using a combination of provider directory and utilization data, the ratio of Medicaid patients per provider is plotted against the percentage of providers participating in the Texas Medicaid program. Payers should concentrate their network development efforts in markets where the patient-to-provider ratio is below benchmarks or regulatory requirements.

### Medicaid Provider Ratio vs. Patients per Provider, Texas Counties

Figure 2.11



The Medicaid Provider Ratio represents the percentage of providers in the county who have seen at least one Medicaid patient. The Medicaid Patients per Provider measures the number of Medicaid patients per provider who has seen at least one Medicaid patient.

Source: Trilliant Health Provider Directory and national all-payer claims database.

## Steps to Conduct a Network Coverage Analysis

### 1. Define Criteria for Network Coverage

In addition to considering regulatory requirements for network adequacy, determine the criteria that will define a high-performance provider network within the target market, including geographic coverage, types of specialties offered, quality metrics, cost-effectiveness and member satisfaction ratings. Consider how new technology might change workforce roles and functions.

### 2. Analyze Internal Network Data

Review internal data to identify any obvious gaps or deficiencies with the current provider network, including geographical distribution of providers, provider performance, provider referral patterns, member utilization, member demographics and outcomes.

### **3. Curate External Market Data**

Demographic data including current-year population and five-year population projections:

- Real-time healthcare utilization and prevalence of disease incidence rates by patient ZIP Code
- Current physician supply including specialty, age, panel size and FTE breakout by practice location
- Benchmark provider-to-population ratios based on market similarity

### **4. Geospatial Assessment**

Utilize geospatial data to map and visualize provider distribution and identify geographic pockets that are underserved or lacking access for certain medical specialties. Segment market access by medical specialty and facility type.

### **5. Identify Network Gaps**

Analyze external market data to identify areas where members consistently access out-of-network providers to evaluate potential service gaps in the current network design. Quantify service gaps and areas of unmet need based on the current supply of providers compared to the expected provider demand:

- Calculate provider demand using Census population and benchmark provider-to-population ratios
- Calculate the current provider supply (total FTE count) using actual volume by site of service (% of FTE)
- Calculate patient loyalty to better understand the current share of medical services by specialty

### **6. Develop a Strategic Plan**

Prioritize market demand and network gaps based on compliance with regulatory requirements and evolving membership needs. Develop a detailed action plan to identify and recruit new providers to fill gaps in the current network.

### **7. Monitor and Maintain Network Coverage**

Continuously monitor the coverage of the provider network, adjusting as needed to ensure ongoing compliance with regulatory requirements and the evolving needs of the member population, including routine audits, provider surveys and updates to network adequacy standards.



## Use Case: Managing Network Performance to Meet MLR Targets

The concept of “high-value” networks is popular for employers hoping to constrain healthcare costs, as well as with health systems hoping that payers will steer volume based on that designation. Logically, a “high-value” network would be just that – a group of providers who deliver value for money, i.e., average or better than average quality in exchange for a reimbursement rate that is near or below the median market rate.

In the absence of tangible proof of quality outcomes, health insurers often use volumes (and brand) as a proxy for “high-value” network facilities. With the advent of health plan price transparency, health plans – who have long known about wide variance in reimbursement rates – may be forced to reconsider the selection criteria for a provider to be included as a “high-value” network participant, if not the minimal quality standards for in-network designation.

In this example, using a combination of provider directory, utilization and health plan price transparency data, Fort Worth Endoscopy Center is a high-volume provider for Blue Cross and Blue Shield of Texas (BCBS TX) in the Dallas–Fort Worth–Arlington, TX CBSA.

### BCBS TX Colonoscopies by Outpatient Facility in Dallas-Fort Worth-Arlington, TX CBSA, Q1 2022-Q3 2023

Figure 2.12

	Outpatient Facility	Visit Volume
1	Digestive Health Center of Plano	17,048
2	Digestive Health Center of Dallas	13,802
3	Texas Endoscopy at Independence Medical Village	10,401
4	Lone Star Endoscopy Flower Mound	9,864
5	Lone Star Endoscopy Center Southlake	9,650
6	Fort Worth Endoscopy Center	7,831
7	Digestive Health Center of Allen	7,709
8	Endoscopy Center at Central Park	7,006
9	Arlington – North Texas GI Center	6,588
10	Southwest Fort Worth Endoscopy Center	6,139

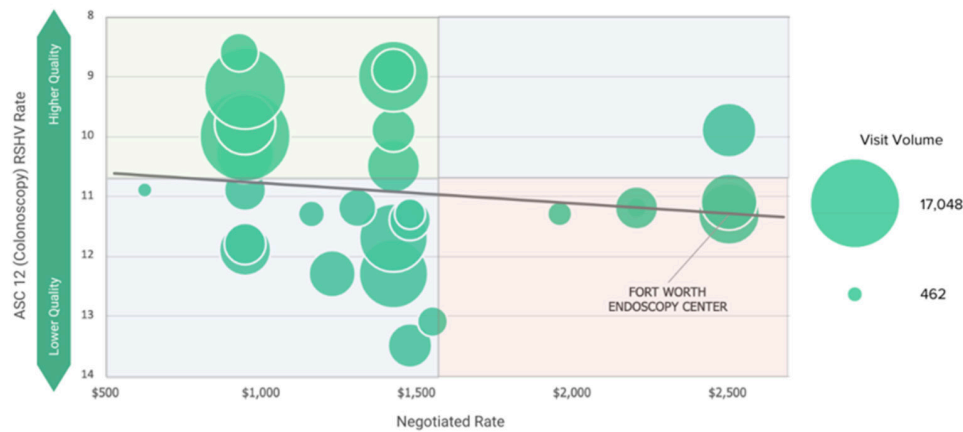
Visit Volume is the count of commercial BCBS TX colonoscopies

Source: Trilliant Health Provider Directory and national all-payer claims database.

However, the health plan price transparency data for CPT 45380 – Colonoscopy reveals that Fort Worth Endoscopy Center offers low value for money, with an in-network reimbursement higher than almost every other in-network provider while delivering quality outcomes that are below the expected value.

### Quality vs. BCBS TX Commercial Visit Volume vs. BCBS TX In-Network Negotiated Rate for CPT 45380 – Colonoscopy in Dallas-Fort Worth-Arlington, TX CBSA

Figure 2.13



Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency dataset; Ambulatory Surgical Center Quality Reporting (ASCQR) program.

## Steps to Manage Health Plan Network Performance

### 1. Define Network Goals and Key Performance Measures

In addition to considering regulatory requirements for network adequacy, determine success measures for overall network performance. Establish criteria for selecting high-performing providers, including factors such as volume of services provided, clinical outcomes, patient satisfaction, geographic accessibility and cost-effectiveness.

### 2. Evaluate the Current Provider Network

Leverage internal data to evaluate the effectiveness of the current provider network in achieving defined goals and meeting the needs of the member population. Adjust to the network design based on performance data, member feedback and changes in market dynamics.

### 3. Provider Profiling for Network Expansion

Leverage external market data to identify providers with high volume and better-than-average quality performance. Evaluate key performance indicators, such as total cost of care, complication rates, readmission rates and adherence to evidence-based guidelines. Utilize quality metrics and performance indicators to target providers based on their effectiveness in delivering high-value care.

#### **4. Engage Target Providers**

Engage with high-performing providers to establish partnerships and negotiate contracts that incentivize quality and efficiency. Tie reimbursement to outcomes and performance metrics to encourage continuous improvement and accountability.

#### **5. Network Monitoring and Feedback**

Regularly evaluate the effectiveness of the provider network. Establish mechanisms for monitoring performance and provide regular feedback to providers, including comparative data on key metrics, to support performance improvement efforts. Offer education and support to providers to help them improve their clinical outcomes, adopt best practices and enhance patient engagement.

## **Physician Strategies for Life Sciences Firms**

No health economy stakeholder is more dependent on physician decisions than life sciences firms. While approximately half of all inpatient admissions originate in the emergency department, and payers can paradoxically benefit from the absence of a physician decision, a physician order is required for a prescription to be dispensed and or a medical device to be implanted. As a result, understanding physician specialties, individual physician prescribing patterns and physician loyalty is essential to the network performance of every life sciences firm.

**Stakeholders at life sciences firms must answer the following questions when developing go-to-market (GTM) strategies for commercialization:**

- Which healthcare providers in the target market, including facilities, physicians, allied health professionals, “payviders” and digital health firms, might adopt or prescribe a new device or therapeutic based on historical utilization, patient panels, cost, demographics and psychographics?
- What is the stakeholder’s market share with each healthcare provider in the target market?
- Where does the target population for the device or therapeutic live? What are the distinct utilization patterns, needs and preferences of the target population?
- Are there unique requirements for the delivery of the device or therapeutic, such as CAR-T therapies?
- How will the device or therapeutic affect existing value-based care (VBC) arrangements?
- What competitive devices or therapeutics do target healthcare providers currently utilize?
- Which providers are likely to be key opinion leaders (KOLs) in certain markets or segments, given their referral relationships and affiliations?
- How will current and future policy and payment trends influence the growth opportunities for the stakeholder’s products in the target market?

Post-launch, life sciences firms can monitor the adoption of their products across these provider networks, adjusting their sales and marketing strategies accordingly. Questions might include:

- How does adoption vary across segments of the provider network by specialty or payer mix?
- What are the characteristics of providers and patients in markets that adopt new devices or therapeutics at an accelerated pace?
- What is the expected rate of change? How will the market for certain therapeutics change over time? Which therapeutics or procedures will decline in share/utilization over the next five to 10 years?

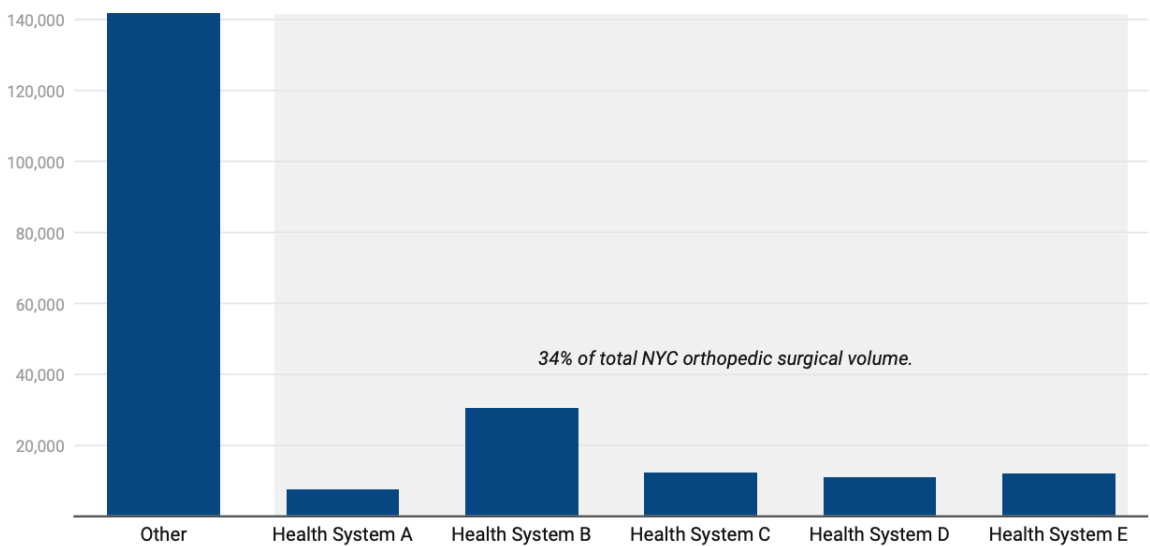
## Use Case: Targeting Provider Organizations for GTM Strategies

To develop effective GTM strategies, life sciences firms must first understand the market share of healthcare providers in the target geography. A typical GTM strategy might target a handful of the most well-known healthcare providers in the market, but those providers make up only a fraction of total volumes for many service lines.

In this example, using a combination of provider directory and utilization data, in the New York–Newark–Jersey City, NY–NJ, the health system with the largest volume of total orthopedic surgeries has only 14.2% of the TAM. Moreover, the top five healthcare provider organizations have, in aggregate, only one-third of the market TAM, the balance of which is delivered by more than 200 other providers.

**Total Orthopedic Surgical Volume by Health System in New York-Newark-Jersey City, NY-NJ, 2021**

Figure 2.14



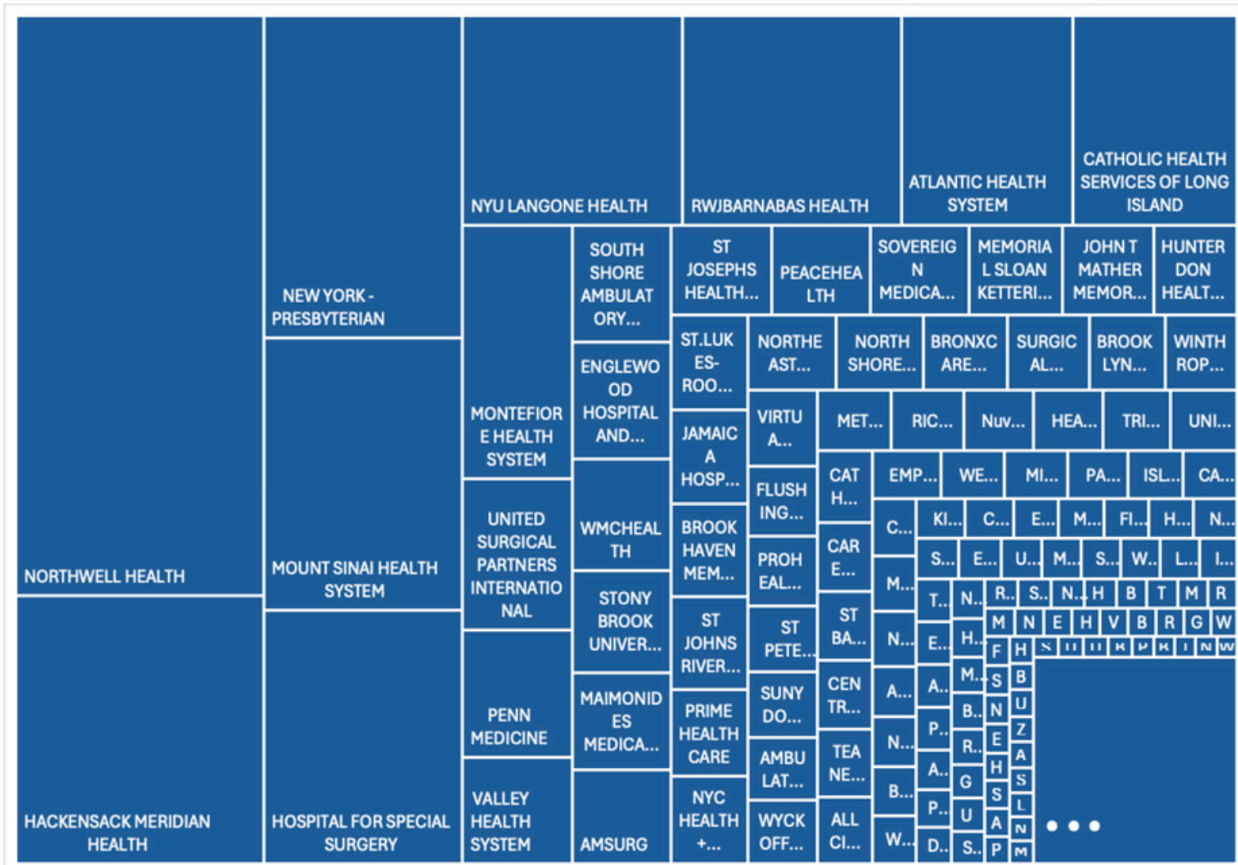
Source: Trilliant Health Provider Directory and national all-payer claims database.

With an understanding of the TAM and each provider's market share, life sciences firms can develop strategies to capture market share not only from the market's large health systems, but also from the many smaller hospitals, ambulatory facilities and physician groups that, in aggregate, represent significant revenue potential.

In this example, using a combination of provider directory and utilization data, orthopedic market share in the New York CBSA is calculated for the hundreds of smaller healthcare providers in the market.

## Orthopedic Surgical Market Share Across the New York-Newark-Jersey City, NY-NJ CBSA, 2021

Figure 2.15








Source: Trilliant Health Provider Directory and national all-payer claims database.

With an understanding of the TAM and each provider's market share, life sciences firms can develop strategies to capture market share not only from the market's large health systems, but also from the many smaller hospitals, ambulatory facilities and physician groups that, in aggregate, represent significant revenue potential.

In this example, using a combination of provider directory and utilization data, orthopedic market share in the New York CBSA is calculated for the hundreds of smaller healthcare providers in the market.

## Trended Volumes for Most Common Orthopedic Surgical Procedures at Health System D, 2021

Figure 2.16

	Most Common Procedure Categories	2021 Volume	CAGR
1	Joint Replacement of Knee or Hip	1,979	-3.2% 
2	Endoscopy/Arthroscopy Procedures of the Musculoskeletal System	1,077	-5.1% 
3	General Surgical Procedures on the Musculoskeletal System	886	-5.4% 
4	Repair Revision and/or Reconstruction Procedures on the Foot and Toes	601	-14.1% 
5	Other Surgical Procedures on the Hands and Fingers	717	3.1% 

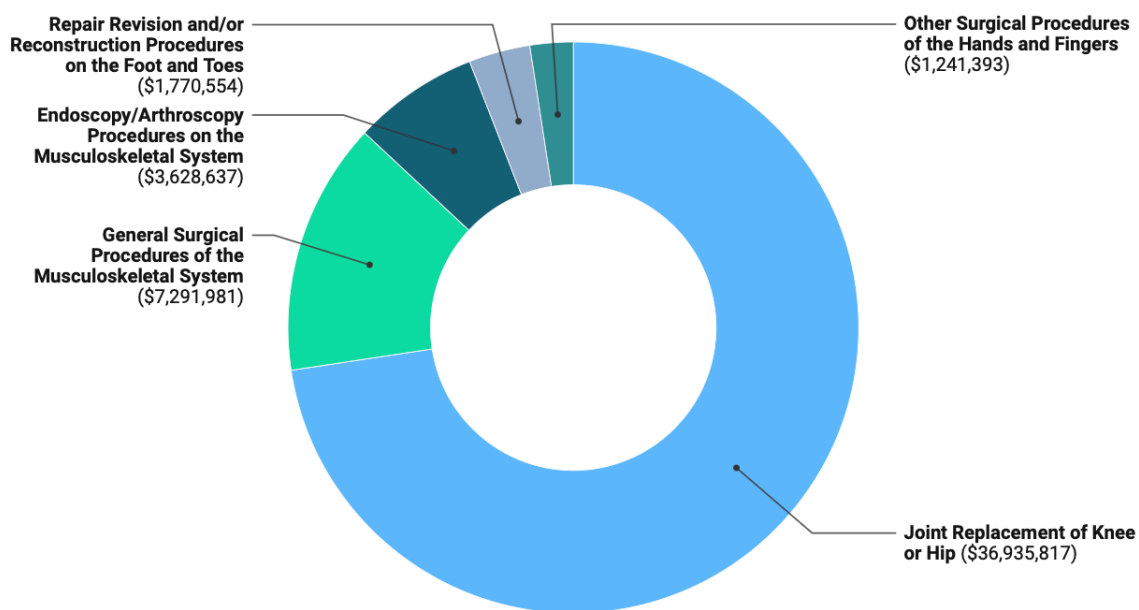
"Health System D" is an example health system in the New York-Newark-Jersey City CBSA.

Source: Trilliant Health Provider Directory and national all-payer claims database.

In this example, using provider directory, utilization and reimbursement data, surgical procedures on the foot and toes are revealed to make up a small portion of Health System D's overall revenue and are unlikely to offset significant declines in other services. With insight into a provider organization's revenue and volume trends, life sciences firms can develop targeted GTM strategies, with tailored outreach to align with each provider organization's priorities.

### Reimbursement for Most Common Orthopedic Surgical Procedures at Health System D, 2021

Figure 2.17



"Health System D" is an example health system in the New York-Newark-Jersey City CBSA.

Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency dataset.

## Steps to Target Health Systems and Facility Partners

### 1. Planning and Research

Analyze internal sales data to identify patterns in customer behavior, such as the volume and frequency of purchases. Understand the relative reimbursement and profitability of the target customers for the applicable device or therapeutic. Segment the data by geographic area, facility type (hospitals, surgery centers, clinics, etc.) and service line segment (orthopedics, cardiology, etc.) to prioritize areas of strength and potential growth based on strategic fit, revenue potential and feasibility for expansion.

### 2. Define Target Segments and Personas

Identify key decision-makers and influencers within the target market who order or utilize medical devices. Segment the market opportunity based on key growth factors such as facility size,

specialty focus, physician group utilization and purchasing behaviors. Develop buyer personas representing the key decision-makers and influencers within target facilities and physician groups likely to be interested in target medical devices.

### **3. Identify Partnership Opportunities**

Evaluate potential partnership opportunities with facilities and physician groups that align with key business objectives and target growth segments. Augment internal data with external market data to gain a comprehensive understanding of market trends, competitor activities and potential partnership opportunities.

### **4. Facility Targeting**

Identify facilities with high growth potential and demonstrated evidence of providing better than average quality. Analyze key metrics to define strengths, weaknesses and pain points of each potential facility partner. Key facility metrics include:

- Bed Size
- System Affiliation
- Operating Margin
- Market Share Trend
- Service Mix and Procedure Volume
- Payer Mix
- Employed Provider Network
- Affiliated Provider Network

### **5. Develop Data-Driven Marketing and Sales Strategy**

Allocate sales and marketing resources as well as operational investments based on the potential return on investment and identified growth prospects. Create targeted marketing and sales strategies tailored to the unique needs and characteristics of each facility and physician opportunity. Customize messaging, value propositions and promotional activities to resonate with key decision-makers within each target segment.

### **6. Monitor Market Performance**

Establish metrics to monitor the performance of growth initiatives in the target market and service line segment. Continuously track sales performance, market share, customer feedback and other key indicators to assess effectiveness and make data-driven adjustments as needed.



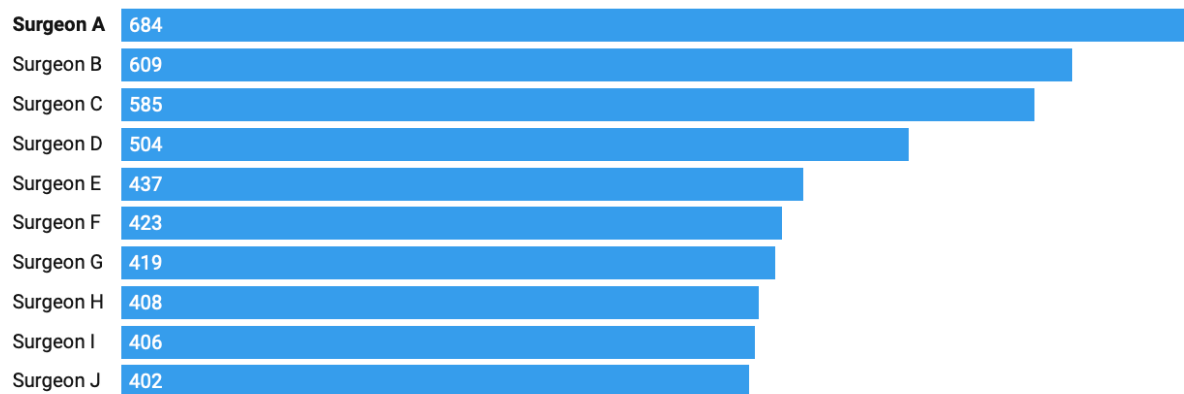
## Use Case: Targeting Individual Physicians

Life sciences firms should target physicians based upon an analysis of volumes, payer mix and relative reimbursement for the applicable device or therapeutic.

In this example, using a combination of provider directory and utilization data, the orthopedic surgeons with the highest volume of hip and knee replacements in the Los Angeles–Long Beach–Anaheim, CA CBSA are listed, led by “Surgeon A,” who performed 684 procedures in 2022.

### Highest Volume Orthopedic Surgeons for Hip & Knee Replacements in Los Angeles, CA CBSA, 2022

Figure 2.18



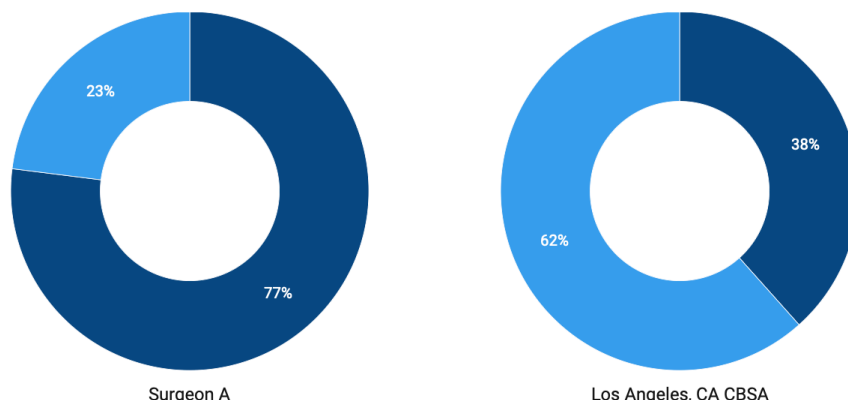
Source: Trilliant Health Provider Directory and national all-payer claims database.

With a more detailed understanding of each surgeon’s practice patterns, life sciences firms can develop more targeted outreach strategies and quantify the potential revenue impact of partnerships. In this example, using a combination of provider directory and utilization data, Surgeon A is shown to perform knee and hip replacements most frequently in an inpatient setting. However, Surgeon A has a higher proportion of traditional Medicare cases, which are often reimbursed at a lower rate.

## Inpatient Utilization for Hip & Knee Replacements, 2022

Figure 2.19

■ Inpatient  
■ Outpatient



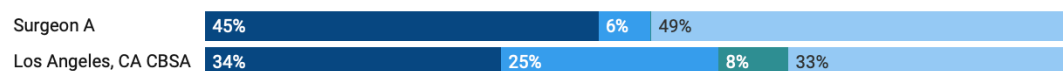
Analysis of surgeons in Los Angeles, CA CBSA

Source: Trilliant Health Provider Directory and national all-payer claims database.

## Payer Mix for Hip & Knee Replacements, 2022

Figure 2.20

■ Traditional Medicare ■ Medicare Advantage ■ Medicaid ■ Third Party



Analysis of surgeons in Los Angeles-Long Beach-Anaheim, CA CBSA

Source: Trilliant Health Provider Directory and national all-payer claims database.

## Steps to Target Individual Physicians

### 1. Planning and Research

Analyze internal sales data to identify patterns in customer behavior, such as device or therapeutic utilization volume and frequency. Understand the relative reimbursement and profitability of the target customers for the applicable device or therapeutic. Segment the data by geographic area, facility type (hospitals, surgery center, clinics, etc.) and service line segment (orthopedics, cardiology, etc.) to prioritize areas of strength and potential growth based on strategic fit, revenue potential and feasibility for expansion.

### 2. Define Target Segments and Personas

Identify key decision-makers and influencers within the target market who order or utilize medical devices or therapeutics. Segment the market opportunity based on key growth factors such as facility size, specialty focus, physician group utilization and purchasing behaviors. Develop buyer personas representing the key decision-makers and influencers within target facilities and physician groups who are likely to be interested in your medical devices.

### **3. Identify Partnership Opportunities**

Evaluate potential partnership opportunities with facilities and physician groups that align with key business objectives and target growth segments. Augment internal data with external market data to gain a comprehensive understanding of market trends, competitor activities and potential partnership opportunities.

### **4. Provider Targeting**

Identify high-performing providers based on service mix, competitive market position and facility affiliation. Assess utilization rates and adoption rates to target sales efforts around the highest-volume physicians for relevant services, also consider how practice patterns might impact revenue. Research each physician to learn more about their background and medical training. Key physician metrics include:

- Specialty
- Group Affiliation
- Age
- Medical Training
- Payer Mix
- Procedure Volume by Facility
- Medical Device Utilization
- Facility and Provider Referral Relationships

### **5. Develop Data-Driven Marketing and Sales Strategy**

Allocate sales and marketing resources as well as operational investments based on the potential return on investment and identified growth prospects. Create targeted marketing and sales strategies tailored to the unique needs and characteristics of each facility and physician opportunity. Customize messaging, value propositions and promotional activities to resonate with key decision-makers within each target segment.

### **6. Monitor Market Performance**

Establish metrics to monitor the performance of growth initiatives in the target market and service line segment. Continuously track sales performance, market share, customer feedback and other key indicators to assess effectiveness and make data-driven adjustments as needed.

# Physician Strategies for Employers

**Employers understand less about, and are impacted financially more by, network integrity than any other health economy stakeholder.** For decades, employers have assumed that payer networks were intended to minimize, if not lower, the medical costs incurred by their employees through “navigation” and “steerage,” i.e., the tactics by which payers notionally direct employees to providers to improve their network performance.

Health plan price transparency reveals that payers reimburse providers within the same market at highly divergent rates whose correlation with quality is negligible. As a result, network integrity is entirely theoretical for the employer since it is impossible to deliver value for money consistently without creating networks of providers who deliver value for money.

