Doing More with Less in Health Care

May 2023

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Preface

There's no rest for the weary goes the proverb, and nowhere is this more true than in health care. The pandemic tested the sector's grit and stamina, and providers and others responded admirably.

But resting on one's laurels is not an option. There's a long list of big challenges to be managed, including inflation, rising premiums, provider profitability, care inequity, and, perhaps most urgent, a labor shortage that threatens the ability to deliver top-quality care. There's also the fact that health care, like other sectors, is going to have to do more with less, which means rethinking and recasting long-standing processes and practices in many critical areas.

Some of the issues to be addressed, such as fast-rising costs and access to labor and resources, require immediate attention. Others are structural and long-term, such as challenges to profitability and the changing nature, make-up, and demands of the workforce. In this year's compendium of relevant BCG thinking, we've compiled a selection of articles on significant issues facing health care in the near to medium term. These issues include:

- Resilience
- Resource Constraints
- Doing More with Less
- Technology
- Workforce Pressures
- New Care Channels
- Growing Inequity
- Youth Mental Health

We hope these articles will help payers, providers, health systems, and services organizations focus their efforts.

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February 2023

For US Hospitals, Resilience Requires Tough Choices

By Sanjay Saxena

BCG: Could you compare the state of a typical US health care provider in February 2020, at the start of 2023, and 12 to 18 months from now?

Sanjay Saxena: Even before the pandemic, there were healthy provider organizations, ones that were getting by, and ones that were struggling. The pandemic exacerbated the issues that each of them faced. The healthy ones became less healthy, the ones that were okay started to flash yellow and even red, and then the ones that were struggling are looking at bankruptcy or other alternatives. Today, everyone is struggling to achieve favorable financial performance. Virtually all major providers will either have had very low margins or will have lost money in 2022.

The longer-term structural issue is that providers live off of models of cross subsidization. And those cross-subsidization models are broken in two ways. First, they rely on commercial or private payers to subsidize inadequate government reimbursement from Medicaid and Medicare. As Americans age and as more people enroll in Medicare and the expansion of Medicaid grows, the math just isn't working anymore.

Second, investors and entrepreneurs are entering the highest-margin health care services. For example, they go after outpatient and elective procedures that can be performed in freestanding ambulatory surgical centers that are more conveniently located for patients and lower in cost for payers. As those services leave hospitals, providers are left with the emergency room and less profitable services.

How would a recession affect this picture?

On a positive side, health care tends to be countercyclical. We also have better safety nets in place so that people don't necessarily go uninsured if they lose their job. They can go into Medicaid or the Affordable Care Act exchanges. But if people move from insurance provided by their employer to Medicaid or Obamacare, the hospital's getting less money. And therein lies the challenge.

What have hospitals done in the past to become more resilient?

The typical playbook is they try to freeze spending. They cut administrative positions and try to get higher reimbursement rates from commercial payers. Today's challenges are too big for that approach.

Historically, people rightfully have resisted making cuts in clinical care. But I think we will find ourselves in a place where some institutions are going to have to start examining whether they need to exit certain clinical programs and even certain geographies because they can't make the cross subsidies work. Instead of having two cardiac programs in hospitals that are relatively close to one another, they might be forced to choose one cardiac center of excellence. Does a small hospital need to have its own cardiothoracic program and the latest MRI? Probably not.

The US health care workforce has already been through a tough three years. How can hospitals and other providers create better working conditions in order to retain nurses and other health care professionals?

Asking a group of people who are already burnt out to do more with less is recipe for accelerating departures. For example, technicians in New York City who are working in a big hospital can often get a better job in retail or from working at home.

Nursing is probably the single greatest shortage in health care. The practices of some staffing agencies risk making the problem worse. The CEOs of several health systems have told me the same story. A nurse who works for them on Friday quits and becomes a temp worker at a staffing agency. They pay that same nurse on Monday two and a half to four times the hourly rate they paid the week before. While part of the allure for nurses is higher pay, many nurses (especially younger ones) are attracted to the geographic flexibility and scheduling freedom that working for a staffing agency provides.

> **The less time health care professionals spend on administrative tasks, the more time they can spend on patient care.**

Labor costs are real and significant. About 70% of a hospital's cost structure is labor. Nursing costs are a significant component of that cost structure, particularly intensive care nursing. There are mandated staffing ratios that you must adhere to in most states in the US. If you don't have the nurses, you can't get the revenue because you can't staff the beds.

In response, providers are starting their own staffing agencies within their own systems. Big providers with a lot of hospitals are trying to smooth demand by transferring nurses between hospitals.

We also must reimagine the work that nurses and other health care professionals do. The less time they spend on administrative tasks, the more time they can spend on patient care and the more they can enjoy their jobs. But that's going to take time. Across the board, health systems will need to rethink their talent value proposition to attract and retain their workforce.

What would happen to quality of care in an economic downturn?