In turn, health plan price transparency reveals this: ***Narrow networks do not deliver value.***

In contrast to the fervently held belief of payers, brokers, consultants and policymakers, the way to receive value for money is not through steerage to a “narrow” network but rather steering **away** from a handful of providers.

## Use Case: Understanding Variance in Value Across Healthcare Providers

It is axiomatic that “you get what you pay for.” Healthcare is a noticeable exception to the axiom since in healthcare customers and end users rarely know what they bought, what was delivered, what it cost or whether it was any good.

Using several well-known correlation measures to compare common quality measures for high-volume hospital inpatient procedures with the in-network reimbursement paid for them reveals negligible correlation between cost and quality. The result?

***In healthcare, a higher price does not guarantee higher quality, and often results in slightly worse quality.***

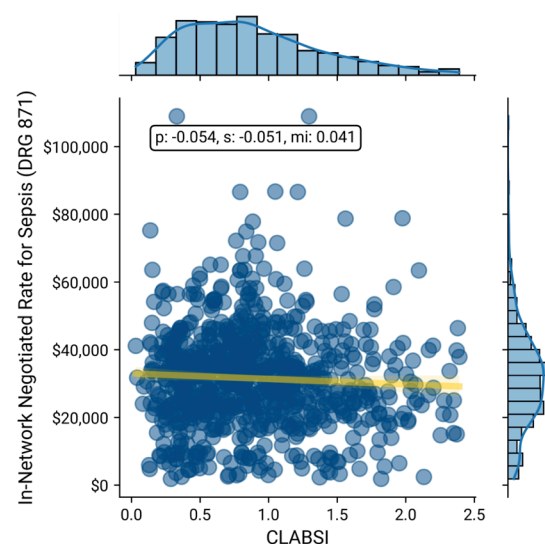
In each of the correlation analyses below of in-network rate vs the applicable quality measure, the X-axis represents quality, where a lower number is better. As a result, in these correlation analyses, the ideal correlation would be -1, which would demonstrate that as the rate increases, so does quality. Conversely, a correlation of 1 would demonstrate that as rate increases, quality decreases. In each example below, the slope of the regression line is “good,” but the correlations are “weak.”

Comparing the in-network negotiated rate for DRG 871 – Sepsis with central line-associated bloodstream infections (CLASBI) as a relevant measure of quality reveals a negligible correlation between price and quality.

Similarly, comparing the in-network negotiated rates with the 30-day post-discharge mortality for DRG 190 – COPD, DRG 193 – Pneumonia, DRG 280 – Acute Myocardial Infarction and DRG 291 – Heart Failure, respectively, reveals a negligible correlation between price and mortality.

### Negotiated Rate for Sepsis vs. CLASBI

Figure 2.21

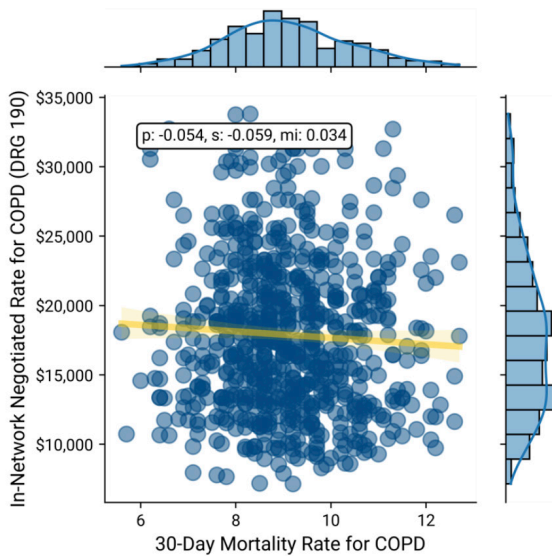


Analysis of 834 hospitals reporting CLASBI rates and a contracted rate with UnitedHealthcare PPO Select for DRG 871

Source: Trilliant Health health plan price transparency dataset; CDC's National Healthcare Safety Network (NHSN).

### Negotiated Rate vs. 30-Day Mortality for COPD

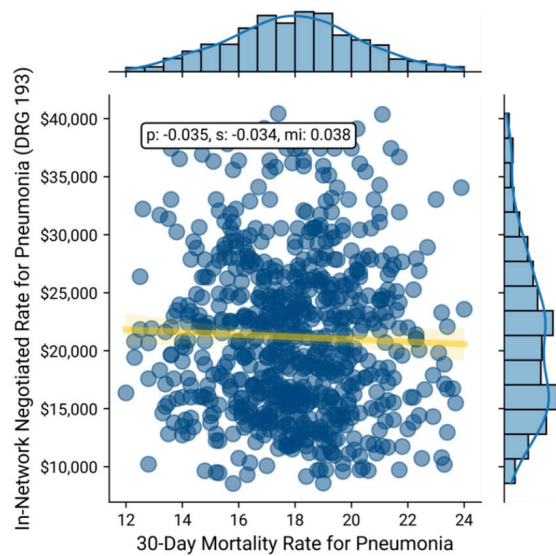
Figure 2.22



Analysis of 965 hospitals reporting 30-day mortality for COPD and a contracted rate with UnitedHealthcare PPO Select for DRG 190  
Trilliant Health health plan price transparency dataset; CMS QualityNet

### Negotiated Rate vs. 30-Day Mortality for Pneumonia

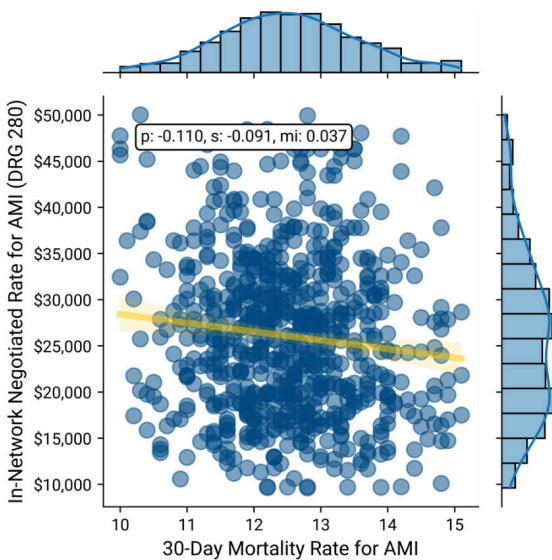
Figure 2.23



Analysis of 1,046 hospitals reporting 30-day mortality for Pneumonia and a contracted rate with UnitedHealthcare PPO Select for DRG 193  
Source: Trilliant Health health plan price transparency dataset; CMS QualityNet

### Negotiated Rate vs. 30-Day Mortality for AMI

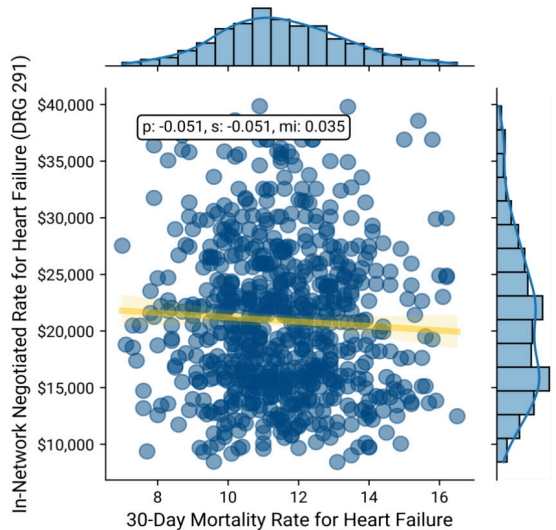
Figure 2.24



Analysis of 952 hospitals reporting 30-day mortality for AMI and a contracted rate with UnitedHealthcare PPO Select for DRG 280  
Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

### Negotiated Rate vs. 30-Day Mortality for Heart Failure

Figure 2.25

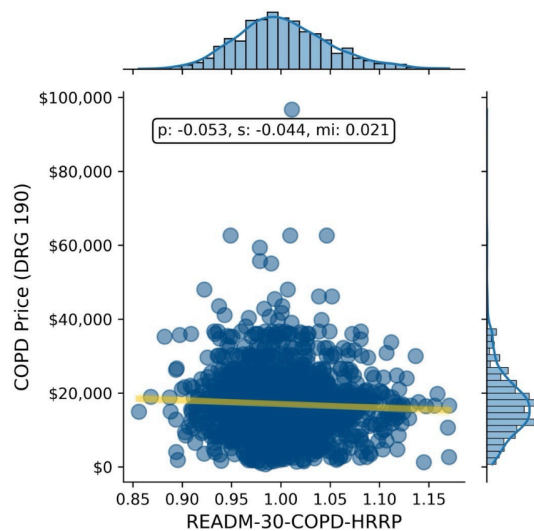


Analysis of 1,147 hospitals reporting 30-day mortality for Heart Failure and a contracted rate with UnitedHealthcare PPO Select for DRG 291  
Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

Similarly, in this example, using a combination of provider directory, health plan price transparency and CMS QualityNet data, the negotiated rate paid by a single national payer is compared to excess readmission ratios, another common quality measure, for the same four DRGs – DRG 190 – COPD, DRG 193 – Pneumonia, DRG 280 – Acute Myocardial Infarction and DRG 291 – Heart Failure, respectively, for more than 1,200 hospitals, revealing negligible correlation between readmission rates and reimbursement rate.

### Negotiated Rate vs. 30-Day Readmission Rate for COPD

Figure 2.26

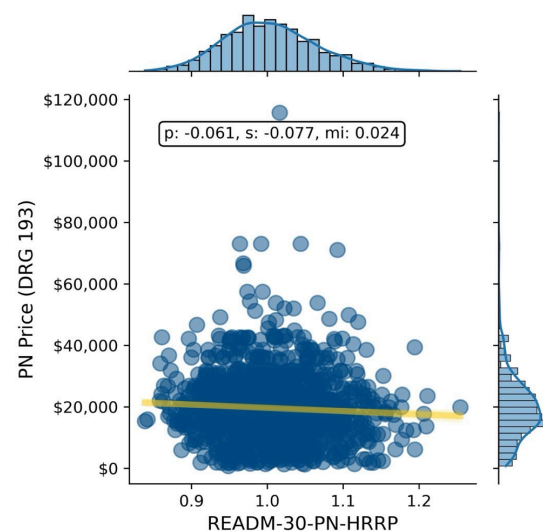


Analysis of 1,332 hospitals reporting 30-day readmission rates for COPD and a contracted rate with UnitedHealthcare Choice Plus for DRG 190

Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

### Negotiated Rate vs. 30-Day Readmission Rate for Pneumonia

Figure 2.27



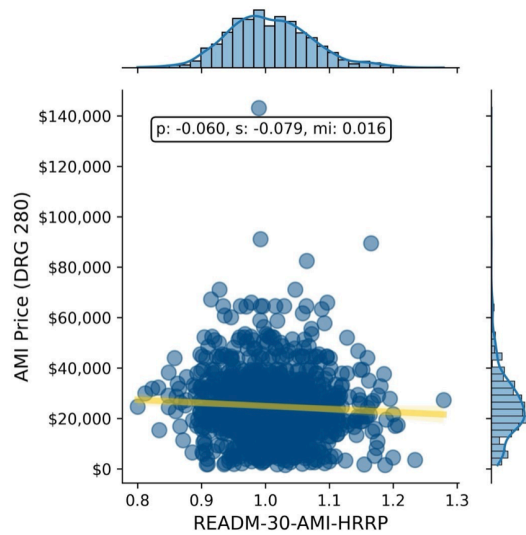
Analysis of 1,382 hospitals reporting 30-day readmission rate for Pneumonia and a contracted rate with UnitedHealthcare Choice Plus for DRG 193

Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.



### Negotiated Rate vs. 30-Day Readmission Rate for AMI

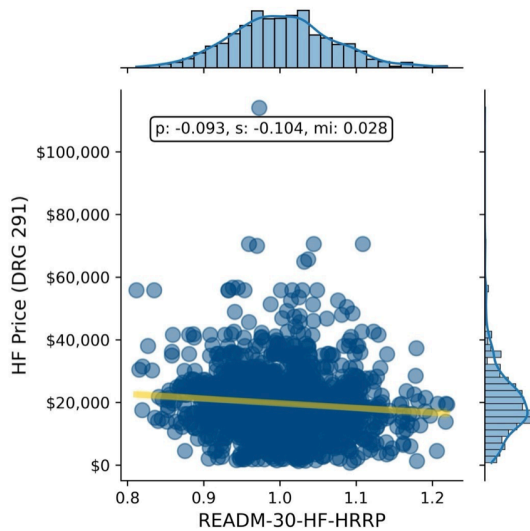
Figure 2.28



Analysis of 1,056 hospitals reporting 30-day readmission rate for AMI and a contracted rate with UnitedHealthcare Choice Plus for DRG 280  
Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

### Negotiated Rate vs. 30-Day Readmission Rate for Heart Failure

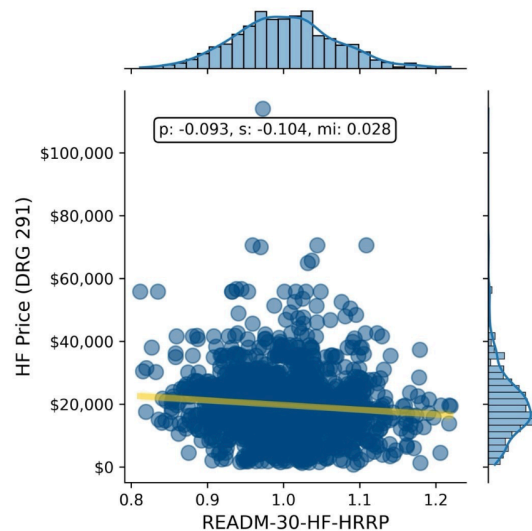
Figure 2.29



Analysis of 1,396 hospitals reporting 30-day readmission rate for Heart Failure and a contracted rate with UnitedHealthcare Choice Plus for DRG 291  
Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.

### Negotiated Rate vs. 30-Day Readmission Rate for Hip & Knee Replacement

Figure 2.30



Analysis of 1,294 hospitals reporting 30-day readmission rate for Hip & Knee Replacement and a contracted rate with UnitedHealthcare Choice Plus for DRG 469  
Source: Trilliant Health health plan price transparency dataset; CMS QualityNet.



In this example, using a combination of provider directory, health plan price transparency and CMS QualityNet data, the highest value provider in the BCBS TX network for diagnostic colonoscopy in an ASC is 60% cheaper and significantly higher quality than the lowest value provider.

### Quality vs. BCBS TX Commercial Visit Volume vs. BCBS TX In-Network Negotiated Rate for CPT 45380 – Colonoscopy in Dallas-Fort Worth-Arlington, TX CBSA

Figure 2.31



Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency dataset; Ambulatory Surgical Center Quality Reporting (ASCQR) program

***In summary, in every example above, a similar or identical quality outcome can be purchased at a range of prices that varies by as much as 7X.***

While price transparency was designed to help consumers make more informed, price-conscious decisions, health plan price transparency is arguably more meaningful to employers, revealing the vast intra-market disparity in rates for identical healthcare services and providing pricing leverage they have never known they had. In every market, for every health care service, employers can, and will, require health care providers and health plans to defend their negotiated rates.

Providers charging premium rates must justify why they receive “Lamborghini rates” for “Buick quality.” Conversely, health plans must explain the broad range of rates they pay for identical services, especially in cases where they reimburse high-quality providers with lower rates and low-quality providers with higher rates.

***Contrary to the guidance of consultants and health benefits brokers, leveraging price transparency and quality metrics to quantify “value for money” compels employers to seek broad provider networks, while designing benefits at the service-line level in every market to incentivize employees to use the best value provider, whoever and wherever they are.***

# Steps to Develop High-Value Provider Networks

## 1. Employee Utilization Analysis

Gather internal data on healthcare utilization patterns among employees, including information on the types of services utilized, frequency of visits, costs incurred and outcomes. Analyze historical claims data to identify trends, high-cost procedures, frequent conditions and common healthcare needs among the employee population.

## 2. Analyze Facility and Provider Quality

Utilize external market data to better understand quality metrics such as patient outcomes, readmission rates, infection rates, patient satisfaction scores and adherence to clinical guidelines to assess performance that the facility and individual provider level. Identify facilities and providers who consistently deliver high-quality care across a range of services and specialties.

## 3. Evaluate Cost-Effectiveness

Leverage external rate data to assess providers and facilities based on cost-effectiveness. Key metrics should include negotiated rate per procedure, average cost per episode of care and overall cost. Consider providers and facilities who offer competitive pricing while delivering better than average quality in the target market.

## 4. Design the Network

Leverage cost and quality outputs to design a network that balances accessibility and convenience for employees with the goal of minimizing costs without sacrificing quality. Consider factors such as geographic coverage, specialty services required and network adequacy.

## 5. Collaborate with Healthcare Partners

Collaborate with health plans, third-party administrators and other healthcare partners to leverage their expertise and resources in building and managing the provider network to deliver value for money.

## 6. Employee Education

Communicate the benefits of the provider network to employees, emphasizing the focus on value for money and, at a minimum, avoiding providers who deliver below-average quality at rates above the market median. Provide resources such as online tools, provider directories and educational materials to equip employees to make informed healthcare decisions within the network.

## 7. Network Monitoring and Optimization

Implement systems for ongoing monitoring of provider and facility performance, including quality metrics and cost-effectiveness. Regularly review claims data and feedback from employees to identify areas for improvement and opportunities to optimize the network.

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### Footnotes

1. [https://www.cms.gov/Medicare/Health-Plans/ManagedCareMarketing/Downloads/Provider\\_Directory\\_Review\\_Industry\\_Report\\_Year2\\_Final\\_1-19-18.pdf](https://www.cms.gov/Medicare/Health-Plans/ManagedCareMarketing/Downloads/Provider_Directory_Review_Industry_Report_Year2_Final_1-19-18.pdf)

## CHAPTER 3:

# Developing Effective Consumer Strategies



While almost nothing happens in the health economy without a physician decision to treat or refer or prescribe or order, none of those things can happen without a consumer.

# Why Consumer Decisions Matter for Every Health Economy Stakeholder

Perhaps the most confounding quirk of the U.S. healthcare system is that the customer – the employer – is not the “consumer.” Cambridge Dictionary defines a consumer as “a person who buys goods or services for their own use.”<sup>1</sup> While almost nothing happens in the health economy without a physician decision to treat or refer or prescribe or order, none of those things can happen without a consumer.

Health economy stakeholders reference “consumers” in a variety of ways. The profitability of most health economy stakeholders depends upon “members” or “enrollees,” individuals with some form of health insurance that provides (partial) reimbursement for the cost of the healthcare services they “consume.” Having decided to “consume” a healthcare product or service, the “member” or “enrollee” becomes a “patient” of one or more healthcare providers.

The nature of healthcare reimbursement creates paradoxical and occasionally perverse financial incentives. The Goldilocks principle characterizes the financial incentives of payers, which hope that “members” or “enrollees” consume just enough healthcare services to meet medical loss ratio (MLR) requirements and detect potentially catastrophic conditions early enough to enable more affordable interventions. Conversely, the financial incentives of healthcare providers and life sciences firms are, on the margin, to deliver some sort of clinical intervention to every non-capitated “member” or “enrollee.” As a result, the financial incentive of every health economy stakeholder is for a consumer to make a choice that benefits the stakeholder, even though it might not benefit the consumer.

**In summary, every health economy stakeholder’s financial performance depends upon the same consumer decision: consent to treatment.**

Historically, consumers placed a high degree of trust in the healthcare system, especially upon becoming patients. Because of that trust, and because a third party underwrote most of the cost of care, consumers almost never refused consent to treatment.

In recent years, consumers have become less trusting of the healthcare system simultaneous with continuously increasing personal financial responsibility for the services they consume. Even if health economy stakeholders can regain consumer trust, there is little to suggest that the personal financial responsibility of consumers will decline. As a result, whether consumers consent to treatment will become the most important consumer decision in the U.S. economy.

**This chapter outlines how basic consumer-focused strategies and concepts from non-healthcare industries can be applied throughout the health economy.**

# What Health Economy Stakeholders Are Doing Wrong, and Why

Because most health economy stakeholders want patients to do something – have a visit, take a test, swallow a pill, receive an injection, undergo a surgery – that requires a physician order, their growth strategies unintentionally reveal two core misconceptions: that physicians are customers and patients are loyal. The assumption that patients will do whatever their physicians recommend explains the vacuous “consumer-focused strategies” of health economy stakeholders, like “patient portals” and “digital front doors” and “drug discount cards.”

Because patients can rarely unilaterally “consume” the most profitable healthcare services, it is fair to ask whether healthcare can ever be truly “consumer-focused.” If it can, health economy stakeholders should understand what the most successful consumer-focused enterprises do.

The “first principles” of every truly consumer-focused enterprise is delivering **value** to their customers, which first requires knowing what consumers in a target market will consider valuable. Consumer-focused enterprises also understand their competitors: how much business the competition has, how and where to reach the customers of the competition, whether those customers are valuable and how to take those customers away from the competition. Most importantly, consumer-focused enterprises understand this insight from Peter Drucker:

*A retailer may know a great deal about the people who shop at its stores. But no matter how successful, no retailer ever has more than a small fraction of the market as its customers; the great majority are noncustomers.<sup>2</sup> (Emphasis added)*

While consumer-focused enterprises theoretically desire to be a monopoly, they develop strategies knowing that they do not – and will never – have 100% of the business of their customers. Dr. Drucker’s observation about “a small fraction of the market” is something that most health economy stakeholders have never fully embraced or even understood, but it is foundational to developing innovative consumer strategies in a highly fragmented market like healthcare.

Consumer-focused enterprises are, as the phrase suggests, **focused** on a **limited** product mix and on ensuring that consumers understand that focus, which is why everyone knows that Whole Foods does not sell gasoline and that 7-Eleven does not sell Wagyu beef. In contrast, Fortune 100 pharmaceutical firms focus on multiple disease states and hospitals strive to be all things to all potential patients, branding every service line as a “Center of Excellence,” which is diametrically opposed to the “focused factory” strategy proposed by Professor Regina Herzlinger in her 1996 book *Market Driven Health Care*.

As discussed in the [Introduction](#), the first mistake of every health economy stakeholder is failing to identify their real customer. As discussed in [Chapter 1](#), the second mistake of every health economy stakeholder is overestimating their market share because of a failure to identify all relevant

competitors. Having failed to identify their real customers and relevant competitors, health economy stakeholders are sorely challenged to know what their customers want and need and might acquire from someone else. However, the most important – and underappreciated – difference between truly consumer-focused enterprises and health economy stakeholders is this:

**Consumer-focused enterprises earn the business of consumers, while health economy stakeholders attempt to compel it.**

Consumer-focused enterprises try to entice individual consumers by offering value that large numbers of consumers find appealing, like Amazon Prime. Is the goal of Amazon Prime to draw a customer into an ecosystem of products that Amazon sells? Of course, but Amazon is trying to influence behavior, which is quite different than trying to compel it. The former is consumer-focused; the latter is not.

In contrast, the behavior of health economy stakeholders suggests that they view employers not as customers but as facilitators, a means to an end, as either the aggregator of “risk pools” or the underwriter of the cost of those risk pools or both. Health economy stakeholders then attempt to control those “risk pools” in a variety of ways: narrow networks, benefit design, pharmacy benefit managers, electronic medical record (EMR) portals, utilization management, group purchasing contracts, etc. The only exception is Medicare Advantage (MA), the design of which forces payers to compete annually based on network and benefit designs to entice elderly consumers to enroll.

Instead of trying to control consumer behavior through opaque contractual relationships, health economy stakeholders should focus on delivering what employers and patients want and need: **value for money**.

The most important elements of value in healthcare services are cost, quality, safety and convenience. Historically, health economy stakeholders in the U.S. have emphasized quality despite its rather subjective nature. In contrast, the British are refreshingly honest about the challenges of defining a “quality outcome” in determining value:

*Any assessment of a health service ought to examine indicators of the value of the ‘output’ it creates. Traditionally, two classes of outcome are considered important in healthcare: clinical outcomes expressed in terms of the health gains created by the system, and the quality of the patient experience, independent of health outcomes, expressed in concepts such as ease of access to care and responsiveness.*

*Some health outcomes indicators – such as life expectancy rates, infant mortality rates and cancer mortality rates – are available. However, improvements in these are a function of many factors over which the NHS often has little influence. The relative scarcity of readily accessible outcome data specific to the NHS forces any analysis to rely heavily on process indicators, on the assumption that they provide a reasonable proxy for health outcomes.<sup>3</sup> (Emphasis added)*

Knowledgeable observers of the U.S. healthcare system know that the British are, as they say, spot on, affirming Centers for Medicare and Medicaid Services (CMS) significant reliance on process measures and patient experience in quality reporting. While the relative difference between providers on common quality measures has narrowed in the past 15 years, the mean value of almost every CMS quality measure is astonishingly low.

What is less frequently discussed is the fact that the importance of quality as an element of value is highly variable depending on the type of care. Quality, which is critically important in neurosurgery, is almost irrelevant in an ankle X-ray if the patient doesn't move.

As a result, **developing truly consumer-focused strategies in healthcare requires a dynamic definition of value for money** that depends on the type of product or service being delivered, the complexity of the product or service and the relative and comparative price of that product or service, as well as the relative and comparative price of substitute goods.

As discussed in the [Introduction](#), quality would undoubtedly increase if mortality decreased, a subject the industry is loath to discuss. In the absence of quantifiable and easily understood quality outcomes other than mortality, influencing consumer decisions to consent to treatment for elective services can be reduced to these two general principles:

**As acuity increases, consumer preference about location and convenience decreases.**

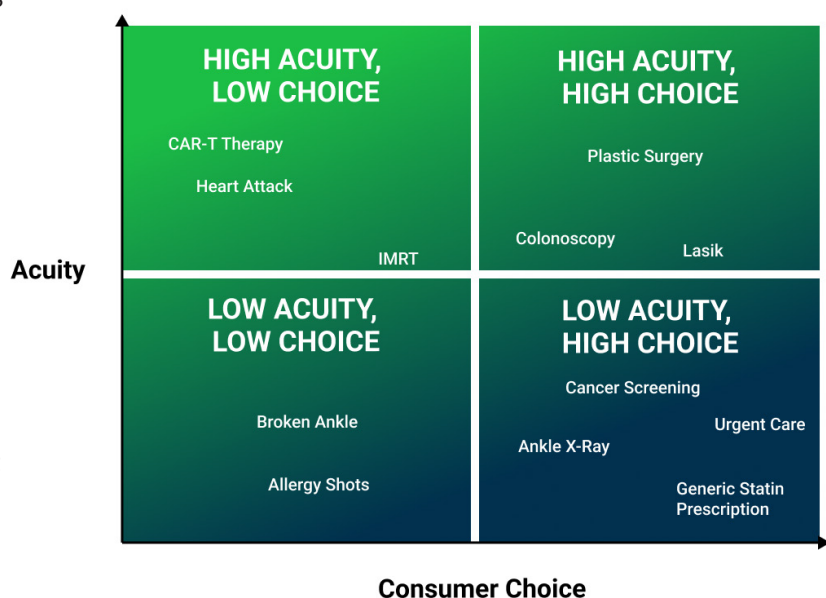
**As price increases, the more consumers will consider postponing elective and even emergent care.**

The foundation of every successful consumer-focused strategy ultimately depends upon delivering value for money to the customer. Period.

In healthcare, stakeholders can deliver value for money to the customer – the employer – in three ways:

1. Better than average quality at a price at or near the median market rate
2. Average quality at a price that is below the median market rate
3. Better than average quality at a price that is below the median market rate

### The Inverse Relationship Between Acuity and Consumer Choice





While any “consumer-focused” strategy that does not deliver value for money to the customer is ultimately worthless, consumer-focused strategies can help influence a consumer decision to consent to treatment. This chapter focuses on use cases for which consumer psychology is most likely to influence a consumer’s consent to treatment. [Chapter 4](#) leverages health plan price transparency data to reveal how negotiated rates can influence a consumer’s consent to treatment. Where quality is equal, competing on convenience and price for low acuity care is a key consumer strategy.

## The Questions Every Stakeholder Should Answer

To develop effective consumer strategies, every health economy stakeholder must be able to answer:

- What is the **total demand** for healthcare products and services from consumers in a defined geographic market? What is the future demand for those products and services?
- What healthcare products and services do the consumers in the target market need – and what do they want? How do these services differ across different **consumer segments**?
- How do the consumers in the target market **quantify value**?
- What **“share of care”** does the stakeholder’s organization capture? Which services are most profitable? Which services are least profitable?
- For which products or services does the stakeholder offer **higher value** than competitors? For which products or services does the stakeholder offer lower value than competitors?
- What does the current and future **policy and payment landscape** signal for the growth opportunities and constraints for the stakeholder’s products and services?



# Consumer Strategies for Healthcare Providers

Historically, patients have had limited choices with regard to site of service (e.g., hospitals, emergency departments or physician practices), so patient preference was relatively unimportant. Instead, the location of physician offices was focused on physician convenience, which explains the proliferation of medical office buildings on hospital campuses.

In contrast, American consumers expect convenient goods and services tailored to their unique preferences in every other part of their lives. As digital health companies and large retailers like Amazon and Walmart expand primary care services and offer abundant choices for where and when patients receive care, patient choices increasingly reveal a preference for on-demand care outside of traditional care pathways (e.g., retail care, alternative medicine). (Editor's note: This chapter was published prior to Walmart's announcement that it plans to shutter its 51 clinics, citing an unsustainable business model. It beggars belief that Walmart believes there is no sustainable business model to operate its clinics profitably. Primary care margins are similar to grocery store margins, and Walmart sells groceries quite profitably.)

Traditional providers who are reluctant to align care delivery with consumer preferences should at least understand those preferences to compete with new entrants in a shrinking market of commercially insured patients with increasing options for care. Likewise, traditional providers eager to innovate to align with consumer preferences must understand that consumer loyalty requires more than an EMR portal and opening clinics in wealthy neighborhoods that see patients until 8PM.

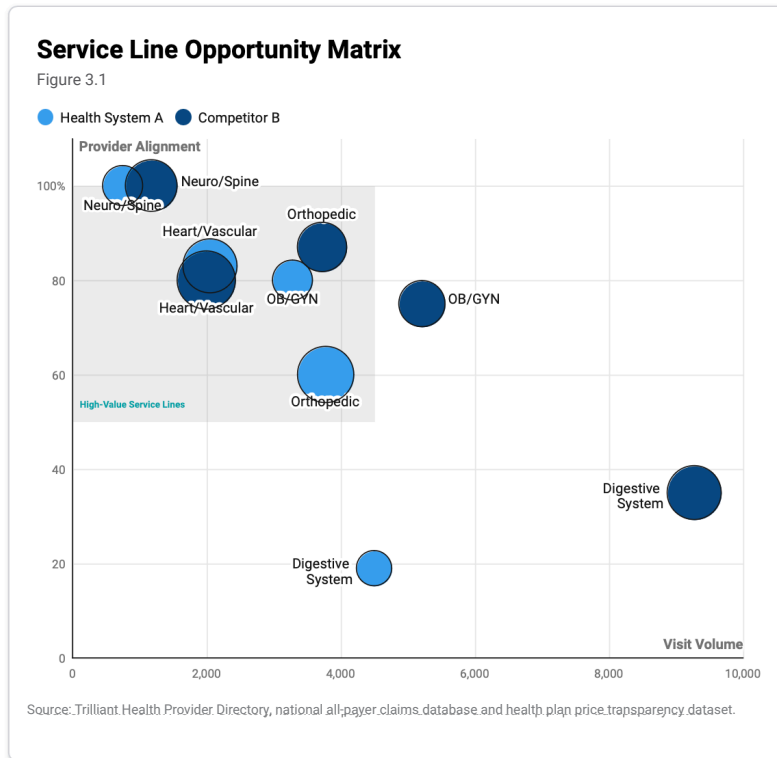
To transition to a consumer-focused enterprise, healthcare provider organizations must answer:

- What is the **total demand** for healthcare services from consumers in a defined geographic market? What is the **future demand** for those services?
- What healthcare services do the consumers in the target market need – and what do they want? How do these services differ across different **consumer segments**?
- What **"share of care"** does the stakeholder capture by service line? Which service lines are most profitable? Which service lines are least profitable?
- For which service lines does the stakeholder offer **higher value** than competitors? For which service lines does the stakeholder offer lower value than competitors?

## Use Case: Prioritizing Service Line Growth

Adopting a "focused factory" strategy is seemingly obvious in a resource-constrained industry. Doing so requires healthcare providers to allocate resources strategically to service lines where they are positioned to compete effectively. Provider organizations should prioritize service lines with high margin, acceptable quality, strong provider alignment and increasing consumer demand.

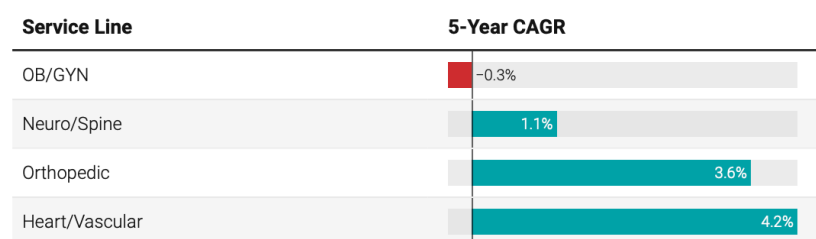
In this example, using a combination of provider directory, utilization and demand forecast data, an example health system's service lines are plotted against a competitor based on provider alignment, visit volumes and patient revenue, revealing the Neuro/Spine, Heart/Vascular, OB/GYN and Orthopedic service lines as high-priority service lines. While the Digestive volumes are high, low physician alignment limits the return on investment in that service line, with only 20% of downstream care staying in system.



However, an analysis of future demand for each service line reveals that Orthopedics and Heart/Vascular should be the highest priorities for service line investment. In this example, using a demand forecast based on local utilization, the Orthopedics and Heart/Vascular service lines are projected to have a 3.6% and 4.2% compound annual growth rate (CAGR), respectively, over a five-year period. In contrast, future demand for Neuro/Spine is much lower, and OB/GYN is declining.

### Projected 5-Year CAGR by Service Line in Health System Service Area

Figure 3.2



Source: Trilliant Health Demand Forecast.

# Steps to Prioritize Service Line Growth

## 1. Define Objectives and Service Line Selection Criteria

Translate the broad goals of the strategic plan into specific service-line objectives that are measurable, achievable, and aligned with the mission and vision of the organization. Establish criteria for selecting target service lines, including factors such as volume of services provided, quality performance, market share, patient satisfaction, geographic accessibility and price.

## 2. Identify Key Performance Indicators

Identify relevant key performance indicators to measure the success of growth initiatives, such as patient acquisition cost, patient lifetime value, conversion rates and return on investment (ROI).

## 3. Gather and Consolidate Data

Collect relevant data from internal sources, including electronic health record (EHR) data, patient surveys, website analytics and insights from past marketing campaigns. Curate external data sources such as market utilization, industry studies, and demographic data to understand market trends and emerging healthcare needs.

## 4. Assess Service Line and Market Growth Opportunities

Leverage external data to identify opportunities for service line expansion and market differentiation. Prioritize service line opportunities through the analysis of current market share, competitive landscape, future service demand, reimbursement rates and provider alignment.

- **Market Share:** Analyze market share and patient demand to identify service line gaps where the organization can fulfill unmet need or provide higher value solutions compared to current offerings.
- **Competitive Positioning:** Conduct a competitive analysis to understand the strengths, weaknesses and market positioning of competing health systems and service lines.
- **Predictive Modeling:** Utilize predictive modeling techniques to forecast future demand for specific service lines based on historical data, population demographics, healthcare trends and other relevant factors. Prioritize campaigns and marketing initiatives around current and future service line demand.
- **Provider Alignment:** Analyze referral patterns and physician affiliations to identify opportunities for collaboration and strategic partnerships to expand patient reach and enhance care coordination. Focus marketing efforts on providers that are more likely to leverage services within the network.

## 5. Collaborate with Key Stakeholders

Collaborate closely with internal stakeholders, including senior leadership, clinical teams, operations and other departments to ensure alignment between growth initiatives and strategic priorities. Seek input and feedback from stakeholders based on the key findings from the service line selection analysis to ensure buy-in and alignment with the strategic plan and allocation of any necessary capital.

## 6. Create Operational Marketing Plan

Allocate marketing resources, including budget, personnel and technology, in alignment with strategic priorities. Develop integrated campaigns that leverage multiple channels, including digital, social media, email, traditional advertising and community outreach. Create highly targeted messaging to reinforce key initiatives and effectively communicate the value proposition. Ensure consistency in messaging and branding across all channels to enhance brand recognition.

# Use Case: Developing Lead Plans for High-Margin Services

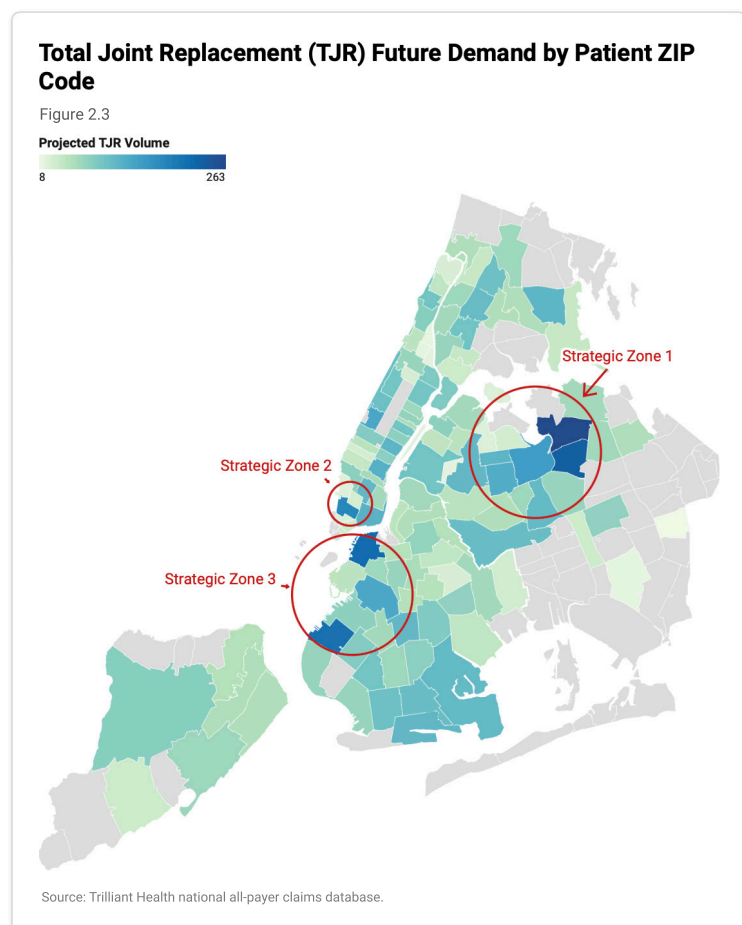
Provider organizations can more effectively allocate scarce marketing resources with a hyper-local understanding of projected consumer demand.

In this example, using a combination of provider directory, utilization and health plan price transparency, the market opportunity for Total Joint Replacement (TJR) volume, based on patients in the market who have been diagnosed but have not had surgery, is estimated at 8,960 patients in the service area:

**Patients with Trigger Diagnosis:**  
**203,630**

**Historic Surgical Conversion:**  
**4.4%**

**1-Year Projected TJR Surgical Volume:**  
**8,960**



Demand is not distributed evenly across the market. Based on the concentration of future demand, the health system should focus its market strategy on building awareness and loyalty for consumers in the three strategic zones outlined in red.

These strategic zones represent significant opportunity for growth, but the health system is not well-positioned to capture that demand, with low market share in key ZIP Codes. For example, in the ZIP Code with the highest projected demand, the health system has only 6% market share, limiting its ability to capture a significant portion of the projected \$9.6 million revenue opportunity. With a hyper-local view of consumer demand, the health system can deploy its marketing resources to develop brand awareness with consumers who are most likely to need future surgical intervention.

### Top 20 ZIP Code Opportunities for Total Joint Replacements

Figure 3.4

Patient ZIP Code	Future Demand	Revenue Opportunity	Alignment
11354	263	\$9,600,954	6%
11355	233	\$8,499,337	4%
11201	213	\$7,786,904	27%
11220	206	\$7,515,119	7%
10013	178	\$6,518,035	32%
11368	147	\$5,366,563	10%
10023	135	\$4,916,267	43%
11215	132	\$4,806,910	9%
11373	126	\$4,612,318	12%
10016	122	\$4,464,363	21%
10002	120	\$4,372,696	42%
11372	117	\$4,261,730	19%
10022	116	\$4,234,391	24%
10461	114	\$4,178,104	2%
11235	113	\$4,134,682	18%

Top 20 ZIP Codes based on future Total Joint Replacement (TJR) demand

Source: Trilliant Health Provider Directory, national all-payer claims database and health plan price transparency data.

## Steps to Develop Lead Plans

### 1. Identify High-Margin Services and Capacity Requirements

Analyze service lines and procedures that generate highest incremental margin for the organization. Ensure that the organization has capacity for incremental growth in the target service lines or procedures.

### 2. Define the Target Audience

Prioritize high-value patient cohorts that are most likely to benefit from the target service line or treatment. Analyze internal data to identify opportunities to increase engagement with consumers in the market. Leverage external data to identify target cohorts with the highest potential for new customer acquisition based on healthcare need and preferences.

### 3. Analyze Internal Data

Analyze internal data on patient interactions and touchpoints throughout the network, including website visits, appointment scheduling, clinic visits and follow-up care. Map the patient journey to identify key touchpoints where marketing interventions can enhance patient engagement and satisfaction. Use EHR data to identify patients in need of preventive screenings and/or follow-up care related to the target service line. Tailor marketing campaigns to promote the service line and deliver targeted health education content.

#### 4. Analyze External Data

Leverage external market data to build targeted marketing campaigns that effectively reach and engage potential new patients. Identify gaps in the market, areas of unmet healthcare need and opportunities for differentiation that can be leveraged to attract new patients. Utilize geospatial data and mapping tools to analyze the geographic distribution of potential patients within the service area.

#### 5. Identify Community Engagement Opportunities

Analyze community demographics, health indicators, and socioeconomic factors to understand the unique needs of different neighborhoods and populations. Develop community engagement initiatives and partnerships with local organizations to reach and engage potential new patients in underserved communities.

#### 6. Create a Data-driven Marketing Plan

Use data-driven insights to make informed decisions, optimize marketing strategies and allocate resources effectively to support business objectives. Utilize website analytics, search engine optimization (SEO) data and social media metrics to optimize online marketing efforts, continuously evaluating the effectiveness of marketing campaigns in achieving strategic objectives. Adapt campaign strategies as appropriate based on changing market dynamics, patient needs, competitive landscape and feedback from stakeholders.

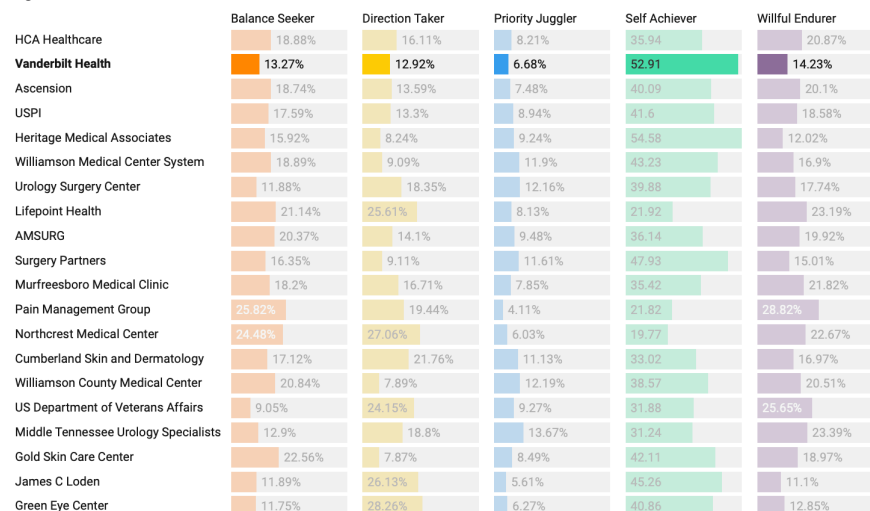
## Use Case: Improving Patient Communications and Network Development with Psychographics

Consumer-focused enterprises understand the importance of psychology in consumer decision-making, and consumer psychology influences healthcare decisions as well. There are five healthcare psychographic profiles: Balance Seeker, Direction Taker, Priority Juggler, Self Achiever and Willful Endurer.

In this example, using a combination of provider directory, utilization and consumer data, Vanderbilt Health has a higher proportion of patients with the Self Achiever psychographic profile than all but one of the largest healthcare providers in the Nashville–Davidson–Murfreesboro–Franklin, TN CBSA.

### Psychographic Mix of Healthcare Providers in the Nashville–Davidson–Murfreesboro–Franklin, TN CBSA, 2022

Figure 3.5



Source: Trilliant Health national all-payer claims database and national consumer dataset.

**Self Achievers** are the most proactive when it comes to their wellness, investing what is necessary toward their health and appearance. Self Achievers may actually have health issues, but they stay on top of them with regular medical checkups, health screenings and research. Purpose-driven, Self Achievers are task-oriented and will tackle a challenge if they are given measurable goals.

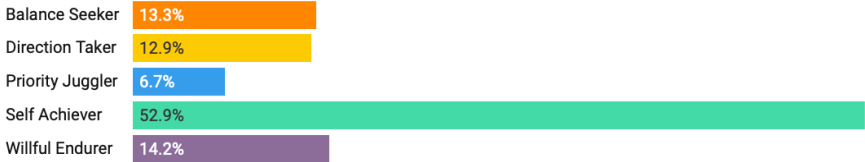
**Behaviors:** Proactive, health conscious, doctor is the expert, enjoys change

**Words that Work:** Overcome the challenge, take charge/control, accomplish(ment)

**Media:** Health websites, magazines, professional contact

**Psychographic Mix for Vanderbilt Health, 2022**

Figure 3.6



Source: Trilliant Health national all-payer claims database and national consumer dataset.

As a result, Vanderbilt Health might tailor their patient outreach strategies for Self Achievers, using phrases like “overcome the challenge,” “exceeding your health goals,” and other phrases that are likely to resonate with this group.

Psychographics inform consumer preferences for care delivery options as well as communication. Understanding consumer preferences for the type and site of care can inform network development, ensuring that the network has a sufficient supply and mix of primary care settings for the members in the target market. Self Achievers prefer traditional relationships with primary care providers and use urgent care and retail settings situationally. As a result, to maintain or increase its share of care in the Nashville market, Vanderbilt Health should ensure that its sites of care match the psychographic preferences of the consumers in Middle Tennessee, particularly Self Achievers.

Vanderbilt Health has opened numerous storefront urgent care clinics throughout Nashville, while locating its primary care physicians on the campus of Vanderbilt University Medical Center and a former shopping mall located a few miles from downtown. Urgent care clinics appeal to Willful Endurers, who take a reactive approach to their healthcare, only seeing a doctor when absolutely necessary.



Willful Endurers live in the “here and now” and believe there are more important things to focus on than improving their health for the future. Willful Endurers are not necessarily unhealthy, but they do what they like, when they like, and typically do not change their habits. Willful Endurers are self-reliant and can withstand whatever life throws at them, going to the doctor only when absolutely necessary.

**Behaviors:** reactive, dislikes planning, lives in the now, least engaged, hardest to reach

**Words that Work:** (first) step, understanding, you belong, today, now, important to you, we have your back, we want to earn your trust, here to support

**Media:** job search sites, interaction with clinician

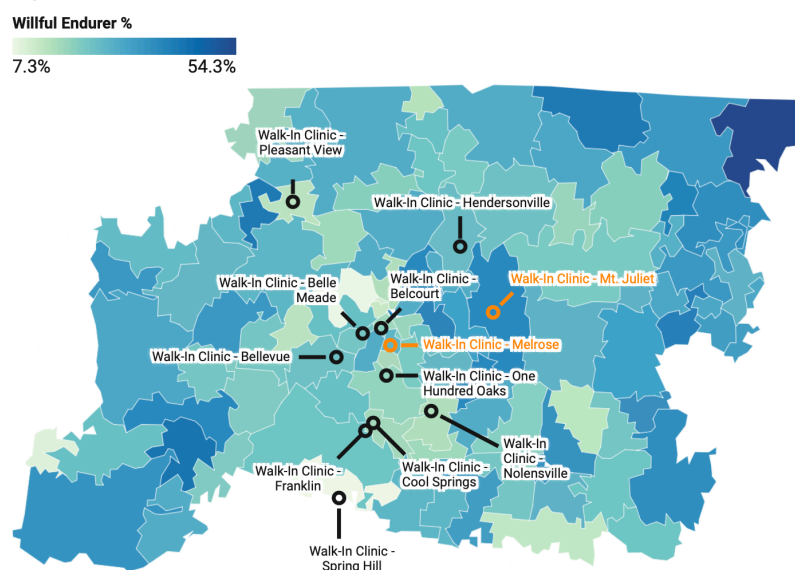
People who live in the moment and are not engaged in their health are unlikely to invest in a traditional primary care relationship, which is why Willful Endurers visit urgent care settings more than any other Psychographic Profile. Willful Endurers are 3X more likely to visit urgent care settings than Self Achievers, and 7X vs other segments.

As a result, to maintain or increase its share of care in the Nashville market, Vanderbilt Health should ensure that its sites of care match the psychographic preferences of the consumers in Middle Tennessee.

The percentage of Vanderbilt Health patients who are Willful Endurers is one of the lowest in the Nashville–Davidson–Murfreesboro–Franklin, TN core-based statistical area (CBSA), and Vanderbilt Health’s urgent care centers are, with two exceptions, misaligned with the neighborhoods with a high percentage of Willful Endurers.

### Comparison of Vanderbilt Health Walk-In Clinic Locations with Willful Endurer Population

Figure 3.7



Source: Trilliant Health Provider Directory and national all-payer claims database.



# Steps to Analyze the Psychographic Mix of a Patient Population

## 1. Identify Strategic Initiatives

Identify and focus on a key strategic initiative of the organization. Focus areas may include cost containment in high-risk populations, patient education on health issues or high-cost therapeutics, gaps in care coordination, and increasing member satisfaction.

## 2. Define the Target Audience

Clearly define the scope and objectives of the psychographic analysis. Gather feedback from service line leaders on current patient retention and engagement metrics. Identify focus areas where improved patient acquisition, retention or engagement would have the greatest impact on meeting the organization's strategic goals. Prioritize high-value patient segments that are likely to benefit from improved communication or to seek care in the provider's network.

## 3. Analyze Internal Data

Analyze internal data on patient interactions and touchpoints throughout the network, including website visits, appointment scheduling, clinic visits and follow-up care. Map the patient journey to identify key touchpoints where marketing interventions can enhance patient engagement and satisfaction. Use EHR data to identify patients in need of preventive screenings and/or follow-up care related to the target service line. Tailor marketing campaigns to promote the service line and deliver targeted health education content.

## 4. Analyze External Data

Gather external data sources that inform the psychographic and demographic makeup of patient populations across your organization, as well as key competitors in the market:

- Psychographic data, de-identified for individual consumers in the market
- Real-time utilization across in- and out-of-network providers
- Demographic data, such as age, income or gender

Analyze the competitive landscape, including competing health systems, independent practices and retail providers, to understand each organization's patient population. Assess what the demographic and psychographic mix reveals about each competitor's strengths and weaknesses. Confirm that existing sites of service within the network are aligned with consumer preferences in target markets and have sufficient capacity to manage incremental volumes.

## 5. Create a Data-driven Marketing Plan

Use data-driven insights to make informed decisions on how best to engage the target patient population. Tailor patient follow-up, including the method, style and content of communications, to align with the needs and preferences of the target patient population. Create marketing campaigns to compete for the patients of key competitors, informing messaging with insight into

## Use Case: Tracking Patient Loyalty and Retention

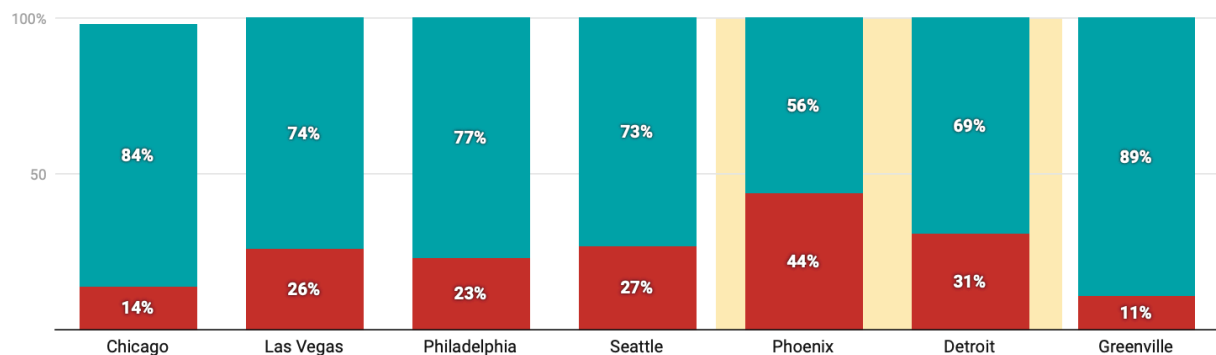
Patient loyalty is a proxy for network performance, which is a key predictor of financial performance for healthcare providers. Using analytics that reveal longitudinal patient “care journeys,” providers can calculate patient loyalty metrics and quantify the “lost” revenue when patients seek care from other providers.

In this example, using a combination of provider directory and utilization data, a healthcare provider lost \$90 million in downstream revenue from patients who sought treatment from competing clinics for subsequent care episodes. The market-level analysis reveals that the Detroit and Phoenix markets should be a strategic focus for improving patient loyalty.

### Patient Retention and Churn Percentage for National Ambulatory Service Provider, 2021

Figure 3.8

■ Patient Outmigration ■ Patient Retention



Source: Trilliant Health Provider Directory and national all-payer claims database.

# Steps to Conduct a Patient Retention and Churn Analysis

## 1. Internal Planning

Meet with service line leaders and key stakeholders to define specific metrics and goals related to patient retention, including establishing internal benchmarks for patient retention rates, referral leakage rates (patients seeking care outside the system) and patient satisfaction. Clearly define the scope of the patient retention analysis, including the target service lines to be assessed and the definition of the primary and secondary service areas.

## 2. Curate Internal Data

Curate relevant data from internal sources such as employed physician rosters, referral tracking data and patient satisfaction surveys, including patient demographics and feedback.

## 3. Curate External Market Data

Normalize external data to align with internal network definitions, including classifying physicians and facilities based on system ownership. Determine metrics for patient retention reporting. Common metrics include procedures performed and downstream revenue capture.

## 4. Assess Network Performance

Analyze the collected data to calculate key performance metrics related to patient retention. Track and monitor the longitudinal journey of each patient to identify gaps in the network and quantify the amount of patient outmigration over time, as well as across key service lines, geographic areas, settings of care and demographic and psychographic consumer segments. This may involve calculating patient retention and referral leakage percentages by service line, market and setting of care (e.g., telehealth, urgent care).

## 5. Root Cause Analysis

Conduct a root cause analysis to understand the factors contributing to patient retention and churn, including competitive landscape, access to care, physician–patient communication and external factors affecting patient choice. Based on these findings, develop strategic initiatives to improve care coordination, expand access based on the needs and preferences of consumers and strengthen relationships with referring physicians.

## 6. Monitoring and Continuous Improvement

Continuously track and analyze key performance metrics related to patient retention and churn to assess progress and make necessary adjustments to performance improvement initiatives. Foster a culture of continuous improvement within the system by regularly reviewing performance metrics, soliciting feedback from physicians and patients and identifying opportunities for further optimization of network integrity and overall performance.

# Consumer Strategies for Health Plans

Health plans have less need for consumer strategies than any other health economy stakeholder, except for health insurance brokers. Unlike the rest of the economy, health plans don't want "customers for life."

**Why isn't the consumer, i.e., the patient, the end user of healthcare services, the customer of the health insurer?** Health plans either underwrite the cost of healthcare coverage for employers, aka their "fully insured business," or they provide administrative services like network access, claims payment, etc., to self-insured employers, aka their "ASO business."

In the fully insured business, consumers, aka "members," are a **cost center for health plans**, in contrast to the rest of the economy where the consumer is a source of revenue. Whether that mindset explains the typical 100% churn of fully insured members over a four-year period or whether the inevitability of churn informs the mindset, health plans have little incentive to focus on a "member" as a consumer.

In the ASO business, consumers are completely irrelevant to the health insurer, with their name, date of birth, gender and home address merely data fields in an electronic transaction that the health insurer is paid to administer.

In stark contrast to their fully insured and ASO business, every health plan with a MA product deploys more consumer-focused strategies than all other health economy stakeholders combined. Every year, MA plans enroll members by investing millions of dollars in multimedia to advertise benefit design features tailored to consumer preferences on access and cost.

The success that many health plans have achieved with their MA business reveals that **they are capable of being consumer-focused**, which calls into question why they are not consumer-focused in their fully insured and ASO business. The answer lies in the key difference between a health insurer's MA business and the fully insured/ASO business – the absence of a broker. Health plans must earn the business of MA enrollees, whereas they can effectively buy their fully insured and ASO business through commissions to brokers.

In their fully insured and MA lines of business, the MLR of health plans is highly dependent on the choices that their "members" make. As a result, health plans have an incentive to analyze utilization to monitor excessive utilization of high cost and/or low value services or the lack of utilization of low cost and/or high value services like primary care and preventive screening.

**To transition to a consumer-focused enterprise, health plans must answer:**

- What is the **total demand** for healthcare services from consumers in a defined geographic market? What is the future demand for those services?

- What healthcare services do the consumers in the target market need – and what do they want? How do these services differ across **different consumer segments**?
- How do the psychographic profiles of the stakeholder's members compare to the market? What types of primary care access do the stakeholder's members prefer? Do psychographic profiles explain under-utilization of high-value care or over-utilization of low-value care?
- Do certain consumers in the target market have **psychographic profiles** that suggest a preference for diagnostic or therapeutic interventions over surgical interventions?