Interestingly, I don't think there's any correlation between quality of care and economic downturns. I don't think we've gotten to a place where provider organizations cut corners. Where quality arguably suffers is when people delayed getting care because they couldn't afford the out-of-pocket or copays. If you must pay $500 for health care, that's $500 you do not have to pay for heating or groceries.

If hospitals start cutting programs, we could see quality suffering. I don't see that as a New York City risk, but it could be an exurban and rural risk.

Are we headed for a world in which the big cities have a few large relatively healthy systems and rural america is left with systems that provide only the most basic services?

You have already seen significant restructuring of what care looks like with three or four megasystems in big places like New York, Seattle, and San Francisco. I just had a call this morning about two providers exploring a merger. For many small and medium-sized health systems, senior management teams and increasingly their boards are saying that there's no path forward without the benefits of greater size and scale. Organizations can't just sit still. They still must make investments in their physical plants, equipment, and digital health technology. It's harder for many systems to access the capital markets. But the bigger players still have no problem raising money because people see their size and the strength of their overall balance sheet.

In rural areas, I do think in the next three to five years we are going to need to subsidize or bail out a lot of hospitals, or we're going to have to reimagine what rural health care looks like. The challenge is that in many of these communities the local hospital is the largest employer. If you take out costs to be resilient, you are harming the local economy.

How would hospital supply chains fare in a recesson?

Along with all other organizations, hospitals have become hyperfocused on efficiency and just-in-time operations. We had these beautifully knit-together global supply chains, which yielded extraordinarily low costs. Then Covid arrived, and hospitals realized that they could not handle surges of that scale. The question then becomes, What's the right level at which a hospital should operate? How much slack are we willing to fund in our health care delivery system? It's not just about supply chains. Should I try to fill the beds? Should I fill the operating rooms, or should I leave capacity? How much resilience do we want to build into the system?

After September 11, we started paying security fees to fly. Maybe hospitals should have a pandemic preparedness fee that the government funds, or they charge payers.

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Resource Constraints

Three global trends are driving a new resource scarcity for businesses. Capital is harder to come by as interest rates rise, a major shift from the last two decades. The post-pandemic labor shortages that health care has been grappling with the past few years are a prelude to more widespread and persistent labor scarcity. Supply chain shortages may also be early signs of more sustained resource depletion, scarcity, or price increases—challenges to which health care is no stranger. Health insurance premiums are expected to increase sharply in 2023 in most developed countries as a result of the care backlog and cost increases. Premium increases will further strain the families and businesses already under the most financial stress.

January 2023

New Abundance: Resource Constraints as Strategic Opportunities

By Martin Reeves, Madeleine Michael, and David Young

Since the industrial revolution, we've lived in an economic system predicated on high growth. For the past 20 years, that growth has relied on an abundance of capital and other external resources and has benefited from tailwinds like global economic integration. Today, however, that model is at risk—we can see the limits of resource abundance encroaching on multiple timescales. The acute constraints we've experienced since the COVID pandemic began, including supply chain disruption, declining workforce availability, and energy shortages, are slowing the rebound to normal rates of growth. Furthermore, slower rebound can be an early warning indicator of deeper systemic change, in this case signaling an era of protracted scarcity of labor, capital, and natural resources that will make growth harder and require new strategies.

This new scarcity could threaten the successful business models of today's large companies, which are built on virtually unlimited access to resources such as labor, raw materials, and energy.

But threats to current business models need not threaten business itself, so long as firms embrace new constraints, leverage them to advantage, and perhaps, in the process, uncover new sources of abundance. Recall Michael Porter's "The Competitive Advantage of Nations" in *Harvard Business Review,* which argues that a nation's competitive advantages sometimes stem precisely from those areas with the tightest bounds. Japan, for example, pioneered lean production techniques in part because it was a mountainous island nation with very little excess land. Singapore is another example of a prosperous but highly resource-constrained economy.

These constraint-related advantages may include more integrated approaches to sustainability, new types of resource efficiency, and innovation around new inputs. They may also include more radical approaches such as de-materialization or an emphasis on well-being over physical production and consumption. Ultimately, the ability to navigate this environment can be a significant competitive differentiator, giving rise to a new set of models for thriving in a new context.

The End of Abundance?

Three major global trends are driving resource scarcity for businesses:

- First, capital is becoming less abundant as interest rates rise, ending a two-decade streak of nearly free capital. In the medium term, interest rates are projected to settle well above the near-zero levels of the past 20 years. Also, the tailwind of global economic integration has played out.

- Second, pandemic-induced labor shortages are merely a prelude to more widespread and persistent labor scarcity. Compounding pandemic-related shortages, the WEF estimates that, by 2025, half of all workers globally will need to reskill to meet changing labor demands. And the long-term challenge of population aging and decline will take hold in the coming years; the UN reports that two-thirds of the global population already live in countries with births below the replacement rate. Migration into those countries is likely the only way to prevent population decline.