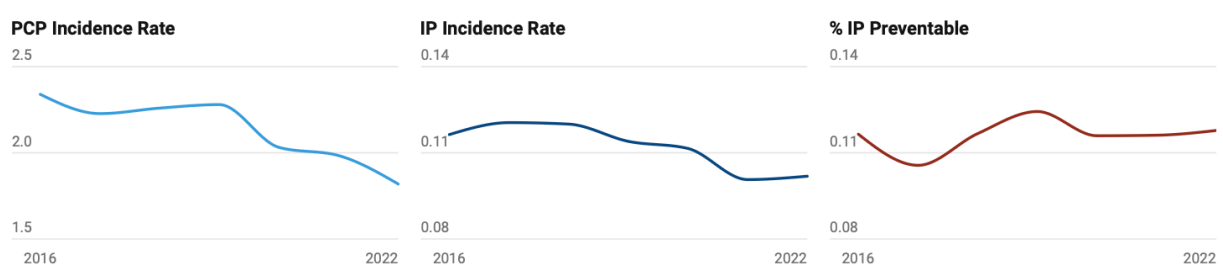
## Use Case: Personalizing Member Communications to Address Low Primary Care Utilization

Consistent utilization of primary and preventive care services is widely believed to improve health and lower medical costs. As a result, in their MA, managed Medicaid and fully insured lines of business, health plans have a financial incentive to promote primary care access and utilization.

In this example, using a combination of provider directory and utilization data, the number of primary care visits per patient has declined year-over-year for the Medicaid population in Florida Medicaid Region 7. While overall inpatient utilization is also decreasing, the percentage of preventable inpatient admissions has increased.

### Trended Primary Care Visit Rates for Florida Medicaid Region 7, 2016-2022

Figure 3.9



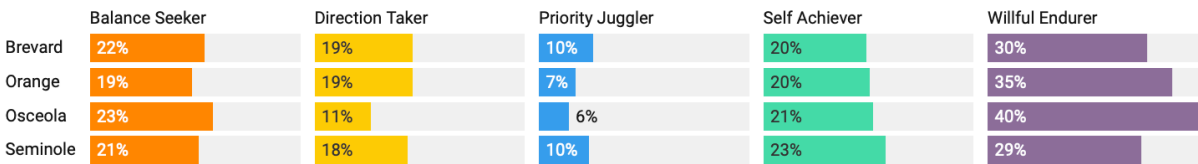
Florida Medicaid Region 7 includes Brevard, Orange, Osceola and Seminole counties.  
Source: Trilliant Health Provider Directory and national all-payer claims database.

Psychographics inform consumer preferences for care delivery options as well as communication. Understanding consumer preferences for the type and site of care can inform network development, ensuring that the network has a sufficient supply and mix of primary care settings for the members in the target market. Understanding consumer preferences for communication informs the tone, content, channel and frequency of messaging to the members.

In this example, using a combination of psychographic and consumer data, an analysis of the psychographic mix in Florida’s Medicaid Region 7 reveals a higher proportion of Willful Endurers in the low-income population, when compared with the region’s overall psychographic mix.

**Psychographic Mix by County in Florida Medicaid Region 7**

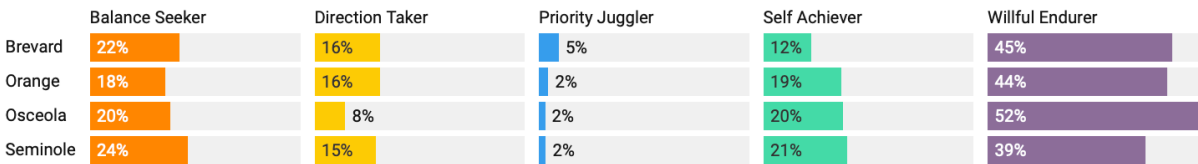
Figure 3.10



Source: Trilliant Health national consumer dataset.

**Psychographic Mix of Low-Income Population by County in Florida Medicaid Region 7**

Figure 3.11



Source: Trilliant Health national consumer dataset.

Willful Endurers take a reactive approach to their healthcare, only seeing a doctor when absolutely necessary. Notably, Willful Endurers are also one of the two psychographic profiles likely to delay or avoid care because of cost.

**Willful Endurers** live in the “here and now” and believe there are more important things to focus on than improving their health for the future. Willful Endurers are not necessarily unhealthy, but they do what they like, when they like, and typically do not change their habits. Willful Endurers are self-reliant and can withstand whatever life throws at them, going to the doctor only when absolutely necessary.

**Behaviors:** reactive, dislikes planning, lives in the now, least engaged, hardest to reach

**Words that Work:** (first) step, understanding, you belong, today, now, important to you, we have your back, we want to earn your trust, here to support

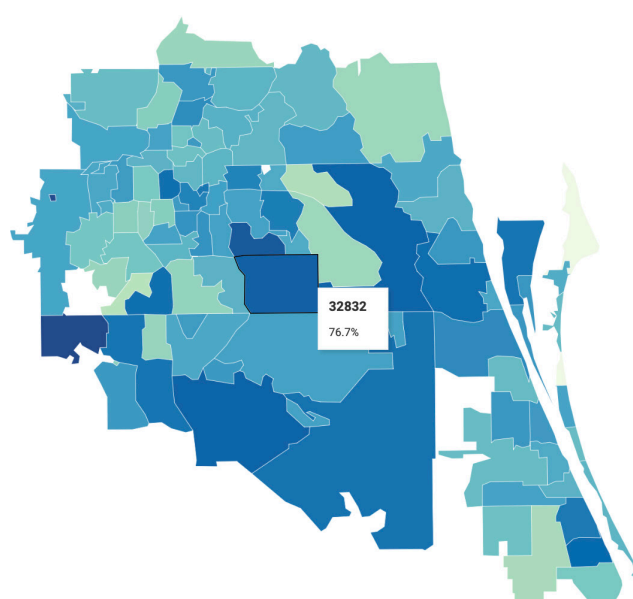
**Media:** job search sites, interaction with clinician

People who live in the moment and are not engaged in their health are unlikely to invest in a traditional primary care relationship, which is why Willful Endurers visit urgent care settings more than any other psychographic profile. Willful Endurers are 3X more likely to visit urgent care settings than Self Achievers, and 7X vs other segments.

In this example, using psychographic and household income data, the distribution of Willful Endurers as a percentage of the low-income population is not distributed evenly across Florida's Medicaid Region 7. Notably, Willful Endurers are more than 50% of the low-income population in Osceola County. To reduce primary care gaps in this high-risk population, Medicaid plans should ensure that the network has sufficient urgent care providers to align with the preferences of Willful Endurers and tailor their communication to members in the ZIP Codes with the highest percentage of Willful Endurers to promote desired healthy behaviors.

**Willful Endurers as Percentage of Low Income Population by ZIP Code**

Figure 3.12



Consumers with less than \$30,000 annual household income are classified as Low Income.

Source: Trilliant Health national consumer dataset.

# Steps to Analyze Psychographic Mix of Patient Population

## 1. Identify Strategic Initiatives

Identify and focus on a key strategic initiative of the organization. Focus areas may include cost containment in high-risk populations, patient education on health issues or high-cost therapeutics, gaps in care coordination, and increasing member satisfaction.

## 2. Define the Target Audience

Clearly define the scope and objectives of the psychographic analysis. Gather feedback from clinical teams on utilization trends. Prioritize the member segments that represent a significant risk to the health plan's performance in the focus area. Analyze internal data to assess the impact on MLR or other key performance metrics.

## 3. Analyze Internal Data

Analyze internal data on member interactions and touchpoints throughout the network, including website visits, appointment scheduling, clinic visits, follow-up care and gaps in care. Map the patient journey to identify key touchpoints where network design or communication initiatives can enhance patient engagement and satisfaction.

## 4. Analyze External Data

Leverage demographic and psychographic data to understand the distinct needs and preferences of the target member population. Analyze member demographics, psychographics, health indicators and socioeconomic factors to understand the unique needs of different neighborhoods and populations. Develop community engagement initiatives and partnerships with local organizations to engage underserved communities.

## 5. Create a Data-driven Marketing Plan

Use data-driven insights to make informed decisions, optimize marketing strategies to the health needs, preferences and communication style of the target member population. Continuously evaluate the effectiveness of marketing campaigns in driving progress toward strategic objectives. Adapt campaign strategies based on changing market dynamics, member needs, competitive landscape and feedback from stakeholders.



## Use Case: Identifying Unexpected or Inappropriate Care Utilization

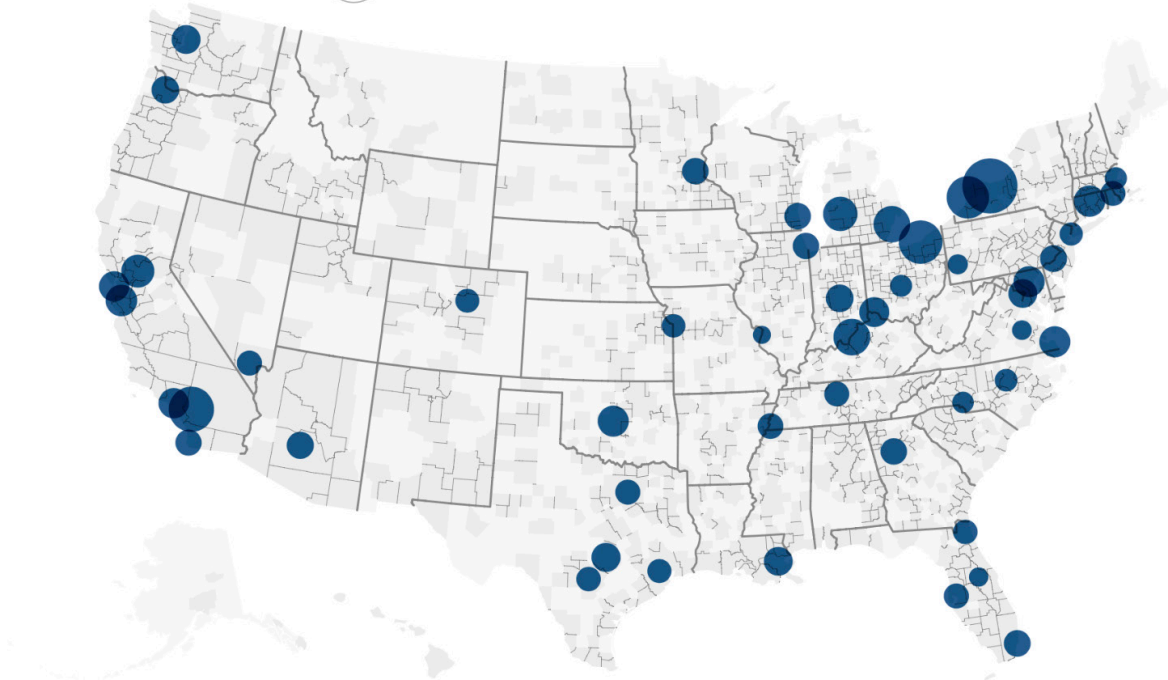
Health plan members can suffer adverse clinical outcomes from inappropriate care utilization, whether from over-prescribing or off-label uses, which in turn can result in adverse MLR outcomes for health plans.

In this example, using utilization data, the increase in off-label Ozempic® (semaglutide) utilization is mapped across select U.S. markets, ranging from +50% in St. Louis, MO-IL to +583% in Rochester, NY. Ozempic® is a high-cost therapeutic with rare but severe side effects that can lead to hospitalization, and increased demand for non-clinically indicated weight loss is likely to have a profound impact on healthcare expenditures and the overall health status of members.

### Percentage Increase in Off-Label Ozempic Prescriptions in the 50 Largest U.S. Markets, 2021-2023

Figure 3.13

Percent Change ○ 60% ○ 250% ○ 600%



Source: Trilliant Health national all-payer claims database.

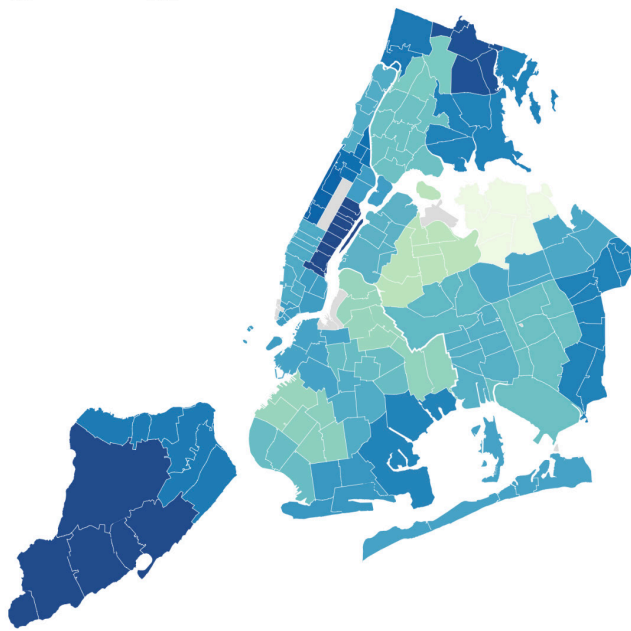
Health plans must understand these trends at the regional, local and hyper-local level to assess intra-market variation, especially for financially and demographically diverse areas.

In this example, the number of patients with GLP-1 activity per 10K individuals is mapped across 34 major New York City neighborhoods, revealing a concentration of GLP-1 prescriptions in the Upper East Side. However, an analysis of off-label usage reveals a mismatch of clinical indication and demand, with high off-label usage in higher income areas.

### GLP-1 Prescriptions per 10K Population in New York City, 2022

Figure 3.14

83.53 231.25

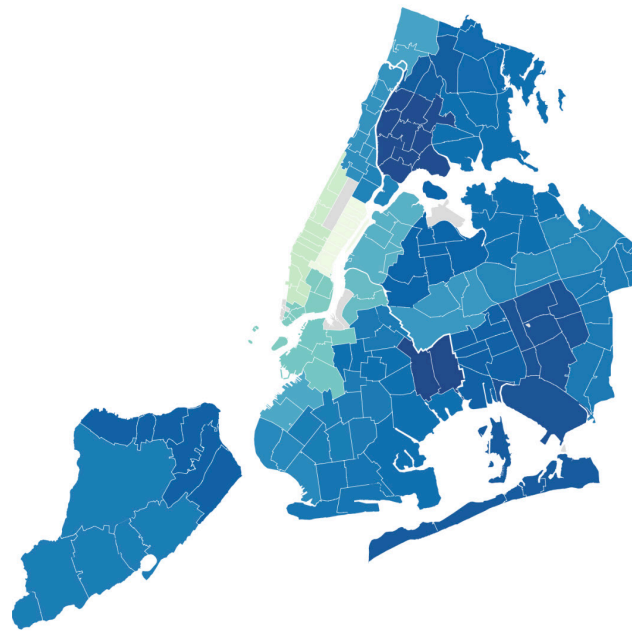


Source: Trilliant Health all-payer claims database.

### Percent of Patients Prescribed a GLP-1 with a Recorded Diabetes Diagnosis in New York City, 2022

Figure 3.15

26.57 74.24



Source: Trilliant Health all-payer claims database.

## Steps to Assess Inappropriate or Unexpected Care Utilization

### 1. Internal Planning

Meet with key stakeholders to define specific metrics and goals related to the target product or service. Gather criteria to determine the appropriateness of care through discussion with clinical stakeholders and review of available national standards of care.

### 2. Curate Internal Data

Gather relevant data from internal sources, such as member demographics, treatment history and clinical outcomes, to understand the impact of inappropriate utilization on member health status and cost of care. Curate the billing codes related to the target product or service, including the diagnosis codes that indicate medical necessity.

### 3. Curate External Data

Gather external data sources to understand trends in utilization for the target product or service. Curate external data to label utilization as appropriate or inappropriate, based on the organization's definitions. External data sources should include:

- Real-time utilization and prevalence of disease incidence rates by ZIP Code
- Demographic data, including age, gender and income

#### 4. Geospatial Assessment

Utilize geospatial data and mapping tools to visualize utilization at the market and ZIP Code levels. Assess how rates of on- and off-label utilization have changed over time in each geographic area, identifying markets and ZIP Codes with high or growing off-label usage.

#### 5. Root Cause Analysis

Conduct a root cause analysis to understand the factors contributing to utilization without clinical need. This should include evaluating factors such as access to care, differences across consumer segments and provider prescribing and practice patterns. Based on the findings, develop strategic initiatives to contain costs, including utilization management, changes to the provider network, review of plan formularies and member education.

#### 6. Monitoring and Continuous Improvement

Continuously track and analyze key performance metrics related to inappropriate utilization. Benchmark cost containment measures against competitive networks in the same markets, as well as trended over time. Foster a culture of continuous improvement within the organization by regularly reviewing performance metrics, soliciting feedback from physicians and patients and identifying opportunities for further cost containment.

## Consumer Strategies for Life Sciences Firms

Historically, life sciences firms have focused on developing (lucrative) relationships with physicians, knowing that the new implant or device or therapeutic will require a physician's order and that almost every patient will trust their physician's recommendation. Although pharmaceutical firms invest billions in direct-to-consumer advertising, the need for physicians to write prescriptions makes physician outreach their primary focus. In contrast, medical device firms focus exclusively on physician outreach since the patient is asleep when the surgeon implants the device.

Even so, life sciences firms can use analytics about utilization, demand and consumer preference to inform research and development priorities and go-to-market (GTM) strategies. To transition to a consumer-focused enterprise, life sciences firms must answer:

- What is the **total demand** for healthcare services from consumers in a defined geographic market? What is the **future demand** for those services?
- What healthcare services do the consumers in the target market need – **and what do they want?** How do these services differ across different consumer segments?
- Do certain consumers in the target market have **psychographic profiles** that suggest a preference for diagnostic or therapeutic interventions over surgical interventions?
- How should **GTM strategies** be modified at the market level based on the psychographic profiles of consumers in that market?
- Which products are **substitute goods** for more costly interventions?

## Use Case: Measuring Current Demand in Local Markets

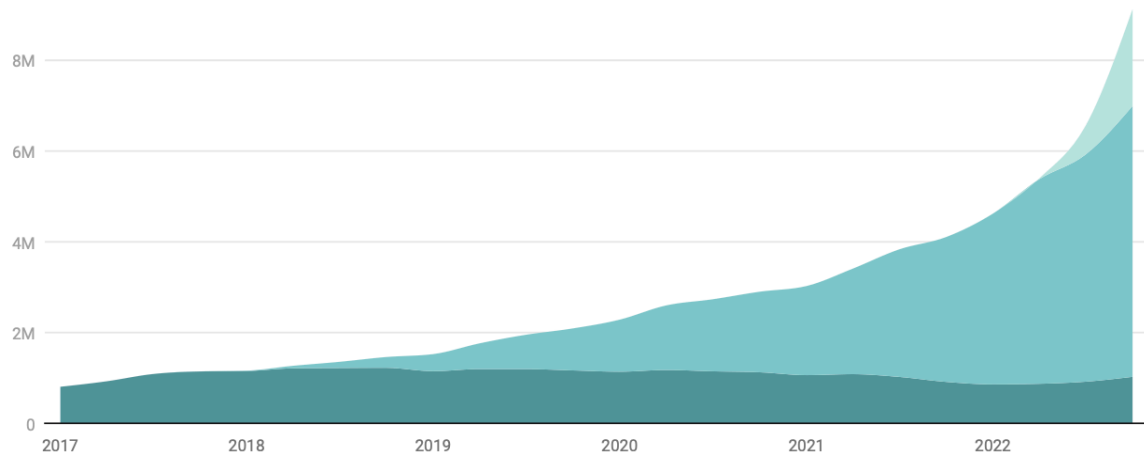
Logically, consumers will demand, and physicians will provide, the diagnostics, therapeutics and surgical interventions that will improve their health. To inform strategy and capital allocation, life sciences firms must better understand where, when and how current and future healthcare demand will manifest across service lines at the national, regional and local levels.

In this example, using utilization data, prescription volumes for GLP-1 medications increased 300% nationwide between Q1 2020 and Q4 2022.

### GLP-1 Prescription Volume by Drug Type, 2017-2022

Figure 3.16

■ liraglutide ■ semaglutide ■ tirzepatide



Source: Trilliant Health all-payer claims database

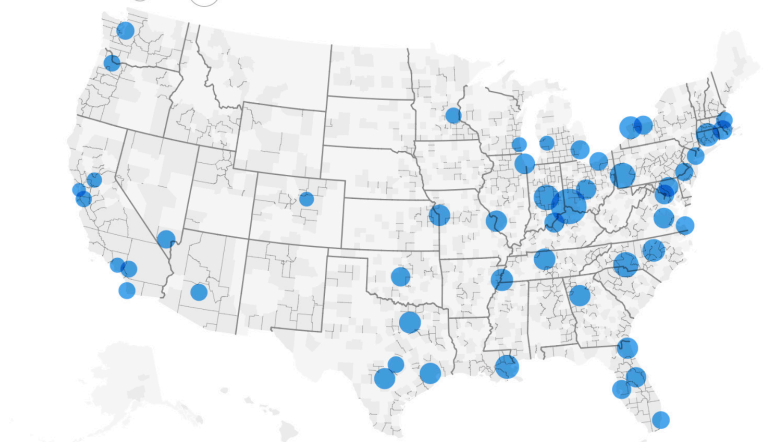
Additionally, life sciences firms can target their resources more effectively by understanding how consumer demand for therapeutics varies at the market level.

In this example, using utilization data, the prevalence of Ozempic® utilization is mapped across 50 major U.S. markets, ranging from 2.47% in the Cincinnati, OH-KY-IN CBSA to 0.31% in the San Francisco-Oakland-Fremont, CA CBSA.

### Prevalence of Ozempic Utilization in the 50 Largest U.S. Markets, 2022

Figure 3.17

Prevalence ○ 0.2% ○ 0.8% ○ 2.0%



Source: Trilliant Health all-payer claims database.

# Steps to Measure Local Demand for Therapeutics

## 1. Internal Planning

Clearly define the objective and scope of the assessment, including the target therapeutic, demographic segments and geographic areas to include in the analysis. Gather feedback from commercial leaders to understand the revenue goals for the therapeutic and the current allocation of sales and marketing resources.

## 2. Curate External Data

Gather external data sources that inform demand for the target therapeutic, as well as competitive products and substitute products or services, including:

- Demographic data, with current-year population and five-year population projections
- Real-time utilization and prevalence of disease incidence rates by ZIP Code

## 3. Assess Trends in Consumer Demand

Measure historic and current utilization of the target therapeutic and any competitive products. Assess how utilization rates and market share have changed over time, identifying key inflection points. Project how population changes may impact future demand.

## 4. Geospatial Assessment

Utilize geospatial data and mapping tools to visualize demand at the market and ZIP Code levels. Assess how demand is growing or declining across key markets. Project how demand might change in the future, based on the projected five-year population of each market.

## 5. Create Action Plan

Evaluate how effectively current sales and marketing resources are allocated to capture consumer demand. Prioritize markets based on strategic importance, profitability and growth rate. Develop an action plan to deploy resources to key markets, including strategies to educate consumers, engage providers and ensure the therapeutic is covered by key payers and employers in target markets.

# Consumer Strategies for Employers

Employers are the customer of every other health economy stakeholder, and their employees are the end users, i.e., the consumers, of the products and services those other stakeholders deliver. Each health economy stakeholder whose business depends on providing a service or device or therapeutic has a vested financial interest in “capturing” 100% of the “share of care” for the services offered by that stakeholder, without respect to the financial impact to the customer or the clinical benefit to the consumer.

As a result, the incentive of every health economy stakeholder is to “divide and conquer” by encouraging or enabling employees to utilize healthcare products and services without regard to cost – and even clinical need. The promise of health savings accounts and high-deductible plans has not created the anticipated alignment of employer/employee interests in constraining healthcare costs, except for the unanticipated and increasingly common scenario in which employees defer care because of high deductibles.

In addition to having been misled by health plans, health insurance brokers and benefits consultants about the ameliorative effect of narrow networks, wellness programs and value-based contracting, employers have lacked visibility into actionable data about healthcare cost and quality. Health plan price transparency through CMS’s Transparency in Coverage initiative reveals how shabbily other health economy stakeholders have treated employers, who routinely pay rates that vary by 300–400% for the same service with the same – or worse – quality. Based on this data, it is illogical and imprudent for employers to assume that they can trust anyone to assist their employees in making healthcare decisions that deliver value for money. It is axiomatic that no one cares about your money more than you do, and employers – whose commercially insured employees are the lifeblood of the U.S. healthcare system – should start acting like they care.

At the same time, employers bear significant responsibility for the current situation. More often than not, employer CFOs have delegated responsibility for managing the cost of employee health benefits to the human resources department. More often than not, the human resources department is the most ossified department in the organization, measuring success not by return on investment but by the number of employees griping about changes to benefit plans. That passive approach to managing one of the largest expense items in every company’s income statement should have ended long ago. Health plan price transparency will be the catalyst for a long overdue change in approach.

Corporate officers have fiduciary duties to the corporation and its stockholders. In Delaware, the state in which more than one million businesses are incorporated, directors and officers of corporations owe a fiduciary duty of care to the corporation and its stockholders, which requires them “to make informed business decisions” based on “the information that is material to the decision” and “to review the information critically.”<sup>1,2,3</sup> Because health benefits costs are a material expense for every corporation that provides them, the advent of health plan price transparency implicates the fiduciary duty of care for directors and officers – especially chief financial officers – to “make informed business decisions” about health benefit costs using health plan price transparency data.

Broadly speaking, employers have two options that will meet their fiduciary duty to manage the costs of health benefits: managing (1) the provider network, and (2) the benefit design. Savvy readers will note that the health plans, benefits consultants and brokers were supposed to have been managing those tasks for the last 50 years.

Implementing the necessary change will require courage, which is sorely lacking throughout the health economy. Whether the threat of personal legal liability – which is a potential outcome for corporate officers who fail to execute their fiduciary duties – is sufficiently motivating to produce requisite courage remains to be seen.<sup>4</sup>

Practically speaking, the most important consumer-focused strategy for employers is to create meaningful incentives to influence their employees to choose providers who deliver more value for money. Some consumers respond better to the carrot, and others to the stick. Every employer should understand which approach is more likely to influence the decisions of their employees based on their psychology. Employers should also use psychographics to understand which employees are more likely to be price sensitive and, therefore, more likely to postpone or avoid necessary care.

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#### Footnotes

1. <https://dictionary.cambridge.org/us/dictionary/english/consumer>
2. Drucker, P. (2001) Management Challenges in the 21st Century. Harper Business.
3. <https://www.health.org.uk/publications/value-for-money-in-the-english-nhs-summary-of-the-evidence>
4. <https://corp.delaware.gov/aboutagency/>
5. <https://corplaw.delaware.gov/delaware-way-business-judgment/>
6. <https://www.natlawreview.com/article/delaware-court-chancery-determines-corporate-officers-owe-duty-oversight-practical>
7. [https://www.clearygotlieb.com/news-and-insights/publication-listing/delaware-extends-exculpation-from-personal-liability-to-senior-officers#\\_ftn4](https://www.clearygotlieb.com/news-and-insights/publication-listing/delaware-extends-exculpation-from-personal-liability-to-senior-officers#_ftn4)

## CHAPTER 4:

# Developing Effective Pricing Strategies



Health economy stakeholders must adapt to the radical new world of health plan price transparency in which employers can, and will, require providers and health insurers to defend their negotiated rates in every market for every product or service.



# Why Pricing Strategies Matter for Every Health Economy Stakeholder

The healthcare cost curve has been “up and to the right” since World War II, and every American needs that to change. “You get what you pay for” is axiomatic except in healthcare, where almost no one understands what they bought, much less what it was worth.

Quality initiatives and the “Triple Aim” have failed to bend the cost curve meaningfully, if at all, because quality metrics are highly intangible. And, regrettably, the reversion to the mean in healthcare quality over the past 15 years has been to values that are stunningly average, as detailed in the [Introduction](#).

Cost, on the other hand, is tangible, and health plan price transparency brings exactly that – transparency about what every provider was paid for the services the provider rendered at the location at which they rendered it.

In an era where everyone wants simple answers, health plan price transparency data provides one. Employers could bend the cost curve significantly merely by steering “away” from a handful of providers that are outliers on price or quality for a particular service line, in turn revealing the fallacy of “narrow networks” and steering “to” a limited set of providers. Whether health plans and brokers fail to understand this or have instead chosen not to share this with employers is an interesting question.

The revelations from health plan price transparency data implicate the fiduciary duties of every corporate officer of every employer to evaluate potential cost savings from improved health benefit design. In turn, the potential of health plan price transparency to dismantle longstanding business models and financial arrangements necessitates every other health economy stakeholder to consider, perhaps for the first time, their pricing strategies.

For decades, pricing strategies in the health economy have had little effect because of information asymmetry between the providers of healthcare services – physicians, clinics, surgery centers and hospitals – and health insurers. Pursuant to the Sherman Act, the Federal government has not only endorsed but also enforced this pricing information asymmetry for decades. CMS’s Transparency in Coverage initiative changes all of that.

**This chapter outlines how health plan price transparency can – and should – impact the pricing strategies of every health economy stakeholder.**

# What Health Economy Stakeholders Are Doing Wrong, and Why

Every health economy stakeholder other than employers is guilty of ignoring the wisdom of the inimitable Peter Drucker, who described “The Five Deadly Business Sins” in an essay for *The Wall Street Journal* in October 1993:<sup>1</sup>

- The first and easily the most common sin is the worship of high profit margins and of “premium pricing.”
- Closely related to this first sin is the second one: mispricing a new product by charging “what the market will bear.”
- The third deadly sin is cost-driven pricing.
- The fourth of the deadly business sins is slaughtering tomorrow’s opportunity on the altar of yesterday.
- The last of the deadly sins is feeding problems and starving opportunities<sup>1</sup>

The U.S. health economy is without peer with respect to “cost-driven pricing,” which is deeply embedded into the status quo in both practice and mindset. A recent example of this mindset is a dispute between UnitedHealthcare and Mount Sinai Hospital (NY):

“Mount Sinai associate professor of OBGYN and senior medical director of Physician Contracting and Billing at Mount Sinai Health System, [sic] Dr. Alan Adler said the issue began after Mount Sinai learned UnitedHealthcare was paying less to them than other health care providers.

“We were able to see that we’re getting paid at least 30% less than the other academic centers. We still have the same labor costs,” Adler said.

UnitedHealthcare is accusing Mount Sinai of seeking a pay hike that would significantly increase costs. In a statement, a spokesperson said:

“Mount Sinai responded by repeating its outlandish demands that included two options — a three-year contract with a 43% price hike that would increase health care costs by \$574 million — and a four-year proposal with a 58% rate increase that would increase health care costs by \$927 million. All of Mount Sinai’s proposals would make its hospitals and physicians the most expensive by a considerable margin in New York City.”<sup>3</sup>

Putting aside the fact that Mount Sinai's in-network rates from UnitedHealthcare are higher than all but two academic medical centers in the New York-Newark-Jersey City, NY-NJ core-based statistical area (CBSA) and within 5-10% of the in-network rates of the second highest paid academic medical center, it is notable, if unsurprising, that neither party mentioned **value**, only relative reimbursement in the market.

There are two fundamental problems with this approach. First, neither party is focused on their customer, just their internecine squabble. Second, as Dr. Drucker noted:

“The worship of premium pricing always creates a market for the competitor. And high profit margins do not equal maximum profits. Total profit is profit margin multiplied by turnover. Maximum profit is thus obtained by the profit margin that yields the largest total profit flow, and that is usually the profit margin that produces optimum market standing.”<sup>2</sup>

Instead of trying to charge “what the market will bear,” Mt. Sinai should analyze its quality performance against the other academic medical centers in the New York CBSA to determine whether it is providing better value for money than its competitors. To the extent that it does, Mt. Sinai should use that to their advantage with the employers in the market.

As noted in [Chapter 3](#), employers – the customer of every health economy stakeholder – have neglected their own financial interest in **managing** the cost of employee health benefits for decades. That, in turn, has catalyzed the proliferation of cost-driven pricing throughout the health economy.

The history of American business reveals many casualties of the “cost-driven pricing” mindset: textiles, steel, electronics, computer chips, etc. The existential question for every health economy stakeholder is whether they have the ability – and the courage – to adapt to “price-driven costing.”

Dr. Drucker summarizes the reason for “price-driven costing” this way:

“Customers do not see it as their job to ensure manufacturers a profit. The only sound way to price is to start out with what the market is willing to pay – and thus, it must be assumed, what the competition will charge and design to that price specification.”<sup>4</sup>

Logically, price-driven costing would force health economy stakeholders, especially healthcare providers, to adopt the principles outlined by Professor Regina Herzlinger in her 1996 book *Market-Driven Healthcare: Who Wins, Who Loses in the Transformation of America's Largest Service Industry*. Instead of trying to be all things to all people, every healthcare stakeholder should consider the long-term prospects of every product or service they offer and exit those for which they cannot generate meaningful margin from being a market leader.

Similarly, Dr. Drucker reminds that the only way to deliver value for money is this:

“Activity-based costing provides the foundation for integrating into one analysis the several procedures required to create customer value. With activity costs as a starting point, the enterprise can separate activities that add value to customers from those that do not, and eliminate the latter. The chain of value-creating activities uncovered during value analysis is the starting point for analyzing the underlying process of value creation. Process analysis seeks to: improve the features of the product or service, restructure the process while reducing costs, and maintain or improve quality.” <sup>5</sup>

Traditional health economy stakeholders have never focused on delivering value for money, and those stakeholders should view the entrance of Amazon and Walmart into primary care as a portent. Amazon and Walmart have entirely different business models than traditional health economy stakeholders, through which they have developed the scale both to reduce their unit production costs and generate massive aggregate profits despite miniscule incremental margins. Said differently, Amazon and Walmart are playing a different game, one that other health economy stakeholders don't understand and cannot execute successfully. (Editor's note: This chapter was published prior

#### Walmart Health Houston Price List

15953 Fm 529 Rd  
Houston, TX 77095  
[281-500-7191](tel:281-500-7191)

#### Service

Medical	Price
Chronic Care Management	\$100
Sick or Injury Visit	\$100
Virtual Urgent Care Visit	\$70
Annual Physical Exam (ages 18 years and older)	\$100
Annual Physical Exam (ages 6-17 years old)	\$70
Department of Transportation (DOT) Physical	\$69
Pre-Employment Physical	\$72
Sports, School, or Camp Physical (ages 6 years and older)	\$35
Pre-Operative Exam	\$100

Dental	Price
Adult New Patient Visit (Exam w/ Diagnostic X-rays & Panoramic X-rays)	\$70
Youth New Patient Visit (Exam w/ Diagnostic X-rays & Panoramic X-rays)	\$70
Urgent Dental Visit (includes 2 Diagnostic X-rays)	\$40

Behavioral Health	Price
Virtual Individual Counseling	\$72
Virtual Individual Mini-Session Counseling, Existing Patient	\$36
Virtual Couples Counseling	\$84
Virtual Family Counseling	\$84

Immunizations	Price
Influenza (Flu)	\$41.53
Influenza, High-Dose (Flu HD)	\$99.04
Tetanus, Diphtheria, Pertussis (Tdap)	\$54.84
Pneumococcal (Pneumonia)	\$319.27
Meningococcal ACYW (MenACWY)	\$187.81
Human papillomavirus (HPV)	\$344.89
Hepatitis B	\$70.70
Varicella (Chickenpox)	\$209.04

#### Medical add-on services

LABS	Price
Blood Draw	\$4
Complete Blood Count (CBC)	\$9
Comprehensive Metabolic Panel	\$15
Flu Test (Influenza A & B)	\$64
Gonorrhea/Chlamydia Test	\$70
HIV Test	\$43-\$95
Hemoglobin A1c (HbA1c)	\$25
Hepatitis C Test	\$95
Lipid Panel	\$29
Microalbumin/Creatinine	\$50
Mono Test	\$10
Pregnancy Test	\$20
Strep Test	\$28
Thyroid Stimulating Hormone (TSH)	\$19
Urinalysis	\$4-\$8
Urine Culture	\$15
Vitamin B12	\$18
Vitamin D	\$39
PROCEDURES	Price
ECG	\$28
Ear Wax Removal	\$49
Pap Smear	\$50-\$70
TB Skin Test	\$65
Wart Removal	\$111-\$130
X-ray	\$80

#### Dental add-on services

ADDITIONAL PREVENTATIVE & DIAGNOSTIC SERVICES	Price
Adult Basic Cleaning (requires diagnosis from dentist)	\$50
Fluoride Varnish	\$10
Panoramic X-ray	\$30
Sealants (per tooth)	\$35
Youth Cleaning (basic cleaning & fluoride treatment)	\$50
DENTAL TREATMENT PRICING	Price
Complex Extraction	\$225
Crowns	\$750
Dentures (Partial Denture - Complete Denture) per Arch	\$329-\$959
Fillings	\$113-\$188
In-Office Teeth Whitening (per arch)	\$150
Non-surgical gum disease therapy (deep cleaning, per quad, up to 4 quads)	\$125
Root Canals	\$600-\$850
Simple Extraction	\$135

to Walmart’s announcement that it plans to shutter its 51 clinics, citing an unsustainable business model. Given Walmart’s scale, it is unbelievable that Walmart could not operate primary care practices profitably. It is more likely that Walmart has chosen to cease its primary care operations in favor of a greater focus on lucrative specialty pharmacy services.)

Perhaps unsurprisingly, as consumer-focused enterprises, neither Amazon nor Walmart needed the Federal government to mandate price transparency.

Few health economy stakeholders can compete with Walmart’s prices, and none of them is as transparent. How long other health economy stakeholders can avoid competing on price is the most important question in the U.S. economy.

## Why Value-Based Care Is Not – and Cannot Be – a Pricing Strategy

Given the Sherman Act’s longstanding prohibition on evidence-based pricing strategies, health economy stakeholders have instead focused on risk allocation strategies, especially since the implementation of the Medicare Modernization Act of 2003. The best known risk allocation strategy is “value-based care” (VBC) even though 15 years of CMS pilot programs have demonstrated no tangible evidence that VBC is consistently effective or scalable.

The industry’s zeal for VBC is curious since it is not designed to deliver value to the ultimate payer – typically the Federal government, a state Medicaid program or an employer – because **VBC is focused on allocation of risk within a pool, not the reduction of the aggregate cost of the risk pool**. Because in VBC the “true” payer is disintermediated from the entity providing the product or service, **VBC can never be a pricing strategy**. For these reasons and more, fee-for-service reimbursement remains the dominant payment model throughout the health economy.

Effective **pricing strategy** must be grounded in an understanding of negotiated rates for healthcare services and focused on delivering **value for money** to the ultimate payer for that product or service, aka the customer. In turn, producing value for money requires **value-based competition** by health economy stakeholders.

Perhaps unsurprisingly, several concepts promoted by stakeholders and consultants in the health economy are antithetical to creating value for money. The value of the narrow provider networks “created” by health insurers is generally limited to the network discount applicable to that narrow network, which incentivizes providers to raise prices simply to maintain current revenue levels, which incentivizes health insurers to demand a higher discount, a continuous game of Three-card Monte in which the employer is the mark.

Likewise, many “centers of excellence” are not, and obviously no single hospital or health system is the “best” in every single service line. It is self-evident that a “narrow network” designed around a single health system does not create value for money but instead inevitably sacrifices some aspect of quality at the altar of price. Similarly, any narrow network designed around inscrutable “quality outcomes” is incapable of creating the most value for money. Nothing, of course, is more antithetical to value for money than the clandestine rebates received by multiple health economy stakeholders from pharmacy benefit managers, except for cost-plus business models, the current “innovation” darling in Washington, D.C.

## Why Health Plan Price Transparency Will Catalyze Novel Pricing Strategies

While CMS’s Transparency in Coverage initiative was intended to help consumers make more informed, price-conscious decisions, health plan price transparency is arguably more meaningful to employers, revealing the vast intra-market disparity in rates for identical health care services and providing pricing leverage they have never known they had. Price transparency leads to discovery of a “market price,” which leads to reduction in price spreads, forcing once-dominant business models and brands to adapt or go bankrupt.

The American Hospital Association was forced to use the Danish concrete case<sup>6</sup> as the foundation of its opposition to price transparency because there are not any good examples in U.S. history of universal price increases following price transparency. In fact, the opposite usually happens. The deregulation of the airline industry paved the way for discount airlines like Southwest Airlines and businesses like Priceline and Kayak. Likewise, the development of the Internet browser allowed Kelley Blue Book to become the most visited automotive site on the Internet in 1995, radically changing the nature of automobile sales. More recently, the advent of trading stocks in decimals paved the way for E-Trade and Robinhood.

Price transparency has bipartisan support in Washington, D.C., and, in March 2024, several bills in Congress seek to codify and expand upon CMS’s Transparency in Coverage initiative. Providers that ignore the implications of price transparency are either naïve or foolish.

To date, most stakeholders’ curiosity about price transparency has been disappointingly sophomoric, focused on what other stakeholders are paying or getting paid. In fairness, the punishment for Sherman Act violations – a fine of up to \$1 million and a sentence of up to 10 years in Federal prison – has historically been a strong deterrent to price discovery. Health economy stakeholders must adapt to the radical new world of health plan price transparency in which employers can, and will, require providers and health insurers to defend their negotiated rates in every market for every product or service.

# The Questions Every Stakeholder Should Answer

To develop effective pricing strategies, every health economy stakeholder must be able to answer:

How do the stakeholder's in-network rates compare to its competitors **at the service-line level within each market?**

Are the stakeholder's rates a **market outlier?**

## For providers:

- Are there service lines where the stakeholder provides above-average quality at a rate below the market median? Are there service lines where the stakeholder provides below-average quality at a rate above the market median?
- Are there service lines for which the stakeholder has comparatively high volumes and comparatively low rates? Are there service lines for which the stakeholder has comparatively low volumes and comparatively high rates?

## For payers:

- Which providers are being paid above-average rates by the stakeholder for below-average quality?
- Which providers are being paid below-average rates by the stakeholder for above-average quality?
- Are the stakeholder's in-network rates correlated with the market share of providers in the market?
- What is the **median market rate** for the products and services (service lines, insurance products and services, medical devices, therapeutics) that the stakeholder offers? How large is the disparity in the rates that the stakeholder receives as compared to its competitors in the same market? What is the justification for the disparity, and is it sustainable?
- Can the stakeholder **generate profit** at that median market rate?
- How would a **regression to the mean** price in the market for the products and services (service lines, insurance products and services, medical devices, therapeutics) affect the stakeholder's net revenue and profitability?
- How many products and services that the stakeholder offers **reduce the total cost of care?**
- How many products and services that the stakeholder offers are **substitute goods** for the products and services offered by its competitors? Are those products more expensive or less expensive than the substitute goods?
- For products and services whose value depends more on **price and convenience** than quality, how does psychographic data inform consumer preference for the products and services offered by the stakeholder?



- What does the **current and future policy and payment landscape** signal for the growth opportunities and constraints for the product and services (service lines, insurance products and services, medical devices, therapeutics) offered by the stakeholder?

## **Pricing Strategies – A Primer on Value for Money**

Value for money in healthcare is a foreign concept for stakeholders in the U.S. health economy, in part because it originates with England's National Health Service (NHS). As one might expect of the English, the NHS has a constitution, with "seven key principles [that] guide the NHS in all it does."<sup>1</sup> The third, sixth and seventh principles of the NHS Constitution are as follows:

### **3. The NHS aspires to the highest standards of excellence and professionalism**

It provides high quality care that is safe, effective and focused on patient experience; in the people it employs, and in the support, education, training and development they receive; in the leadership and management of its organisations; and through its commitment to innovation and to the promotion, conduct and use of research to improve the current and future health and care of the population. Respect, dignity, compassion and care should be at the core of how patients and staff are treated not only because that is the right thing to do but because patient safety, experience and outcomes are all improved when staff are valued, empowered and supported.

### **6. The NHS is committed to providing best value for taxpayers' money**

It is committed to providing the most effective, fair and sustainable use of finite resources. Public funds for healthcare will be devoted solely to the benefit of the people that the NHS serves.

### **7. The NHS is accountable to the public, communities and patients that it serves**

The NHS is a national service funded through national taxation, and it is the government which sets the framework for the NHS and which is accountable to Parliament for its operation. However, most decisions in the NHS, especially those about the treatment of individuals and the detailed organisation of services, are rightly taken by the local NHS and by patients with their clinicians. The system of responsibility and accountability for taking decisions in the NHS should be transparent and clear to the public, patients and staff. The government will ensure that there is always a clear and up-to-date statement of NHS accountability for this purpose.



While the NHS's performance against its principles and values is the subject of debate, focusing on value for money is a cornerstone for all NHS stakeholders.<sup>2,3,4</sup> The NHS highlights the inherent tension between the quality and cost of healthcare with its commitment "to providing the most effective, fair and sustainable use of finite resources." To accomplish this, the National Institute for Health and Care Excellence (NICE) was established in 1999 to "evaluate new health technologies for NHS use, considering clinical effectiveness and value for money."<sup>5</sup>

Unlike the British, Americans pretend that healthcare resources are infinite. In reality, the U.S. health economy desperately needs each of its stakeholders to adopt this mission:

***"We are committed to providing the best value for employers' and taxpayers' money."***

While that is unlikely to happen, health economy stakeholders who deliver value for money more consistently than their competitors – whether providers or health insurers or life sciences firms – will win healthcare's negative sum game.

Basic economic principles, as well as logic, suggest that every stakeholder must be able to deliver products or services profitably at, or even slightly below, the market range of payment for that product or service or else exit that market. Professor Herzlinger wrote about this in 1997:

***"The American health care industry is filled with opportunities to establish focused factories, ranging from those that perform only one procedure, like cataract surgery, to those that provide the full panoply of care for a disease like cancer. To fulfill the promise of focused factories, however, the industry will have to resize – that is, replace its unfocused multipurpose providers and redundant, underutilized technology with muscular focused factories, loaded with cost-saving, quality-enhancing medical technology."***<sup>6</sup>

Dr. Drucker cited the example of DuPont:

***"By contrast, DuPont has remained the world's largest producer of synthetic fibers because, in the mid-1940s, it offered its new and patented nylon on the world market for the price at which it would have to be sold five years hence to maintain itself against competition. This was some two-fifths lower than the price DuPont could then have gotten from the manufacturers of women's hosiery and underwear."***

***DuPont's move delayed competition by five or six years. But it also immediately created a market for nylon that nobody at the company had even thought about (for example, in automobile tires), and this market soon became both bigger and more profitable than the women's wear market could ever have been. This strategy thus produced a much larger total profit for DuPont than charging what the traffic would bear could have done. And DuPont kept the markets when the competitors did appear, after five or six years."***<sup>7</sup>

As noted in [Chapter 3](#), the most important elements of value in healthcare services are cost, quality, safety and convenience, but the importance of quality as an element of value is highly variable depending on the type of care. As a result, value for money in healthcare is a dynamic concept that depends on the type of product or service being delivered, the complexity of the product or service and the relative and comparative price of that product or service, as well as the relative and comparative price of substitute goods.

Health economy stakeholders can deliver value for money to the customer – the employer – in one of three ways:

- 1. Better than average quality at a price at or near the median market rate
- 2. Average quality at a price that is below the median market rate
- 3. Better than average quality at a price that is below the median market rate

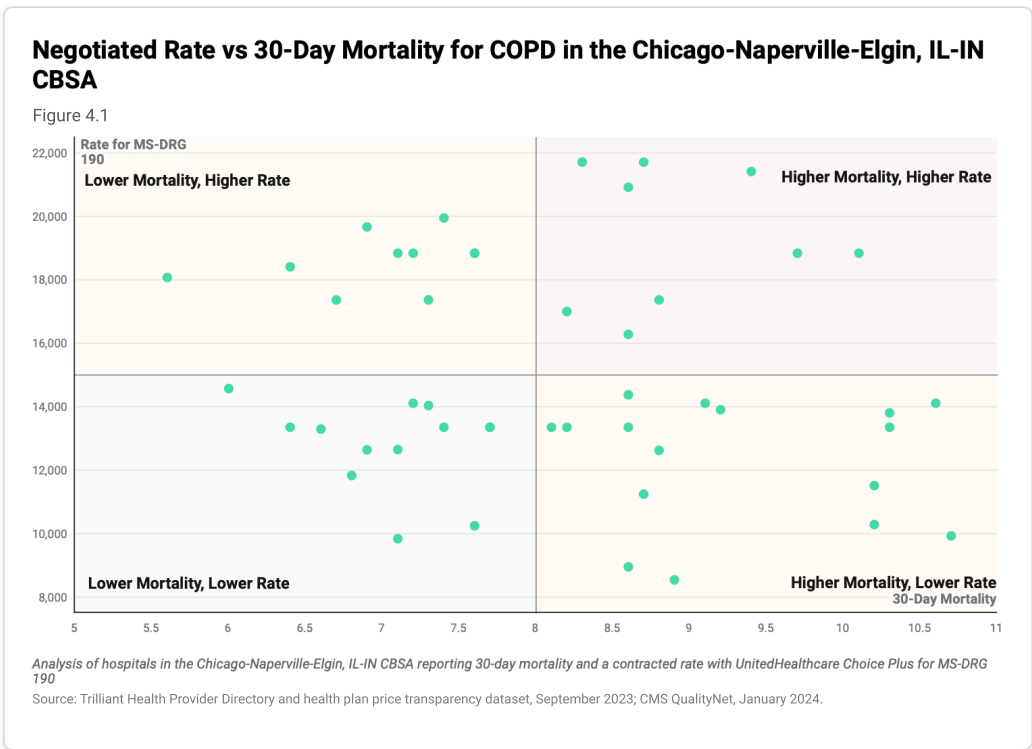
**There is no value for money proposition in offering worse than average quality at any rate, especially one that is higher than the median market rate.**

## Use Case: Identifying Providers Delivering Value for Money

Value in the health economy exists at the intersection of quality outcomes and negotiated rate. William Farr famously stated that “death is a fact; all else is inference.” As such, mortality is the ultimate measure of quality, making it the most important quality metric in determining value.

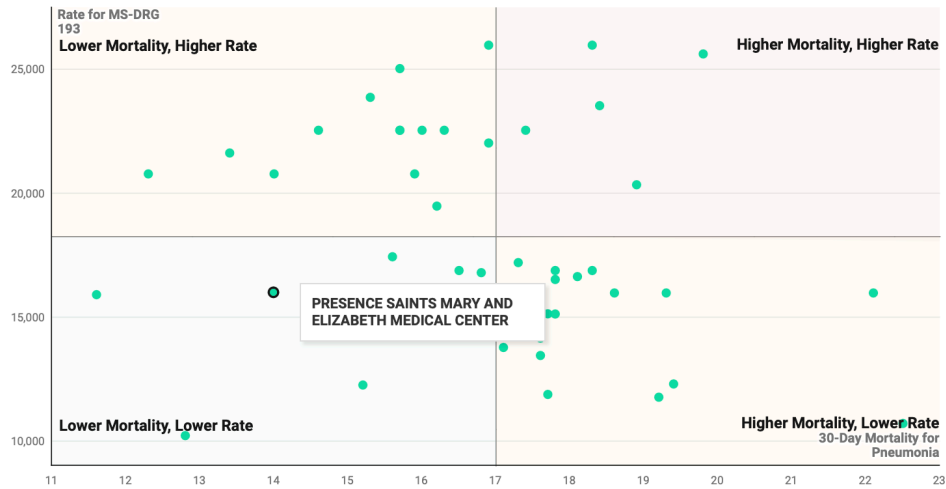
As detailed in the [Introduction](#), there is no observed correlation between price and quality in healthcare services at the national level. In the following examples, using a combination of provider directory, CMS QualityNet and health plan price transparency data, hospitals in the Chicago–Naperville–Elgin, IL-IN CBSA are benchmarked comparing in-network negotiated rates with 30-day post-

discharge mortality for MS-DRG 190 – COPD, MS-DRG 193 – Pneumonia, MS-DRG 280 – Acute Myocardial Infarction and MS-DRG 291 – Heart Failure, respectively.



### Negotiated Rate vs 30-Day Mortality for Pneumonia in the Chicago-Naperville-Elgin, IL-IN CBSA

Figure 4.2

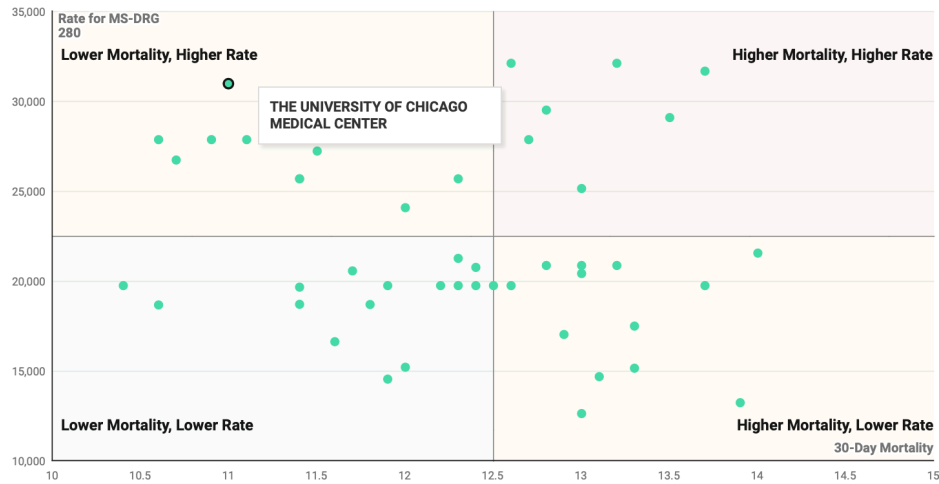


Analysis of hospitals in the Chicago-Naperville-Elgin, IL-IN CBSA reporting 30-day mortality and a contracted rate with UnitedHealthcare Choice Plus for MS-DRG 193

Source: Trilliant Health Provider Directory and health plan price transparency dataset, September 2023; CMS QualityNet, January 2024.

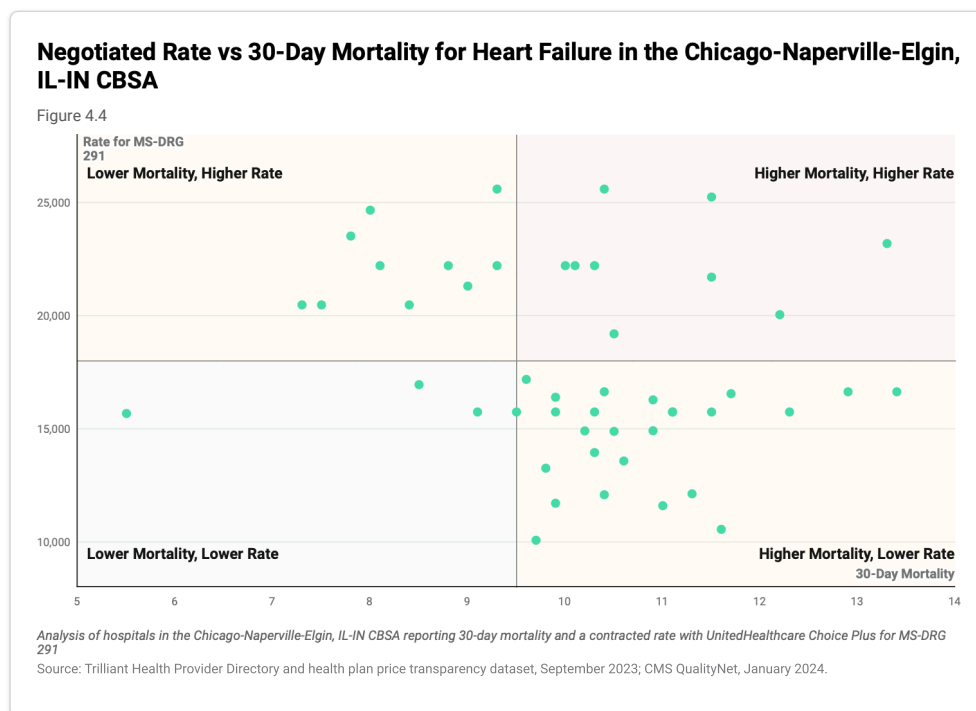
### Negotiated Rate vs 30-Day Mortality for Acute Myocardial Infarction in the Chicago-Naperville-Elgin, IL-IN CBSA

Figure 4.3



Analysis of hospitals in the Chicago-Naperville-Elgin, IL-IN CBSA reporting 30-day mortality and a contracted rate with UnitedHealthcare Choice Plus for MS-DRG 280

Source: Trilliant Health Provider Directory and health plan price transparency dataset, September 2023; CMS QualityNet, January 2024.



## Steps to Identify Providers Delivering Value for Money

### 1. Curate Internal Data

Curate internal financial performance data, including revenue, profitability and cost structures. Pull utilization data to demonstrate the volume and types of services consumed by the target patient population. Highlight any areas of high demand or specialized services.

### 2. Curate External Market Data

Collect comprehensive data on reimbursement rates, including negotiated rates by various health insurers to different healthcare providers. Normalize the rate data to align with internal service line definitions and classifications, including mapping external billing codes to internal service line categories. Leverage external data to identify specific metrics that are relevant indicators of healthcare quality. These should include patient outcomes (e.g., mortality rates, complication rates), patient satisfaction scores and process measures (e.g., adherence to clinical guidelines).

### 3. Data Cleaning and Preparation

Clean and prepare the market data by checking for missing values, outliers and inconsistencies. Leverage market utilization to identify and remove negotiated rates that are clinically implausible. Assign the provider organization name using the billing NPI and/or EIN. Group individual organizations based on system ownership and isolate target care settings for detailed reporting around inpatient and outpatient services. Transform the raw data into a format suitable for statistical analysis.

#### **4. Benchmarking**

Leverage external market data to better understand competitive contract structure and negotiated rates at the billing code level. Compare negotiated rates and quality metrics to industry benchmarks and to other providers and health insurers in the target market. Establish a baseline for market performance and highlight cost variations among different providers and health insurers.

#### **5. Correlation Analysis**

Analyze the correlation between negotiated rates and quality metrics. Use statistical methods to identify any significant correlations between higher reimbursement and better quality of care. Consider any potential confounding variables that may influence the relationship between negotiated rates and quality metrics. These could include patient demographics, case mix, severity of illness or other factors that may affect both reimbursement and quality of care. Control for these variables by including them as covariates in the analysis or conducting subgroup analyses.

#### **6. Communicate Findings**

Present findings in a clear and concise manner, using tables, charts, and graphs to illustrate the relationship between negotiated rates and quality metrics. Clearly communicate the implications of the analysis for the negotiation process, emphasizing any statistically significant correlations and their potential impact on healthcare delivery.

#### **7. Monitor and Adjust**

Continuously monitor market trends, quality metrics and policies to stay informed and adjust strategy as needed. Regularly review and update the analysis to maintain a strong position over time.

# Pricing Strategies for Employers

The **health plan price transparency** component of CMS's Transparency in Coverage initiative reveals an existing market rate for both inpatient and ambulatory healthcare services. However, as detailed in the [Introduction](#), negotiated rates for the same plan for the same service in the same market are widely divergent, but there is no observed correlation between price and quality in healthcare services at the national level. As a result, ensuring that employees make informed choices about value is the only way for employers to receive value for money for their health care expenditures and, in turn, the only way to "bend the cost curve" in the health economy.

How can employers receive value for money from their health benefits expense?

First, every employer should ask their health insurance broker these questions:

- What is the amount of the commission paid to the broker by the carrier?
- Why is there such a wide range of quality outcomes, especially mortality, among in-network providers?
- Why is there such a wide range of rates among in-network providers offering equivalent quality for identical services?
- Why do some in-network providers receive above-average rates for below-average quality?
- Why do some in-network providers receive below-average rates for above-average quality?

Second, every employer should analyze in-network providers based on value – the intersection of quality and rate. In almost every case, the analysis will reveal that employers could bend the cost curve significantly merely by steering "away" from a handful of providers who are outliers on price or quality for a particular service line, in turn revealing the fallacy of "narrow networks" and steering "to" a limited set of providers.

Third, every employer must understand that generating value for money requires value-based competition by providers across every service line, meaning that **open networks and any willing provider statutes are essential**. As a result, employers should design benefits at the service-line level in every market that allow employees the freedom to choose any provider they want while tiering benefits to incentivize higher-value care and disincentivize lower-value care.

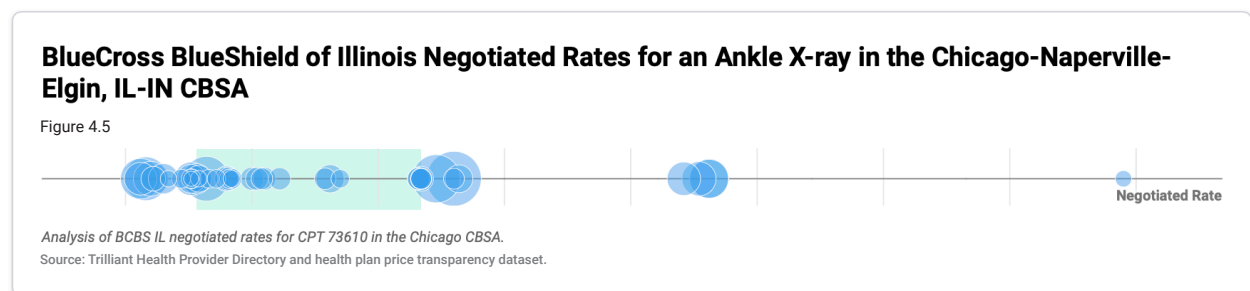
## Use Case: Competing on Price and Convenience for Low-Acuity Care

Health economy stakeholders can deliver value for money to the customer – the employer – in one of three ways:

1. Better than average quality at a price at or near the median market rate
2. Average quality at a price that is below the median market rate
3. Better than average quality at a price that is below the median market rate

The lower the acuity of care, the more that value depends on price and convenience.

In this example, using a combination of provider directory, utilization and health plan price transparency data, there is a 1,100% variance in rate in the Chicago–Naperville–Elgin, IL–IN CBSA for ankle X-rays:



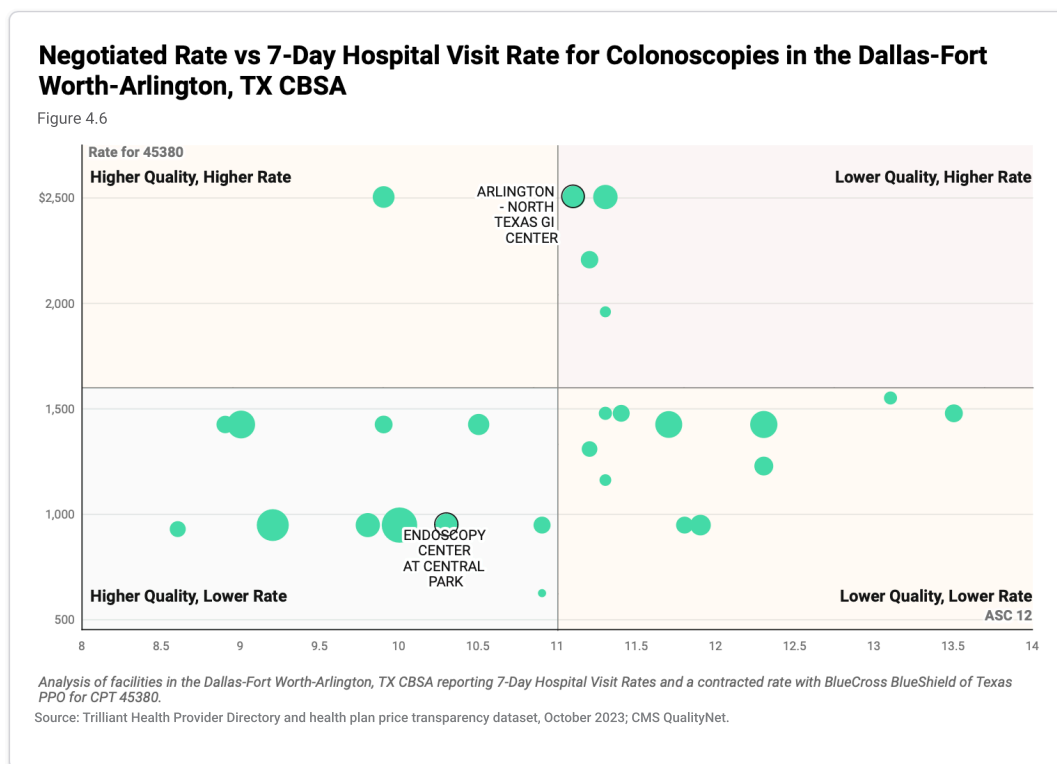
## Use Case: Directing Employees Away from Lower-Value Care Settings to Higher-Value Care Settings

Health economy stakeholders can deliver value for money to the customer – the employer – in one of three ways:

1. Better than average quality at a price at or near the median market rate
2. Average quality at a price that is below the median market rate
3. Better than average quality at a price that is below the median market rate

There is no **value for money** proposition in offering worse than average quality at any rate, especially one that is higher than the median market rate.

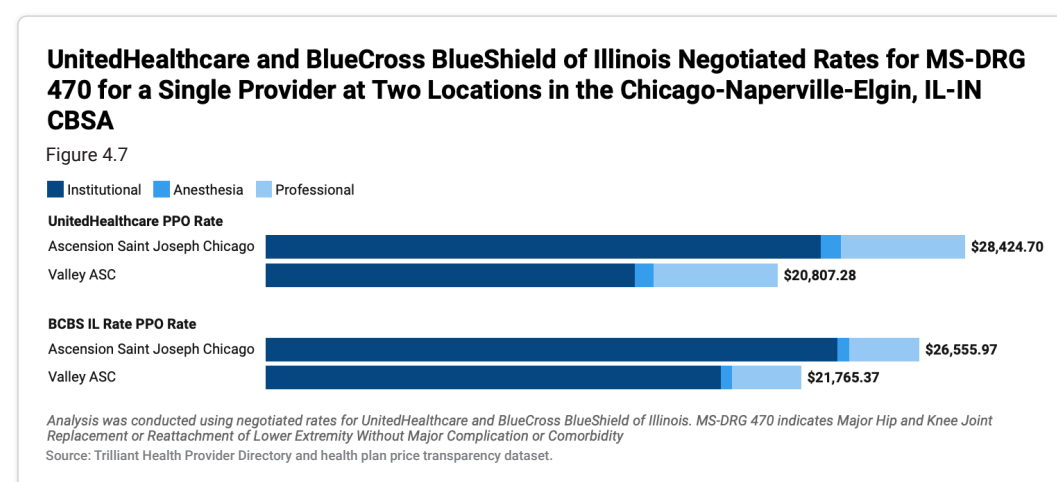
In this example, using a combination of provider directory, CMS QualityNet and health plan price transparency data, analyzing the relative value delivered by facilities performing outpatient diagnostic colonoscopies in the Dallas–Fort Worth–Arlington, TX CBSA suggests that employers could generate value for money by disincentivizing employees from utilizing the Arlington – North Texas GI Center and incentivizing them to utilize the Endoscopy Center at Central Park.



## Use Case: Comparing Negotiated Rates Across Settings of Care and Health Insurers

The cost of an identical service performed by the same physician can vary significantly based on the site of care and the patient’s health insurer.

In this example, using a combination of provider directory, claims data and health plan price transparency data, the difference in total cost of care for a knee replacement performed by the same physician varies by more than 35% depending on the site of care and the health insurer.





## Use Case: Choosing a Health Plan on Value

As detailed in the [Introduction](#), negotiated rates for the same plan for the same service in the same market are widely divergent, but there is no observed correlation between price and quality in healthcare services at the national level.

In this example, using provider directory, utilization, CMS QualityNet and health plan price transparency data, for joint replacements without major complications or comorbidities – MS-DRG 470 – there are 19 hospitals in the Chicago-Naperville-Elgin, IL-IN CBSA that are in-network with UnitedHealthcare performing the procedure at or below the market mean negotiated rate of \$24,362, of which 15 have expected or better-than-expected quality outcomes. Similarly, for joint replacements with major complications or comorbidities – MS-DRG 469 – there are 20 hospitals in the Chicago-Naperville-Elgin, IL-IN CBSA that are in-network with BCBS IL performing the procedure at or below the market mean negotiated rate of \$41,108, of which 17 have expected or better-than-expected quality outcomes.

### UnitedHealthcare vs. BlueCross BlueShield of Illinois In-Network Rates for MS-DRG 470 (Hip & Knee Replacement) in the Chicago-Naperville-Elgin, IL-IN CBSA

Figure 4.8



Source: Trilliant Health's Provider Directory, national all-payer claims database and health plan price transparency dataset; Analysis of Hospital Readmissions Reduction Program (HRRP) data.

# Steps to Direct Employees Away from Lower-Value Care Settings to Higher-Value Care Settings

## 1. Employee Utilization Analysis

Gather internal data on healthcare utilization patterns among employees, including information on the types of services utilized, frequency of visits, costs incurred and outcomes. Analyze historical claims data to identify trends, high-cost procedures, frequent conditions and common healthcare needs among the employee population.

## 2. Analyze Facility and Provider Quality

Utilize external market data to assess performance at the facility and individual provider level based on quality metrics such as patient mortality, readmission rates, infection rates, patient satisfaction scores and adherence to clinical guidelines. Identify facilities and providers that consistently deliver higher-value care at the service line and procedural level.

## 3. Evaluate Value for Money

Leverage external rate data to assess settings of care based on value for money, comparing facility and provider quality to cost metrics including negotiated rate per procedure, average cost per episode of care and overall cost.

## 4. Analyze Employee Preferences

Conduct a root cause analysis to understand factors contributing to the utilization of lower-value settings of care. Evaluate how demographic and psychographic profiles impact the preferences and behaviors of employees and identify segments that are at high risk of seeking care at lower-value facilities. Based on the findings, develop strategic initiatives to educate employees on the benefits of avoiding lower-value care settings and choosing higher-value care settings, to improve care navigation and to ensure convenient access to higher-value facilities. Seek opportunities to collaborate with health plans, third-party administrators and other healthcare partners to leverage their expertise and resources.

## 5. Optimize Benefits Design

Assess how benefits can be designed to steer employees away from lower-value facilities in each market. Work with third-party administrators and health plans to implement tiered benefits to incentivize higher-value care and disincentivize lower-value care.

## 6. Implement Care Navigation Efforts

Consider how employees might be equipped with information about cost and quality in real time as they make decisions about their healthcare. Evaluate online opportunities, such as scheduling platforms and employee portals, to make information more accessible.

## 7. Network Monitoring and Optimization

Implement systems for ongoing monitoring of provider and facility performance, including quality metrics and cost-effectiveness. Regularly review claims data and feedback from employees to identify areas for improvement and opportunities to optimize the network.

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## Footnotes

1. [15 years of CMS pilot programs](#)
2. <https://www.wsj.com/articles/SB113208353287697881>
3. <https://ny1.com/nyc/all-boroughs/health/2024/03/02/some-unitedhealthcare-members-lose-mount-sinai-coverage>
4. Drucker, P, Management Challenges for the 21st Century, quoted from The Daily Drucker, page 207
5. <https://www.walmarthealth.com/locations/tx/houston/1040/pricelist>
6. [https://sites.duke.edu/collardwexler/files/2015/01/danish\\_concrete\\_cartel.pdf](https://sites.duke.edu/collardwexler/files/2015/01/danish_concrete_cartel.pdf)
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11. <https://www.nice.org.uk/about/what-we-do>
12. Herzlinger, Regina. Resizing – The “Trade Fat For Muscle Diet.” Market-Driven Health Care, Addison-Wesley Publishing Company, Inc., 1997, page 158.
13. <https://www.wsj.com/articles/SB113208353287697881>

## CHAPTER 5: Capital Allocation



As befits the largest sector of the largest economy in the world, the U.S. healthcare system consumes capital voraciously. Because different capital allocations generate different levels of return, it is essential for health economy stakeholders to invest in strategies that are most likely to generate the highest economic profit.

# Why Capital Allocation Matters for Every Health Economy Stakeholder

As befits the largest sector of the largest economy in the world, the U.S. healthcare system consumes capital voraciously. The phrase “capital allocation” is frequently used as a synonym for “capital expenditures,” i.e., investments in fixed assets such as hospitals, surgery centers, imaging centers and medical office buildings. A broader definition that applies to all health economy stakeholders is this:

Capital allocation means distributing and investing a company’s financial resources in ways that will increase its efficiency and maximize its profits.<sup>1</sup>

As such, capital allocation activities may include research and development (R&D) for drug discovery, new market entry and development, mergers and acquisitions (M&A), capital equipment, product development, etc. For providers, personnel costs and maintenance for property, plant and equipment (PP&E) are also significant considerations in capital allocation decisions. Even the largest and most profitable health economy stakeholders lack sufficient capital to invest in every compelling opportunity.

As noted in [Chapter 4](#), Peter Drucker emphasized this fact:

And high profit margins do not equal maximum profits. Total profit is profit margin multiplied by turnover. Maximum profit is thus obtained by the profit margin that yields the largest total profit flow, and that is usually the profit margin that produces optimum market standing.”<sup>2</sup>

Similarly, high **rates** of return on invested capital do not necessarily represent the **maximum** return on invested capital, which is measured by economic value added (EVA), also called economic profit.<sup>3</sup> EVA measures the profitability – or lack thereof – of capital allocation by quantifying the profit generated from a project in comparison to the weighted average cost of capital of that project.<sup>3</sup>

**This chapter discusses how essential effective capital allocation is for every stakeholder in the rapidly evolving U.S. health economy.**

# What Health Economy Stakeholders Are Doing Wrong, and Why

The concept of “return on invested capital” implicitly recognizes that the cost of capital requires a return and that anyone allocating capital resources – whether classified as an operating or capital expense – should focus on the value received in return, whether a new therapy, diagnostic tool, medical device, surgical suite, emergency department, ambulatory complex or hospital. Because different capital allocations generate different levels of return, it is essential for health economy stakeholders to invest in strategies that are most likely to generate the highest EVA.

As noted in [Chapter 1](#), no stakeholder can compete effectively without understanding its competitors and their market share – who they are, where they operate and how much business they have. It is therefore problematic that every health economy stakeholder fundamentally misunderstands market share since no stakeholder knows how many competitors exist. It is seemingly self-evident that forecasting a return on invested capital is impossible without first understanding the competitive landscape for that project, whether a new product, service, building or piece of capital equipment.

Moreover, capital allocation is effectively binary, representing an investment either to maintain the status quo or to grow. Although each of these choices reflects a foundational belief in future demand within a market, most stakeholders have for decades relied on a national demand forecast model to allocate capital locally. Shockingly, some stakeholders don’t rely on any demand forecast model.

Beyond general principles, health economy stakeholders must evaluate their capital allocation strategies in light of two emerging trends in the health economy that are existential threats to existing business models. First, while much has been written about the emergence of retail-based healthcare business models, particularly by Amazon and Walmart, little has been written about the disintermediating effect of those business models on traditional healthcare providers. Second, health economy stakeholders are generally unaware of the emerging existential threat to traditional healthcare providers whose financial success depends upon diagnostic and interventional procedures from pharmaceutical firms offering therapeutic treatments that are effectively substitute goods.

## Current and Future Scenarios for Select Surgical Procedures with Less Invasive Therapeutic Alternatives

Figure 5.1

PRESENT <i>Traditional Care Delivery Standard</i>				FUTURE <i>Potential New Standard</i>		
PROCEDURE OR INTERVENTION	APPROXIMATE ANNUAL U.S. VOLUME	AVERAGE INPATIENT MEDICARE RATE	MINIMUM ANNUAL PROVIDER REVENUE		LESS INVASIVE INTERVENTION	POTENTIAL PROVIDER REVENUE LOSS
Bariatric Surgery	250K	\$10,667	\$2.67B	Replace with medication management ➤➤➤	GLP-1 agonists	5% -\$133.33M
						10% -\$266.68M
						20% -\$533.35M
Cardiac Catheterization	1M	\$40,737	\$40.74B	Replace with alternate screening test ➤➤➤	PCSK9/SGLT2 inhibitors	5% -\$2.04B
						10% -\$4.07B
						20% -\$8.15B
Screening Colonoscopy	15M	\$11,722	\$175.83B		Fecal occult blood tests, flexible sigmoidoscopy, fecal DNA testing	5% -\$8.79B
						10% -\$17.58B
						20% -\$35.17B

The approximate annual procedure volumes are based upon national projections. These scenarios represent the potential outcomes of changes in volume due to alternate treatments becoming available or recommended practice patterns changing. Replacement rate scenarios are merely illustrative and could be higher or lower depending on the specific procedure. GLP-1 denotes glucagon-like peptide-1 receptor.

Source: Trilliant Health national all-payer claims database; Centers for Medicare and Medicaid Services Inpatient Prospective Payment System.

For decades, health economy stakeholders have allocated capital with the “Field of Dreams” mindset – “if you build it, they will come” – because of an unsophisticated reliance on demographic trends, national demand forecast models and anecdote. However, just as demography is not necessarily destiny, burden of disease is not necessarily correlated with demand for healthcare products and services. And, in healthcare, past is not prologue. In the future, the market share – and in some cases, survival – of every health economy stakeholder will be determined primarily by its return on invested capital.

# The Questions Every Health Economy Stakeholder Should Answer

The formula to calculate a return on invested capital explicitly recognizes that generating a return on invested capital takes time. As a result, before even considering the allocation of capital in a facility or medical device or pharmaceutical agent or value-based care program, stakeholders should have answered the applicable questions set forth previously in Chapters 1–4.

Having suitably addressed issues of competitive landscape and future demand, stakeholders should answer the following questions:

- What is the stakeholder's average annual capital budget for the past five years? Does the stakeholder anticipate that amount will increase, decrease or remain the same over the next five years?
- How much of the stakeholder's average annual capital budget should be allocated to **maintenance of existing capital infrastructure** or ongoing research and development projects?
- Of the potential capital investment projects:
  - What is the **projected EVA** of each project?
  - What is the **weighted average cost** of capital of each project?
  - What is the **actual EVA of similar projects** in which the stakeholder has previously invested?
  - Does the stakeholder have a **competitive advantage** in the markets in which the capital projects are planned? If so, is that competitive advantage sustainable?
  - Do competitors offer **substitute products or services** for the stakeholder's proposed capital project?
  - What is the projected EVA of all potential projects in the stakeholder's **most profitable markets** versus their least profitable markets?
  - Which projects will enable the stakeholder to increase its market share? Which projects are necessary for the stakeholder to maintain its **market share**?
  - Does the stakeholder have a **long-term commitment** to the market in which a capital project is proposed?



# Capital Allocation Strategies for Healthcare Providers

Every healthcare provider operates in an environment with high capital costs, labor costs and regulatory burden. As a general principle, the capital costs for a provider are positively correlated with the acuity of the services that a provider delivers. The higher the acuity of services, the higher the cost of PP&E associated with delivering the higher acuity services and – importantly – the higher the regulatory burden for licensure and accreditation.

Another general principle is that government regulation increases continuously, and there is no contrary example in healthcare since the establishment of Medicare in 1965. Yet another general principle is that inflation, over the arc of decades, increases

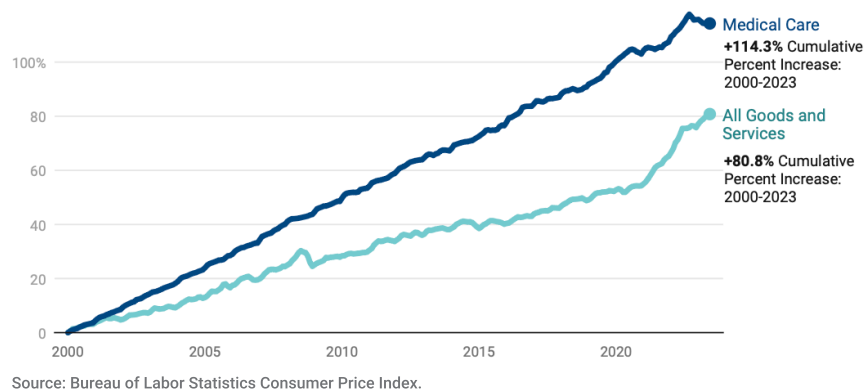
continuously, if occasionally imperceptibly, and, again, there is no contrary example in healthcare since the establishment of Medicare in 1965. In fact, prices for medical care have more than doubled since 2000.

Against the backdrop of continuous increases in the cost of labor, supplies, capital equipment, capital maintenance, construction and regulatory compliance, healthcare providers must face the sobering reality that overall demand for healthcare **services** – as opposed to **pharmaceuticals** – is relatively flat, while the percentage of Americans with commercial health insurance is declining.

The result is that return on invested capital becomes more critical every year, every month and every day. Before considering an investment of capital in a service line, piece of capital equipment, value-based care program, facility, joint venture or acquisition, provider stakeholders should have answered the applicable questions set forth previously in Chapters 1–4. Having suitably addressed issues of competitive landscape and future demand, provider stakeholders should answer the following questions:

## Cumulative Percent Change in Consumer Price Index for All Urban Consumers for Medical Care vs. All Goods and Services, 2000 - 2023

Figure 5.2

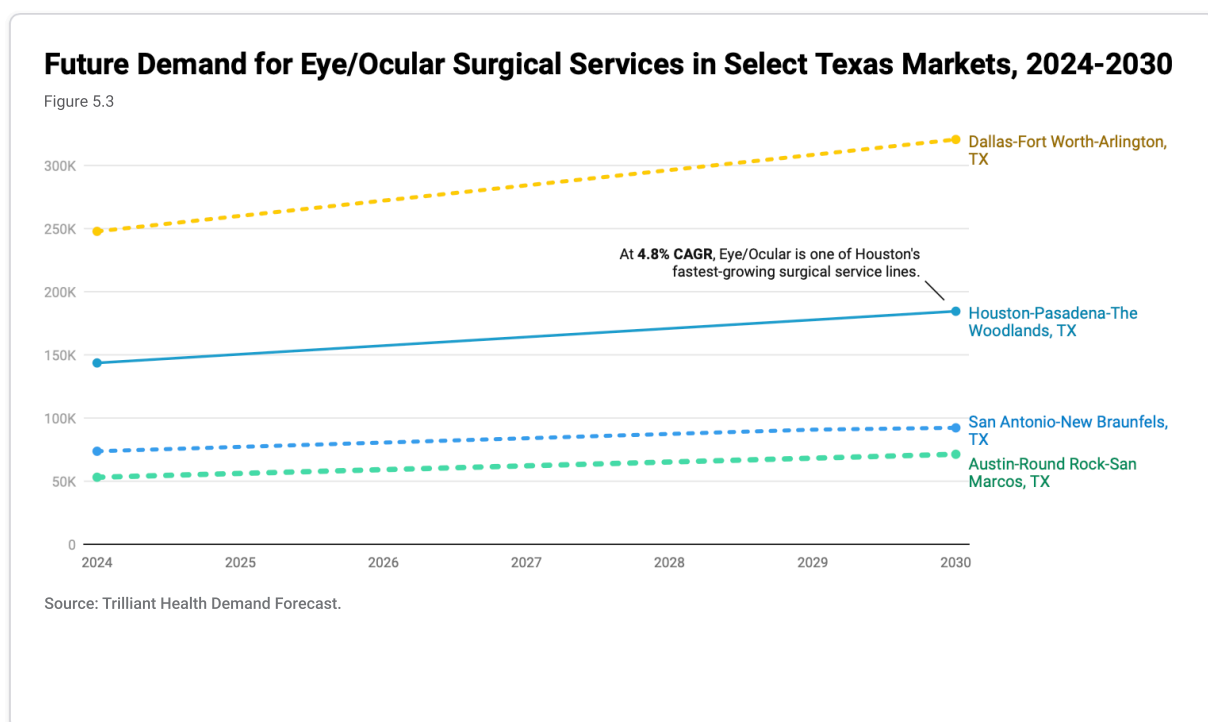


Source: Bureau of Labor Statistics Consumer Price Index.

- In **how many markets** does the stakeholder compete? What is the **total addressable market (TAM) of each market**? What is the **stakeholder's market share in each market**?
- What is the **comparative quality** of the markets in which the stakeholder competes?
- What is the relative strength of the stakeholder's **competitors across markets**? Are those competitors national, regional or local?
- What are the general and specific **growth trends** within each market? Are competitors entering or leaving that market?
- In which markets does the stakeholder have the **most favorable combination** of future demand, reimbursement rates and market share?
- What is the allocation of proposed capital projects relative to the quality of the markets to which the capital would be allocated?
- Having answered all these questions, which markets and service lines offer the **best opportunity** for market share expansion? Which markets or service lines should be **deemphasized or abandoned**?

## Use Case: Investing in De Novo Growth: Eye and Ocular Services

The most important elements in de novo growth opportunities are markets with a significant unmet clinical need and favorable trends in future demand and reimbursement.

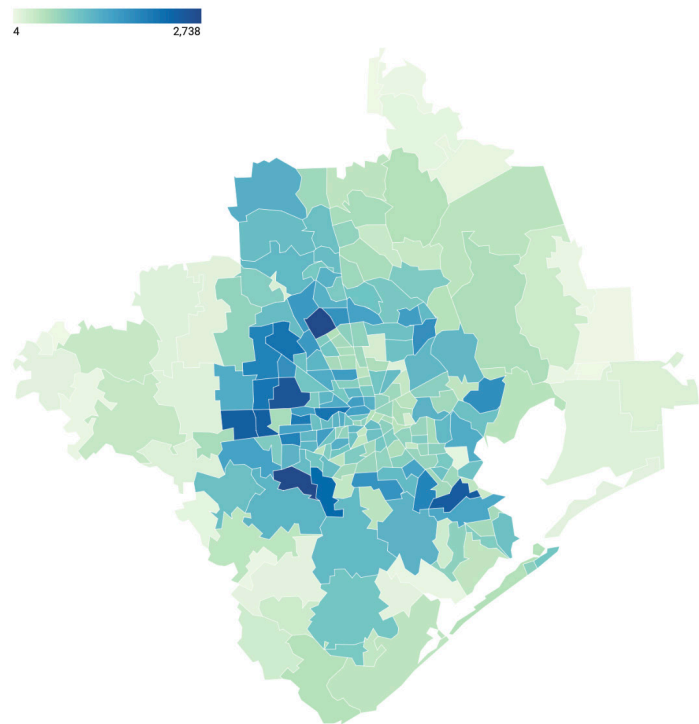


In this example, using utilization and demand forecast data, eye and ocular is one of the fastest-growing surgical service lines in the Houston-Pasadena-The Woodlands, TX core-based statistical area (CBSA) (4.8% compound annual growth rate (CAGR)).

In the Houston–Pasadena–The Woodlands, TX CBSA, there are 41 ZIP Codes with above-market growth and a projected surgical demand that will exceed 1,000 cases in 2030. ZIP Codes with high patient demand and limited access should be viewed as “tier one” expansion opportunities.

### ASC Expansion Opportunity Map for Eye and Ocular in the Houston-Pasadena-The Woodlands, TX CBSA

Figure 5.4



Demand is projected for 2030.

Source: Trilliant Health Provider Directory, Demand Forecast and national all-payer claims database.

### Opportunity Summary of Top 20 ZIP Codes in the Houston-Pasadena-The Woodlands, TX CBSA for Eye and Ocular Services

Figure 5.5

Patient ZIP Code	Projected 2030 Cases	CAGR	Top Destination for Eye/Ocular Procedures
77379	2,738	5.5%	Northwest Surgery Center Red Oak
77479	2,724	7.3%	Sugar Land Surgery Center
77084	2,558	5.2%	HEA Surgery Center
77494	2,433	6.2%	Baylor St Lukes Medical Center
77459	2,253	7.5%	Sugar Land Surgery Center
77429	2,124	4.9%	HCA Houston Healthcare North Cypress
77083	1,911	5.0%	Baylor St Lukes Medical Center
77433	1,890	5.3%	Baylor St Lukes Medical Center
77546	1,869	5.1%	University of Texas Medical Branch Galveston
77346	1,693	5.6%	Memorial Hermann Surgical Hospital Kingwood
77095	1,693	5.2%	HEA Surgery Center
77388	1,659	5.3%	Northwest Surgery Center Red Oak
77584	1,651	5.0%	University of Texas Medical Branch Galveston
77088	1,510	4.9%	HEA Surgery Center
77079	1,472	4.8%	HEA Surgery Center
77007	1,446	7.0%	HEA Surgery Center
77406	1,416	7.3%	HEA Surgery Center
77055	1,302	4.9%	HEA Surgery Center
77571	1,291	5.7%	Doctors Outpatient SurgiCenter - Pasadena
77056	1,288	4.8%	HEA Surgery Center

Analysis of select ZIP Codes in the Houston-Pasadena-The Woodlands, TX CBSA with low supply and high future demand for eye/ocular services  
Source: Trilliant Health Provider Directory, Demand Forecast and national all-payer claims database.

# Steps to Invest in De Novo Growth

## 1. Internal Planning

Ensure alignment and buy-in across the organization, including feedback from senior leadership and other key stakeholders, regarding expansion priorities. Review historical performance and forecast future financial projections to assess the financial health and capacity for expansion. Determine the funding requirements for de novo growth initiatives, including capital investment, working capital and operational expenses.

## 2. Curate External Market Data

Configure external data sources around the defined service offering. Normalize the data to align with internal service line definitions and classifications. This may involve mapping external categories or codes to internal service line categories. Determine key metrics for standard reporting and market evaluation:

- Demographic data including current-year population and five-year population projections
- Real-time healthcare utilization and prevalence of disease incidence rates by patient ZIP Code
- Current provider supply including service mix, procedure volume and full-time equivalent (FTE) breakout by location
- Future market demand by service line and procedure

## 3. Market Research and Analysis

Conduct thorough market research to identify markets and sub-markets with the greatest upside potential for new market growth. Analyze market trends, including population growth, aging demographics, prevalence of disease and future market demand. Evaluate insurance coverage and payer-specific reimbursement rates for target services.

## 4. Assess Competitive Landscape

Identify existing practice locations, clinics, surgery centers and hospitals in the target area. For each competitive offering, evaluate the service mix, pricing strategy, market penetration and community reputation. Highlight areas where current and projected patient demand exceeds the current supply of providers in the market.

## 5. Prioritize Market Opportunity

Identify and prioritize markets with growing populations, high demand for target services, favorable reimbursement rates and fewer competitors. At a local level, consider geographic factors, such as proximity to existing facilities, transportation accessibility and market saturation.

## 6. Financial and Operational Assessment

Conduct financial feasibility studies to assess the potential return on investment (ROI) and profitability of target market opportunities. Forecast revenue potential based on projected patient volume, service mix and market-specific reimbursement rates. Estimate the initial investment required for the development of a new practice location, including costs for facility construction or renovation, equipment purchases, staffing and marketing.

## 7. Build Market Entry Plan

Develop a comprehensive implementation plan with clear timelines, milestones and responsibilities for executing de novo growth initiatives. Continuously evaluate performance metrics, patient feedback and market trends to identify opportunities for optimization and refinement. Adjust strategies and tactics based on real-time data, feedback and changing business conditions to ensure ongoing alignment with patient needs and preferences.

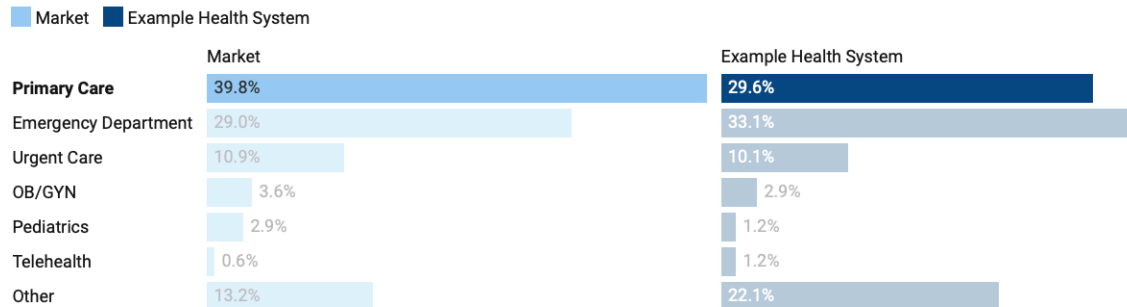
# Use Case: Investing in Primary Care for Top-of-Funnel Growth

Historically, hospitals have focused on developing comprehensive primary care networks as the “top of the funnel” for profitable service line growth, even though primary care is itself usually a “loss leader.”

In this example, using provider directory, utilization and consumer data, 39.8% of the “high-margin” encounters in the market originated with a primary care visit, as compared to 29.6% of the target health system’s “high-margin” encounters.

### Entry Point for Downstream High-Margin Encounters for Example Health System

Figure 5.6

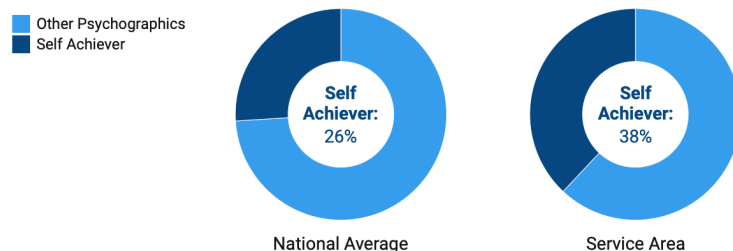


Source: Trilliant Health Provider Directory and national all-payer claims database.

Because 38% of the population in the market has the “Self Achiever” psychographic profile, which is inclined to utilize traditional primary care services, the example health system should invest in expanding access to primary care services through de novo growth and/or increased alignment with independent primary care groups.

### Percentage of Population Classified as Self Achievers in Example Health System's Service Area

Figure 5.7



Source: Trilliant Health national consumer dataset.

## Use Case: Investing in Urgent Care for Top-of-Funnel Growth

Consumers with a “Willful Endurer” psychographic profile are more inclined to utilize urgent care or other retail-based clinics than traditional primary care physician clinics.

In this example, using provider directory, utilization and consumer data, the highlighted ZIP Code has unmet demand for urgent care clinics, with patients travelling >15 minutes for urgent care services.

### Urgent Care Demand in Target Expansion Zone:

**Primary Service Area (PSA)**

**UCC ZIP Code Rank:**

#3 of 15 in PSA

**2021 Population:**

35,260 (2nd Highest in PSA)

**Population CAGR:**

0.31% (7th Highest in PSA)

**Willful Endurer Percentage of Population:**

38% (2nd Highest in PSA)

**Unemployment Rate:**

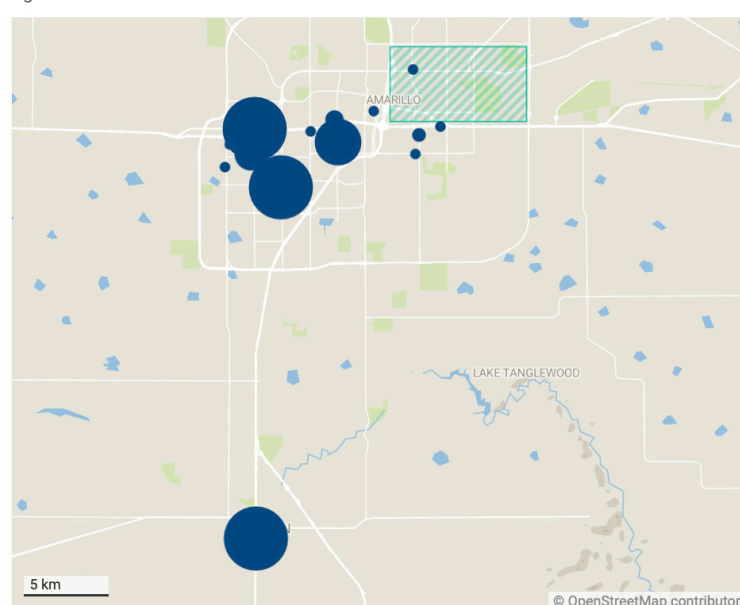
2.7% (State of Texas at 3.8%)

The only urgent care clinic in the target expansion zone, Northwest Texas Healthcare Urgent Care, is not aligned with the example health system, with only 7% of the urgent care’s patients receiving care from the example health system.

Additionally, the target area has the highest Willful Endurer population in the market. The Willful Endurer psychographic profile is 7X more likely to consume urgent care and emergency department services as compared to other psychographic profiles, making this ZIP Code a strategic target for urgent care services.

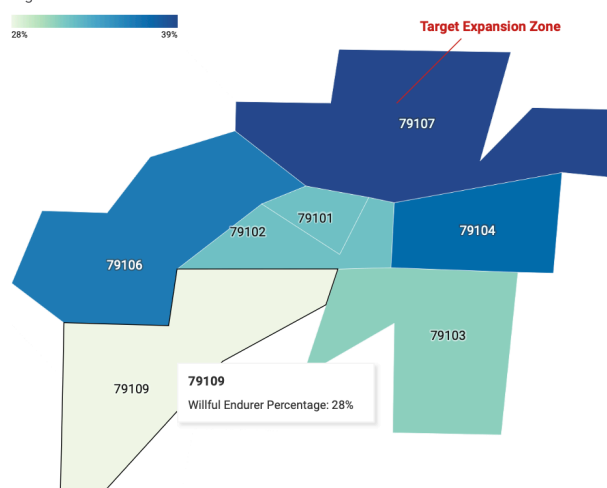
### Map of Access to Urgent Care Clinics in the Amarillo, TX CBSA

Figure 5.8



### Willful Endurers as a Percentage of Population in the Amarillo, TX CBSA

Figure 5.9



# Steps to Invest in Top-of-Funnel Growth

## 1. Evaluate Network Design

Leverage internal data to assess the effectiveness of the current network for “top-of-the-funnel” services (primary care, urgent care, telehealth or emergency department (ED)). Analyze utilization patterns to understand the geographic distribution of patients and utilization rates for each entry point. Evaluate the geographic footprint of the network and identify pockets that are underserved or lacking access. Solicit patient feedback through surveys to assess overall satisfaction with the current access mix and quality of care. Identify areas for improvement and prioritize initiatives to expand “top-of-the-funnel” access within the network.

## 2. Curate External Market Data

Gather comprehensive market data on patient demographics, utilization patterns and access for primary care, urgent care, telehealth and ED services. Configure external data sources around the defined service offering. Normalize the data to align with internal service line definitions and classifications.

## 3. Patient Journey Mapping

Leverage external market data to map out the patient journey across various entry points, including primary care, urgent care, telehealth and ED services. Identify key touchpoints, decision-making factors and barriers to care at each stage of the patient journey. Analyze patient pathways to understand the factors influencing the choice of entry point, such as acuity of symptoms, convenience, accessibility, insurance coverage and provider availability.

## 4. Market Segmentation

Utilize psychographic segmentation to better understand the clinical characteristics, care needs and utilization behaviors of the community at the ZIP Code level. Analyze utilization patterns within each patient segment to identify preferences, trends and variations in entry point selection. Identify patient groups that have high utilization tied to specific entry points.

## 5. Geospatial Assessment

Utilize geospatial data to map and visualize access distribution and identify geographic pockets that are underserved or lacking access for certain entry points. Segment the market by facility type and system ownership.

## 6. Benchmarking and Comparative Analysis

Benchmark current network performance and utilization against industry standards and competitors in the market. Compare entry point utilization rates, wait times and clinical outcomes across primary care, urgent care, telehealth and ED services. Identify opportunities to enhance the attractiveness and effectiveness of the current network of access points.



## 7. Strategic Planning and Network Expansion

Develop a strategic plan for expanding access based on insights gained from the competitive analysis. Prioritize expansion efforts around markets and submarkets with high demand and limited access to care. Consider establishing new partnerships with community providers to create a wider funnel of care that will increase the downstream capture of high-margin services. Continuously evaluate performance metrics, patient feedback and market trends to identify opportunities for optimization and refinement. Adjust strategies and tactics based on real-time data, feedback and changing business conditions to ensure ongoing alignment with patient needs and preferences.

## Use Case: Analyzing Capital Allocation Across Markets and Service Lines

Some healthcare providers are fortunate enough to have more compelling expansion opportunities than capital to invest. Ascertaining the best opportunities is essential to maximize return on invested capital.

In this example, using provider directory, utilization and demand forecast data, 20 markets are analyzed across three service lines to recommend capital allocation for the example health system.

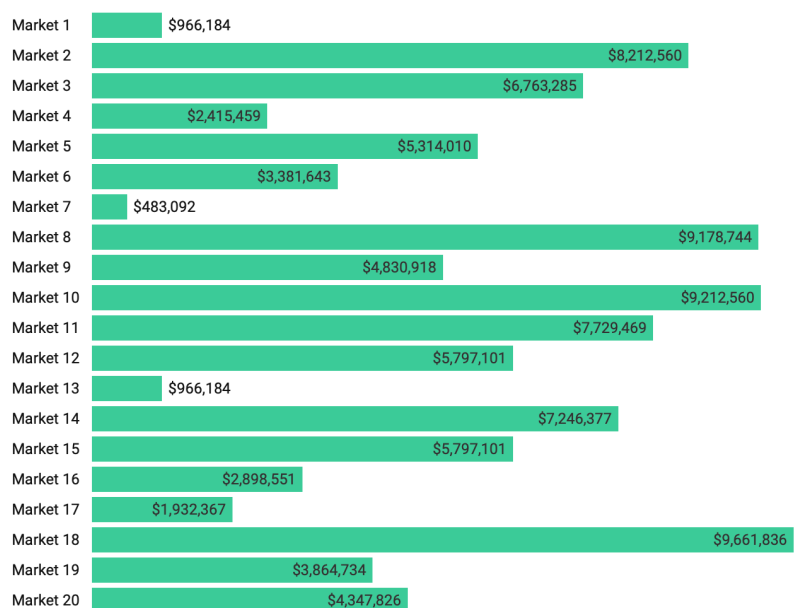
### Assumptions:

- \$100 million total budgeted capital
- All capital allocated to one of the three service lines (Orthopedic, Cardiology, Digestive)
- Health system's calculation of expected contribution margin

First, the markets are compared across multiple service lines to rank markets evaluating current supply, future demand and current patient outmigration. Based on this market ranking, the model recommends the capital to be allocated across each market and across the three service lines.

### Recommended Total Capital Allocation by Market

Figure 5.10

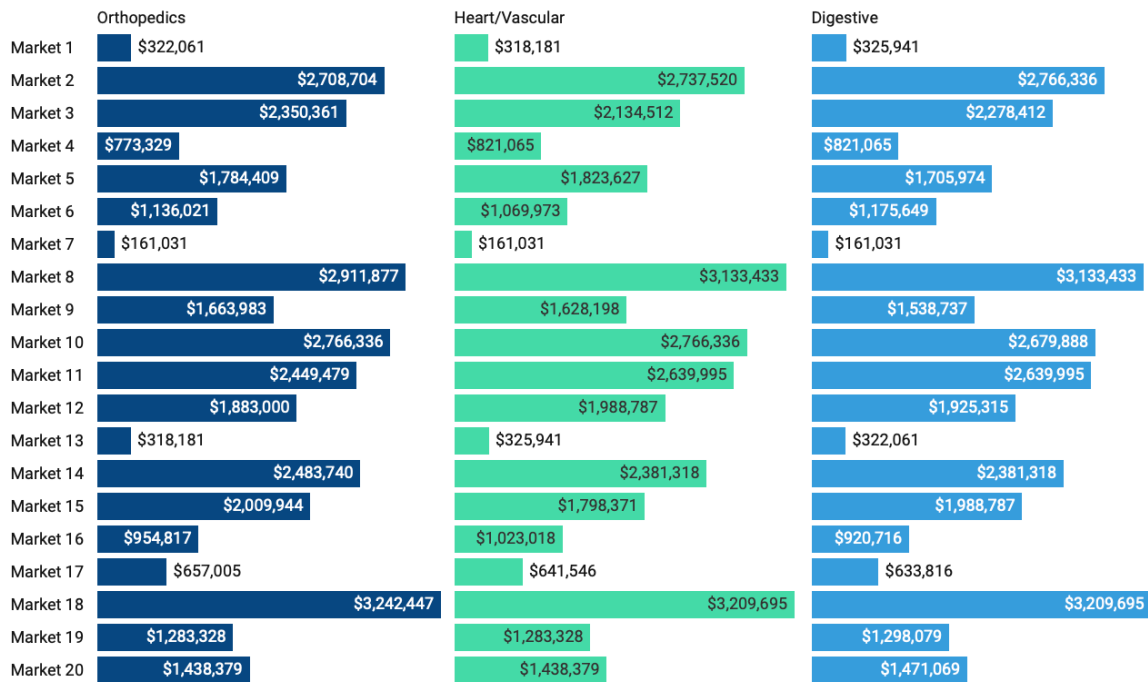


Source: Trilliant Health national all-payer claims database and national consumer dataset. • [Get the data](#) • Created with



## Recommended Capital Allocation by Service Line

Figure 5.11

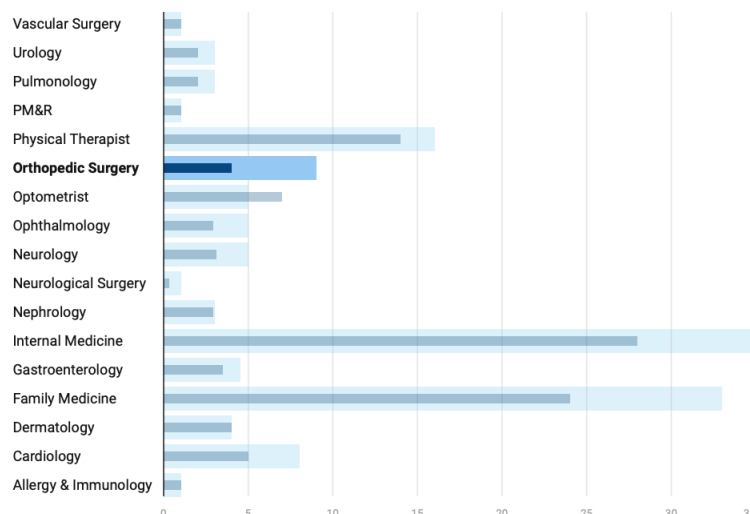


Source: Trilliant Health national all-payer claims database and national consumer dataset.

To allocate capital within each market, stakeholders can identify opportunities and threats at the market level, using the strategies discussed in previous chapters. In this example, using provider directory and utilization data, a physician needs assessment of Market 3 reveals a shortage of orthopedic surgeons. To address the shortage, the organization may consider investing a portion of the \$6.8 million for Market 3 to recruit additional surgeons.

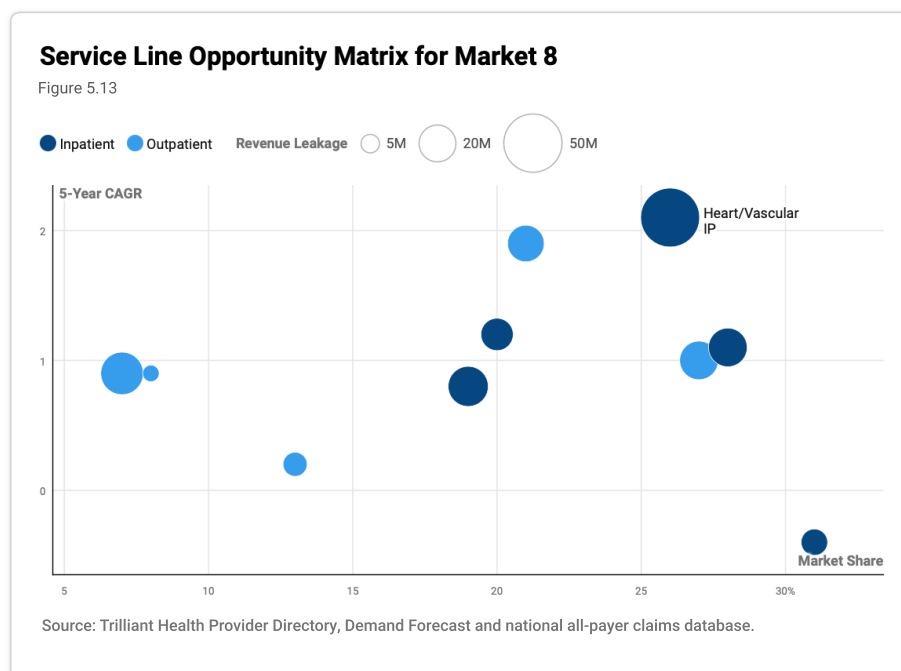
## Physician Needs Assessment for Market 3

Figure 5.12



Source: Trilliant Health Provider Directory and national consumer dataset.

In this example, a service line opportunity matrix, which was introduced in [Chapter 3](#), compares the five-year CAGR, revenue leakage and market share for inpatient and outpatient services across each service line, revealing significant opportunity in inpatient heart/vascular.



## Steps to Allocate Capital Across Markets and Service Lines

### 1. Internal Planning

Collect internal information from each department to understand the contribution that each service line makes to the financial health of the system. Review historical performance and forecast future financial projections to assess the financial health and capacity for future service line investment. Determine the funding requirements for service line growth initiatives, including capital investment, working capital and operational expenses.

### 2. Curate External Market Data

Gather comprehensive market data such as service line utilization, market share, payer mix, consumer preferences and future market demand. Normalize the data to align with internal service line definitions and classifications. This may involve mapping external categories or codes to internal service line categories.

### 3. Market Analysis and Demand Forecasting

Conduct comprehensive market research for each service area. Utilize demographic data, population health statistics, patient utilization patterns and market trends to identify areas of high demand for each service line. Forecast future demand for services based on population growth, aging trends and prevalence of diseases.

#### **4. Provider Needs Assessment**

Analyze current population, healthcare utilization and provider-to-population ratios within service area to identify the provider demand for each medical specialty. Identify service gaps and areas of unmet need based on the current supply of providers compared to the expected provider demand.

#### **5. Evaluate Network Performance**

Track and monitor the longitudinal journey of each patient to identify gaps in the employed provider network and quantify the amount of patient outmigration across key services. This may involve calculating overall patient retention rates as well as leakage rates by service line. Analyze the collected data to calculate key performance metrics related to competing hospital-owned medical groups that are similar in size and specialty mix. Compare medical group performance metrics against competing networks. Quantify and analyze the differences and similarities in network integrity measures such as patient retention rates and leakage by service line. Identify areas where network performance excels and areas for improvement compared to the competing networks.

#### **6. Prioritize Market Opportunity**

Evaluate service line strengths and weaknesses of the system as well as external opportunities and threats within each market. Prioritize market opportunities based on factors such as service line demand, growth potential, competitive positioning, alignment with organizational goals and feasibility of implementation. Consider the strategic fit of each service line relative to the larger strategic plan. Use predictive analytics and modeling techniques to estimate the potential ROI of capital investments in different service lines and geographic areas.

#### **7. Implementation Planning**

Allocate resources in alignment with strategic priorities, ensuring that investments are directed toward initiatives that drive the greatest value and impact. Develop a detailed implementation plan for each market opportunity, outlining specific goals, timelines, resource requirements and performance metrics. Recognize that market dynamics are constantly evolving, and capital allocation decisions should be revisited periodically to reflect changing circumstances and new opportunities. Regularly reassess market dynamics, competitive landscape and emerging trends to adapt the strategy as needed.

## **Use Case: Capital Allocation for M&A**

The purpose of every M&A transaction is to acquire market share. No form of capital allocation in the health economy is riskier than M&A in healthcare services because of two unassailable truths:

1. “Broken” hospitals are the only hospitals ever for sale.
2. No physician ever worked harder for a health system or private equity firm than he/she did as an independent physician.

Moreover, almost every healthcare services M&A transaction is plagued by flawed assumptions and projections about:

- The financial and operational performance of the target's business leading up to the announcement of a transaction;
- The performance of the target between the announcement and the consummation of the proposed transaction; and
- The target's post-closing financial and operational performance.

The least predictable, and therefore most dangerous, are flawed projections about the performance of the target between the announcement and the consummation of the transaction, which is influenced by these factors:

- The inevitable decline in performance of the target which results from uncertainty among physicians, employees and patients about how the transaction will affect them;
- The inevitable regulatory obstacles that delay the consummation of a transaction, which reinforces the concerns of physicians, employees and patients; **and**
- The speed with which physicians will alter longstanding referral patterns after the proposed transaction is announced.

The target in a healthcare services M&A transaction **ALWAYS** loses market share between the announcement and consummation of a transaction, which means that M&A announcements always affect multiple health economy stakeholders. Physicians refer patients to other providers, and those providers have different reimbursement rates with payers and often have different purchasing relationships with medical device manufacturers and life sciences firms. As a result, every announced M&A transaction should spur every health economy stakeholder – especially employers – in the target's market to consider the potential market share changes that will inevitably result.

On March 26, 2024, UnitedHealthcare's Optum Care filed notice with the Health Policy Commission (HPC) of the Commonwealth of Massachusetts to acquire Stewardship Health, d/b/a Steward Medical Group (SMG), the physician network of Steward Health Care.<sup>1</sup> Similarly, in March 2021, Optum Care announced the acquisition of Atrius Health, which the Massachusetts AG and Supreme Court approved in April 2022.

Using provider directory and utilization data, it is possible to compare the historical referral patterns of SMG's Massachusetts network with the referral patterns of Atrius Health's network prior to the announcement of its proposed sale to Optum Care, during the regulatory review period and after the consummation of the transaction.

### Downstream Referral Capture from Atrius Health Providers, 2019-2023

Figure 5.14

	System Name	2019 - 2021	2022	2023	Referral Change
1	BETH ISRAEL LAHEY HEALTH	36%	39%	41%	5.7%
2	STEWARD HEALTH CARE SYSTEM	32%	27%	25%	-6.8%
3	MASS GENERAL BRIGHAM	13%	16%	14%	0.2%
4	TUFTS MEDICINE	5%	6%	8%	2.1%
5	SOUTH SHORE HEALTH SYSTEM	3%	3%	4%	1.2%
6	EMERSON HOSPITAL	3%	3%	3%	0.4%
7	SIGNATURE HEALTHCARE SERVICES	3%	3%	1%	-2.1%
8	BOSTON MEDICAL CENTER	2%	2%	1%	-0.7%
9	TENET HEALTH	1%	1%	1%	-0.2%
10	LAWRENCE GENERAL HOSPITAL	1%	1%	1%	0.2%

Analysis is limited to hospital-based services

Source: Trilliant Health Provider Directory and national all-payer claims database.

### Downstream Referral Capture from Steward Medical Group Providers, 2019-2023

Figure 5.15

	System Name	2019 - 2021	2022	2023	Referral Change
1	STEWARD HEALTH CARE SYSTEM	62%	60%	59%	-2.4%
2	BETH ISRAEL LAHEY HEALTH	13%	13%	14%	1.5%
3	MASS GENERAL BRIGHAM	11%	13%	12%	1.5%
4	TUFTS MEDICINE	3%	3%	5%	1.9%
5	SIGNATURE HEALTHCARE SERVICES	6%	5%	3%	-3.3%
6	SOUTH SHORE HEALTH SYSTEM	2%	2%	3%	1.0%
7	BOSTON MEDICAL CENTER	1%	1%	1%	-0.3%
8	EMERSON HOSPITAL	1%	1%	1%	-0.3%
9	HCA HEALTHCARE	1%	1%	1%	0.1%
10	SOUTHCOST HEALTH SYSTEM	1%	1%	1%	0.3%

Analysis is limited to hospital-based services

Source: Trilliant Health Provider Directory and national all-payer claims database.

Because there is rarely a consistent pattern when physicians change referral patterns, analyzing changes in market share at the service line level is essential to understand the implications of a proposed M&A transaction. In the following example, the change in referral patterns by Atrius Health physicians to Steward Health, Beth Israel Lahey Health and Mass General Brigham are shown for select services lines for the periods prior to, during, and after Optum Care's acquisition of Atrius Health.

### Downstream Referral Capture from Atrius Health Providers by Service Line, 2019-2023

Figure 5.16

Visit Service Line	System Name	2019-2021	2022	2023	Change
Digestive System	BETH ISRAEL LAHEY HEALTH	35%	41%	44%	10%
	STEWARD HEALTH CARE SYSTEM	40%	30%	28%	-12%
	MASS GENERAL BRIGHAM	9%	12%	10%	1%
Heart/Vascular	STEWARD HEALTH CARE SYSTEM	45%	41%	36%	-9%
	BETH ISRAEL LAHEY HEALTH	30%	33%	38%	8%
	MASS GENERAL BRIGHAM	8%	9%	8%	0%
Musculoskeletal	BETH ISRAEL LAHEY HEALTH	39%	43%	45%	6%
	STEWARD HEALTH CARE SYSTEM	31%	26%	25%	-7%
	MASS GENERAL BRIGHAM	12%	14%	11%	0%
Neurology / Nervous System	BETH ISRAEL LAHEY HEALTH	40%	42%	45%	5%
	STEWARD HEALTH CARE SYSTEM	23%	20%	20%	-4%
	MASS GENERAL BRIGHAM	18%	21%	17%	-1%
Oncology	BETH ISRAEL LAHEY HEALTH	37%	41%	46%	9%
	MASS GENERAL BRIGHAM	32%	33%	29%	-2%
	STEWARD HEALTH CARE SYSTEM	15%	11%	10%	-6%

Analysis is limited to hospital-based services  
Source: Trilliant Health Provider Directory and all-payer claims dataset.

Similarly, in the following example, the change in referral patterns by SMG physicians to Steward Health, Beth Israel Lahey Health and Mass General Brigham are shown for select services lines between 2021 and 2023, revealing that SMG physicians began changing referral patterns prior to the recently announced sale to Optum Care.

### Downstream Referral Capture from Steward Medical Group by Service Line, 2019-2023

Figure 5.17

Visit Service Line	System Name	2021	2022	2023	Change
Digestive System	STEWARD HEALTH CARE SYSTEM	67%	63%	62%	-5%
	BETH ISRAEL LAHEY HEALTH	13%	15%	18%	6%
	MASS GENERAL BRIGHAM	7%	8%	8%	1%
Heart/Vascular	STEWARD HEALTH CARE SYSTEM	73%	75%	74%	0%
	BETH ISRAEL LAHEY HEALTH	10%	10%	11%	1%
	MASS GENERAL BRIGHAM	6%	5%	5%	-1%
Musculoskeletal	STEWARD HEALTH CARE SYSTEM	62%	62%	61%	0%
	BETH ISRAEL LAHEY HEALTH	15%	15%	17%	2%
	MASS GENERAL BRIGHAM	10%	10%	9%	-1%
Neurology / Nervous System	STEWARD HEALTH CARE SYSTEM	46%	46%	47%	1%
	BETH ISRAEL LAHEY HEALTH	20%	20%	21%	0%
	MASS GENERAL BRIGHAM	17%	19%	17%	0%
Oncology	STEWARD HEALTH CARE SYSTEM	31%	30%	30%	-2%
	BETH ISRAEL LAHEY HEALTH	16%	16%	16%	1%
	MASS GENERAL BRIGHAM	38%	40%	40%	1%

Analysis is limited to hospital-based services  
Source: Trilliant Health Provider Directory and all-payer claims dataset.

Changes in physician referral patterns resulting from M&A transactions ultimately impact the patients of the organization that is acquired, as well as the health plans and employers underwriting the care those patients receive. Whether those changes in referral patterns result in patients receiving improved value for money is something that every health economy stakeholder – especially employers – should assess.

In this example, using a combination of provider directory, CMS QualityNet and health plan price transparency data, there is no observed correlation between price and quality in the Boston–Cambridge–Newton, MA–NH CBSA.

**Negotiated Rate vs 30-Day Mortality for COPD in the Boston–Cambridge–Newton, MA–NH CBSA**

Figure 5.18



Analysis of hospitals in the Boston–Cambridge–Newton, MA–NH CBSA reporting 30-day mortality and a contracted rate with BCBS of Massachusetts for APR-DRG 190  
Source: Trilliant Health Provider Directory and health plan price transparency dataset, September 2023; CMS QualityNet, January 2024.

**Negotiated Rate vs 30-Day Mortality for Pneumonia in the Boston–Cambridge–Newton, MA–NH CBSA**

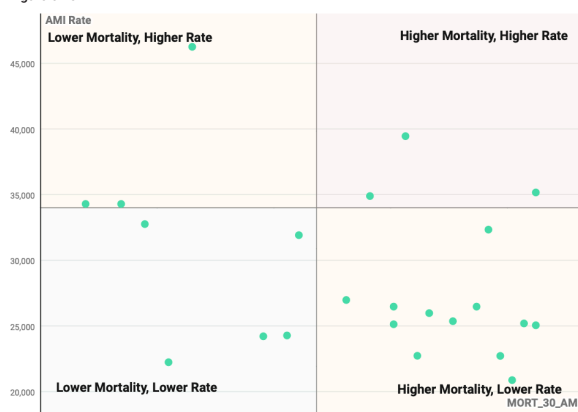
Figure 5.19



Analysis of hospitals in the Boston–Cambridge–Newton, MA–NH CBSA reporting 30-day mortality and a contracted rate with BCBS of Massachusetts for APR-DRG 193  
Source: Trilliant Health Provider Directory and health plan price transparency dataset, September 2023; CMS QualityNet, January 2024.

**Negotiated Rate vs 30-Day Mortality for Acute Myocardial Infarction in the Boston–Cambridge–Newton, MA–NH CBSA**

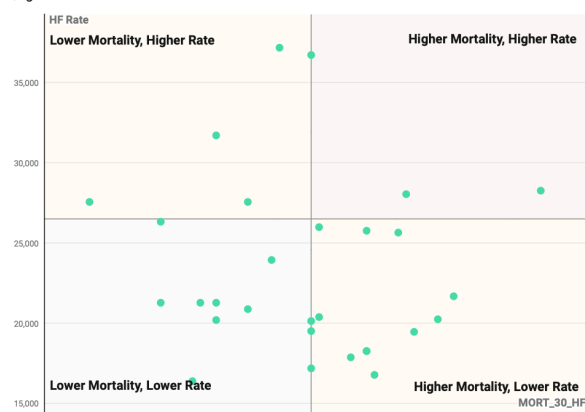
Figure 5.20



Analysis of hospitals in the Boston–Cambridge–Newton, MA–NH CBSA reporting 30-day mortality and a contracted rate with BCBS of Massachusetts for APR-DRG 280  
Source: Trilliant Health Provider Directory and health plan price transparency dataset, September 2023; CMS QualityNet, January 2024.

**Negotiated Rate vs 30-Day Mortality for Heart Failure in the Boston–Cambridge–Newton, MA–NH CBSA**

Figure 5.21



Analysis of hospitals in the Boston–Cambridge–Newton, MA–NH CBSA reporting 30-day mortality and a contracted rate with BCBS of Massachusetts for APR-DRG 291  
Source: Trilliant Health Provider Directory and health plan price transparency dataset, September 2023; CMS QualityNet, January 2024.

# Steps to Analyze an Acquisition Opportunity

## 1. Internal Planning

Clearly define objectives and goals for the potential acquisition. This could include expanding service offerings, increasing market share or enhancing patient access to care.

## 2. Curate External Market Data

Gather external market data, including demographics, patient demand, referral pattern, and payer mix. Obtain financial data from the acquisition target, including revenue, expenses, profitability and historical financial performance. Determine key metrics to evaluate the acquisition opportunity. Common metrics include referral volume, procedures performed and total revenue generated.

## 3. Operational Analysis

Evaluate the operational capabilities and efficiency of the target acquisition. Assess factors such as clinical quality, productivity, workflow processes and technology infrastructure. Review provider credentials, payer contracts and reimbursement rates. Understand how the acquisition will impact payer relationships and negotiated rates.

## 4. Workforce Analysis

Analyze the workforce composition of the acquisition target, including physicians, advanced practice providers and support staff. Assess staffing levels, skill sets and potential retention challenges post-acquisition.

## 5. Technology and Infrastructure Analysis:

Evaluate the technology systems, electronic health records (EHR) and other infrastructure used by the acquisition target. Determine compatibility with existing systems and identify any potential integration challenges.

## 6. Assess Market Impact

Leverage external market data to evaluate how the transaction will affect patient care and access to services. Consider patient satisfaction, continuity of care and potential changes in service offerings post-closing. Analyze patient migration patterns to understand how patients will respond to the transaction. Determine whether the transaction affects physician referral patterns, employment opportunities or practice affiliations. Consider how changes in physician alignment may impact patient access to care and market competition.

## 7. Regulatory and Legal Due Diligence

Conduct due diligence to ensure compliance with healthcare regulations, licensure requirements and contractual obligations. Identify any potential legal or regulatory risks associated with the transaction.



## 8. Transition Plan

Develop a detailed transition plan to ensure a smooth transfer of ownership and operations. Address issues such as patient notification, continuity of care, employee transitions and integration with the acquirer's organization.

## 9. Post-Sale Evaluation

Continuously monitor and evaluate the impact of the transaction post-closing. Assess whether the objectives and goals set initially are being achieved and make adjustments as needed.

# Use Case: Using Similarity Models for M&A

In addition to flawed assumptions about the behavior of physicians, employees and patients of the target of a healthcare services M&A transaction, every corporate development executive underestimates the challenge of integrating the target into the acquirer's organization.

Logically, if never historically, understanding the similarity between the acquirer and the target would inform projections of the success of the acquisition and, in turn, the probability of realizing the necessary return on investment. An even more sophisticated approach for acquirers would be to filter targets to enterprises that were similar to the acquirer's most successful facilities, whether hospitals, surgery centers or clinics.

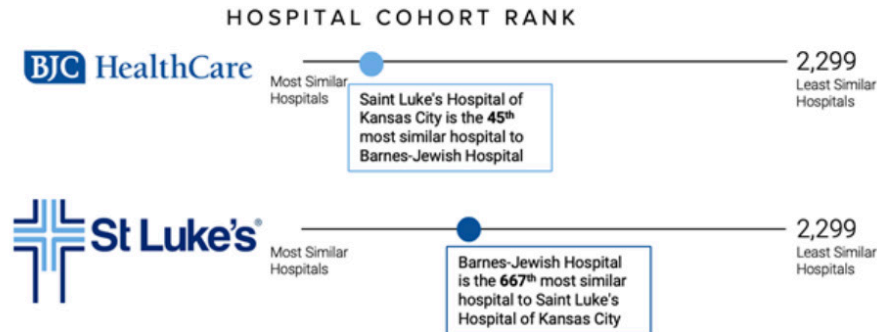
In theory, the more similar that hospitals are based on markets, services, financial and competitive metrics, the higher probability that the merged system will continue with the established "playbook" and fully integrate (i.e., the merger will play to their strengths). The more dissimilar these hospitals are, the more probable that these systems will merge in name only and have a more difficult time fully integrating.

Using machine learning models to index hospitals across quality, financial performance, competition and reimbursement, this example measures the mathematical similarity of BJC HealthCare and Saint Luke's Health System, which formed an integrated Missouri-based health system on January 1, 2024. An analysis of the largest hospital in each system – St. Luke's Hospital of Kansas City and Barnes-Jewish Hospital – reveals the degree of similarity between the two health systems. St. Luke's and Barnes Jewish have a SimilarityIndex™ M&A Score of 76.6, or a distance of 23.4.

Said differently, using Barnes-Jewish as the index hospital, St. Luke's Kansas City is its 45th most similar hospital out of the 2,299 hospitals in the national analysis. This suggests there are several other hospitals that are operationally, financially and competitively more similar from an evidence-based perspective. An M&A strategy driven by clinical, operational, and financial similarity would lead to different partners for each system.

## Hospital Cohort Rank: BJC Healthcare and St. Luke's

Figure 5.22



The scores reflected here differ from the Similarity Scores in the publicly available SimilarityIndex™ | Hospitals, given the cohort criteria are not the same.

Source: Trilliant Health SimilarityIndex™ | Hospitals, 2023

Source: Trilliant Health SimilarityIndex™ | Hospitals, 2023.

## Hospitals Most Similar to Barnes-Jewish Hospital, 2023

Figure 5.23

	Hospital	CBSA	SimilarityIndex™ M&A Score	CMI	Licensed Beds	OPEX / Adj Admission	Third Party Payer Mix
1	Barnes-Jewish Hospital	St. Louis, MO-IL	100	2	1,274	\$24,529	58%
2	UPMC Presbyterian Shadyside	Pittsburgh, PA	83	2	1,146	\$36,532	63%
3	Indiana University Health	Indianapolis-Carmel-Anderson, IN	81	2	1,247	\$46,069	53%
4	Albany Medical Center Hospital	Albany-Schenectady-Troy, NY	81	2	743	\$22,086	56%
5	Ohio State University State Health System	Columbus, OH	81	2	1,026	\$29,812	65%
6	Beaumont Hospital Royal Oak	Detroit-Warren-Dearborn, MI	80	2	1,026	\$17,043	65%
7	Rhode Island Hospital	Providence-Warwick RI-MA	80	2	648	\$24,737	60%
8	Thomas Jefferson University Hospital	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	80	2	854	\$32,625	56%
9	Ascension St Vincent Hospital	Indianapolis-Carmel-Anderson, IN	79	2	732	\$25,753	56%
10	Allegheny General Hospital	Pittsburgh, PA	79	3	552	\$23,619	72%
11	Penn Presbyterian Medical Center	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	79	2	336	\$29,904	57%

Source: Trilliant Health SimilarityIndex™ | Hospitals.

## Hospitals Most Similar to Saint Luke's Hospital of Kansas City, 2023

Figure 5.24

	Hospital	CBSA	SimilarityIndex™ M&A Score	CMI	Licensed Beds	OPEX / Adj Admission	Third Party Payer Mix
1	Saint Luke's Hospital of Kansas City	Kansas City MO-KS	100	2.329	422	\$26,529	57%
2	Good Samaritan Hospital	Cincinnati, OH-KY-IN	90	1.965	370	\$27,330	63%
3	Novant Health Presbyterian Medical Center	Charlotte-Concord-Gastonia, NC-SC	89	2.160	598	\$23,637	67%
4	Research Medical Center	Kansas City MO-KS	88	2.059	368	\$18,353	52%
5	University Of Kansas Hospital	Kansas City MO-KS	88	2.228	854	\$28,153	60%
6	Saint Thomas West Hospital	Nashville-Davidson-Murfreesboro-Franklin, TN	88	2.291	707	\$16,598	59%
7	Integrus Baptist Medical Center	Oklahoma City, OK	88	2.104	650	\$22,123	54%
8	Bethesda North	Cincinnati, OH-KY-IN	88	1.887	414	\$23,878	67%
9	Riverside Methodist Hospital	Columbus, OH	88	2.200	748	\$17,893	62%
10	Froedtert Memorial Lutheran Hospital	Milwaukee-Waukesha, WI	88	2.159	676	\$26,773	63%
11	Abbott Northwestern Hospital	Minneapolis-St. Paul-Bloomington, MN-WI	87	2.334	577	\$28,896	75%

Source: Trilliant Health SimilarityIndex™ | Hospitals.

Numerous factors influence the decision to allocate capital for M&A in healthcare services: market quality, Certificate of Need, competition, etc. As a result, the similarity between the acquirer and target will never be the sole, or even primary, consideration in a decision to consummate a transaction. At the same time, similarity analysis is useful to avoid transactions between organizations that are highly incompatible and therefore likely to integrate timely or effectively, thereby limiting the return on invested capital.

### Footnotes

1. [https://www.investopedia.com/terms/c/capital\\_allocation.asp#:~:text=Capital%20allocation%20means%20distributing%20and,as%20possible%20for%20its%20shareholders.](https://www.investopedia.com/terms/c/capital_allocation.asp#:~:text=Capital%20allocation%20means%20distributing%20and,as%20possible%20for%20its%20shareholders.)
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## Conclusion

# What It Takes to Win

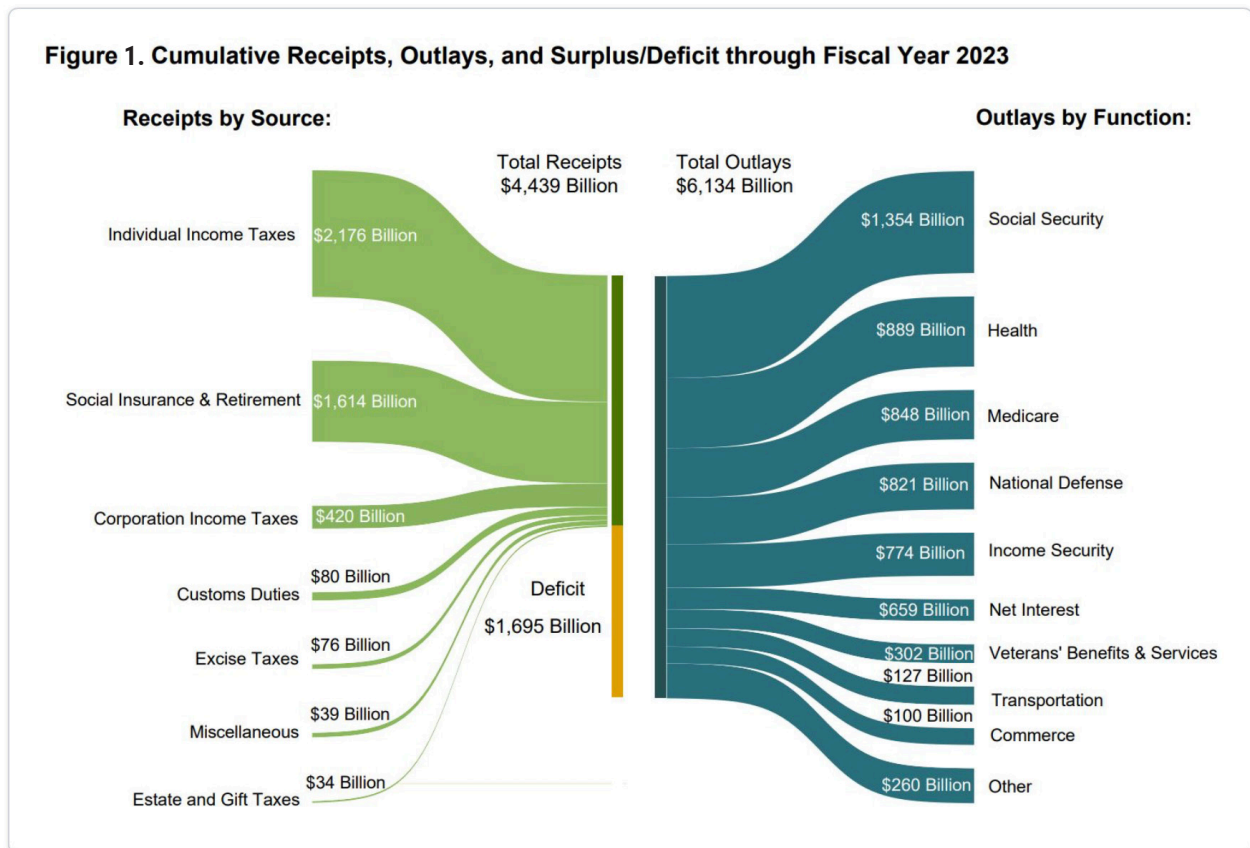


Winning healthcare's negative sum game requires effective governance, courageous leadership, a steely-eyed discernment of market realities, a disciplined approach to maximizing return on invested capital and evidence-based strategies.

# The Present

A sober assessment of the facts suggests that there is no reason for optimism about the future of the U.S. health economy, which on a standalone basis would be the fourth largest economy in the world.

***In fact, \$1 out of every \$24 of global gross domestic product is consumed by the U.S. health economy.<sup>1,2</sup>*** Here is how the Treasury Department's depiction of the problem<sup>3</sup>:



Stein's Law states that "if something cannot go on forever, it will stop."<sup>4</sup> At some point, the U.S. healthcare system will be incapable of ignoring the fundamental principles of economics: demand, supply, and yield.

The combination of the secular decline in the number of commercially insured patients and the inability of most providers to generate positive operating margins from reimbursement for Medicare and Medicaid beneficiaries means that, in aggregate, the U.S. healthcare system is a negative-sum game. There is no way to win a losing game without competing, but there are several ways to compete effectively: winning key battles, cutting losses early, losing less frequently and losing by a smaller margin than the competition.

In the current health economy, every stakeholder's success is imperiled by at least one of three flaws: the status quo, mythology and poor governance and leadership. The most common and most dangerous flaw is the status quo, which, as everyone knows, is Latin for the existing state of affairs. No one wants to be part of the status quo, or at least admit to it, which is why the famous

[Monster.com](#) ad is so funny. However, the status quo has no equal in slowing operational improvement, much less transformation and innovation, in the health economy. Because the rules of negative-sum games are immutable, **the status quo is unsustainable and, therefore, a losing strategy**. Logic suggests that data-driven insights are important for understanding how to develop and execute growth strategies and tactics in any industry, including the health economy. History suggests that the status quo all too often triumphs over logic, until one day the inescapable reality of logic overwhelms the vested interest of the status quo.

The enduring strength of the status quo is partially attributable to the second-most dangerous enemy to health economy stakeholders: mythology. Health economy stakeholders fervently believe in concepts that are demonstrably false, including that:

- value-based care, narrow networks and centers of excellence bend the cost curve;
- “directionally correct” data and “state data” are sufficient to develop effective strategies; and
- demand for healthcare services is ever-increasing.

If you are reading this post, then you have probably heard some version of this myth:

*“As much as 30% of healthcare spending in the U.S. is wasted on low-value care and administrative inefficiencies.”<sup>5,6,7,8</sup>*

A myth, you ask? Yes, the “30% waste” notion originated in a paper published in 1994 that compared the administrative costs of the U.S. healthcare system in 1987 to the administrative cost of Canada’s healthcare system.<sup>9</sup> The first question is what motivated anyone to benchmark the administrative efficiencies of America’s multi-payer system against Canada’s single-payer system. The second question is why anyone believes that benchmark is relevant.

Nevertheless, having been adopted as “ground truth” in U.S. healthcare policy, this finding was then amplified by Atul Gawande’s 2009 [New Yorker](#) article that used the Dartmouth Atlas Project data to compare the cost of healthcare in El Paso, Texas versus McAllen, Texas. Regrettably, the El Paso vs McAllen analysis was flawed by attributing to the city of McAllen the cost of care that residents of McAllen received in Houston, San Antonio and Dallas.<sup>10</sup>

To be clear, there is waste in the U.S. health economy, but like children playing a game of telephone, health economy stakeholders have embraced as conventional wisdom narratives that are either fallacious or irrelevant. The benchmark for what is “appropriate” in America should not be derived from a comparison to Canada five decades ago, if ever, but instead on the rich literature on the direct measurement of low-value care utilization in the U.S.<sup>11,12,13</sup> Another measure of waste is now available with the advent of CMS’s Transparency in Coverage initiative, which routinely reveals a range of 2X–6X in the negotiated rate for the same service in the same market for the same payer. There is little hope for the health economy if stakeholders continue their status quo reliance on

outdated myths when more compelling, evidence-based data is readily available.

The third issue – perhaps the “third rail” of the health economy – is poor governance and leadership throughout the industry. The persistence of the status quo and the prevalence of mythology are only two symptoms of an industry whose governance and leadership is somewhat uneven.

At the outset, it should be self-evident that desiring to be a board member/trustee or CEO is not a qualification for the role, and neither is an appreciation for the perks. Everyone agrees that the U.S. healthcare system is operationally complex, capital intensive, highly regulated and rapidly evolving. Those industry characteristics seemingly suggest that every health economy stakeholder’s Board of Directors should be comprised of individuals with deep and varied expertise in law, finance, healthcare operations, strategy, healthcare policy and technology. Such a Board of Directors would hire – and hold accountable – a CEO with demonstrated ability to recruit, develop and lead talented executives to execute evidence-based strategies that demonstrate effective stewardship of constrained capital resources.

Theranos is a recent, if extreme, example of what can go wrong with ineffective governance and leadership, but an objective assessment of the relevant experience of the directors or trustees of most health economy stakeholders would find few that meet the standard described above. That a Board of Directors lacking relevant healthcare industry experience would struggle to identify, hire or evaluate the most capable CEO should be unsurprising; that a CEO of average talents would struggle to identify, hire or evaluate an effective leadership team is equally unsurprising; and, given the average compensation paid to the CEOs of large healthcare enterprises, that CEOs cling tightly to their roles is the least surprising fact of all.

Somewhat to their credit, many boards attempt to remediate their knowledge gaps by retaining outside experts. Unfortunately, the usual cast of consulting characters routinely demonstrates a surface-level understanding of the details of the business of healthcare and a limited set of “one size fits all” solutions. A fish rots from the head down, and poor governance and leadership manifest in having the wrong people on the bus, in the words of Jim Collins.

# The Future

In theory, there is another path for the U.S. healthcare system, which depends on employers and consumers.

First, and most importantly, the path to a healthy U.S. healthcare system begins with the individual. Is it true that the U.S. healthcare system is oriented to treating illness and disease? Of course. The real question for health economy stakeholders is why any rational person would expect it to be different. Can health economy stakeholders promote health? Of course. However, the four clinical horsemen of the healthcare apocalypse are cancer, heart disease, obesity and behavioral health, the vast majority of which originate in a pattern of poor lifestyle choices by individuals. Preventive measures only work on compliant patients, and forced compliance in the United States with respect to healthcare is a recent development that is not working out as advertised.

The transformation of the U.S. health economy is largely dependent on consumer choices about everything other than healthcare, beginning with diet and exercise. Whether or not Americans accept some form of personal responsibility for their poor lifestyle choices, health economy stakeholders are merely bystanders. To the extent that someone other than individuals should be held responsible for the state of physical health among Americans, it is the food and beverage industry writ large, from consumer-packaged goods companies to the restaurant industry to the alcohol and beverage industry. To the extent that someone other than individuals should be held responsible for the state of mental health among Americans, it is the media and technology industry. But the fault does not lie on the primary care physician or the emergency department nurse or the trauma surgeon.

Second, the path to a new healthcare system requires employers to act like what they are – the most important customer of every health economy stakeholder. As noted in [Chapter 3](#), employers bear significant responsibility for the current state of the U.S. health economy. The status quo manifests in employer CFOs delegating responsibility for managing the cost of employee health benefits to the human resources department, and there is no department more fond of the status quo than the human resources department, which measures success more by the number of employees griping about changes to benefit plans than the company's return on investment. A status quo approach to managing one of the largest expense items in every company's income statement should have ended long ago.



Health plan price transparency will be the catalyst for a long overdue change in approach. Corporate officers have fiduciary duties to the corporation and its stockholders. In Delaware, the state in which more than one million businesses are incorporated, directors and officers of corporations owe a fiduciary duty of care to the corporation and its stockholders, which requires them “to make informed business decisions” based on “the information that is material to the decision” and “to review the information critically.”<sup>14,15,16</sup> Because health benefits costs are a material expense for every corporation that provides them, the advent of health plan price transparency implicates the fiduciary duty of care for directors and officers – especially chief financial officers – to “make informed business decisions” about health benefit costs using health plan price transparency data. Broadly speaking, employers have two options that will meet their fiduciary duty to manage the costs of health benefits: managing (1) the provider network, and (2) the benefit design.

## The Keys to Winning

The history of capitalism provides no examples of a set of stakeholders voluntarily and simultaneously relinquishing the vested interests they have fought so hard to acquire. Likewise, the history of capitalism suggests that suppliers are slow to respond to the demands of a large group of small customers, which is a fair characterization of employers.

However, it is certain that the yield of every health economy stakeholder will be negatively impacted by the “silver tsunami” that creates a “conversion” of commercially insured patients to Medicare or Medicare Advantage. Whether, in addition to the “silver tsunami” effect, demand for healthcare services continues to flatten and even decline or employers demand improved value for money, the outcome will be the same – a smaller total addressable market for health economy stakeholders, whether with respect to yield or demand or both.

As a result, competing effectively – and fiercely – is necessary in either scenario. As Sister Irene Kraus put it simply: “No margin, no mission.” **Competing well requires effective governance, courageous leadership, a steely-eyed discernment of market realities, a disciplined approach to maximizing return on invested capital and evidence-based strategies.**

As ever, I am reminded of the words of Dr. Martin Luther King, Jr.:

*“We are now faced with the fact that tomorrow is today. We are confronted with the fierce urgency of now. In this unfolding conundrum of life and history there is such a thing as being too late. Procrastination is still the thief of time. Life often leaves us standing bare, naked and dejected with a lost opportunity. The ‘tide in the affairs of men’ does not remain at the flood; it ebbs. We may cry out desperately for time to pause in her passage, but time is deaf to every plea and rushes on. Over the bleached bones and jumbled residue of numerous civilizations are written the pathetic words: ‘Too late.’”*

There will be a time when it is too late to save the U.S. healthcare system as we know it. The purpose

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#### Footnotes

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5. [Low-value Care – Lown Institute](#)
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8. [The Role Of Clinical Waste In Excess US Health Spending | Health Affairs](#)
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# A FIELD GUIDE

To Survive Healthcare's Negative-Sum Game