- Third, the supply chain woes of recent months are also merely harbingers of more persistent resource depletion, scarcity, or price increases. Resource scarcity is already apparent for some inputs like water, which the WWF says will be insufficient for two-thirds of the world's population by 2025. Depletion of other inputs, including many chemical elements, may occur within the century. Further, as planetary challenges push countries to begin pricing in externalities like climate change, current business models will likely come under pressure even before depletion is fully apparent.

For businesses, it will become harder and harder to find easy growth by relying on traditional notions of abundance. Instead, businesses will need to innovate to create new types of abundance, whether that comprises novel sources of talent or new types of input to create offerings with fewer harmful externalities.

Prosperity Without Easy Growth

Farsighted leaders will counter the global boundary-tightening trends by rethinking business models to navigate and even exploit scarcity in the short term and to find new abundance in the long. This will require leaders to take various strategic actions on different time horizons.

Today, adapt your market positioning and your stance on innovation to mitigate and exploit scarcity to your advantage. These actions will be familiar to most companies from other contexts. The challenge will be to take sufficient action, with sufficient speed.

- **Reposition for growth.** In each economic crisis, demand patterns shift, and winning formulae for growth change. Even in times of low aggregate growth within a sector or an entire economy, there is always growth somewhere, so reposition into product and market segments that are growing. The 2008 financial crisis significantly shifted demand patterns. So did COVID-19, which significantly increased consumer appetite for digital shopping and consumption. Dell had done big business selling desktop computers to companies. But when the pandemic hit and work-from-home materialized, companies no longer wanted desktops; instead, they had an increased need for laptops for their employees. Dell was able to capitalize on the shift and is now better positioned to support enduring changes in the pattern of work. Now, an impending crisis of scarcity is priming consumers to shift their demands toward sustainable and long-lasting products, as well as to experience and entertainment services.

- **Expand talent access.** Adapt your talent strategy for advantage today and tomorrow. Create a "bionic organization" by focusing human talent where it is needed most, in areas requiring imagination, empathy, or ethics, and leveraging AI where it is especially adept. Further, broaden your talent search, in order to find the best talent and the freshest perspectives. Expand the search at home by developing upskilling or reskilling capabilities to support evolving talent needs and reach underrepresented populations. For example, Amazon must rely on nontraditional IT and tech workers to staff its rural data centers, so they train talent by partnering with local community colleges to create purpose-built vocational programs.

  Expand supply by making your talent search global, and by creating a culture and a structure that support borderless collaboration. Africa and South America will have the most population growth in the next century and will therefore be potential sources of labor. Start building an international culture in your company now. Rakuten, a Japan-based e-commerce firm, made the transition early and mandated in 2010 that the company become English-first, in order to become globally relevant. The transition took two years, but the company reaped the rewards, growing revenues from $3.9 billion in 2010 to $15.3 billion in 2021.

- **Build resilient supply systems.** We know from physics that there are often early warning signs of critical phase transitions (such as collapses) in complex systems. The signs include increased variance and a slowing down of the return to normal after disturbance. We have seen both occur in supply systems during the COVID pandemic, requiring a more holistic approach to enterprise resilience. For example, Totino's faced a rotating list of ingredient shortages for its frozen snack, so the company developed a modular set of 25 recipes that allowed it to continue producing despite such shortages. Diversity (in this case of recipes) is one of the six principles that form the pillars of system resilience.

  Adaptability, another pillar of resilience, can be very valuable in adjusting production capacity in volatile markets. This is relevant in all businesses—even in aluminum smelting, with its notoriously inflexible manufacturing systems. For example, TRIMET, a German aluminum producer, invested in new technology to allow its smelters to vary energy consumption and aluminum production by up to 25% in either direction (compared with the usual range of 5%). This allows TRIMET to adjust consumption to produce at off-peak hours, saving money and energy. In the new volatile and resource-constrained context, companies will have even more reason to tap into each of the six biological principles for creating resilient systems: diversity and adaptability, discussed above, as well as redundancy, modularity, prudence, and embeddedness.

In the medium term, find new abundance through innovation and by making environmental sustainability a durable competitive advantage. It's a challenging task—currently, only 20% of businesses even claim to be able to accomplish it—but it has the power to create true differentiation.

- **Innovate for growth.** A stagnating industry or economy is not a death sentence for an individual company. If you can't find growth passively, make it happen. To that end, innovate to defy the industry average growth rate. In scarcity-constrained, low-growth environments, innovation becomes more important as companies compete more viciously for limited resources. By creating offerings using new inputs and business models, innovators can find reprieve and new abundance.

- **Practice disciplined innovation.** Continued evolution in technology, shifting economics of input resources, and demands for more sustainable business models require innovation at the very same time that an elevated cost of capital makes it more expensive. A new, more disciplined approach to innovation is therefore necessary. One such approach would be the adoption of "co-ambidexterity," wherein the assumed tradeoff between exploration and exploitation is broken. Customer interactions are mined more effectively to identify and shape emerging preferences with shorter learning cycles and more targeted innovation.

- **Leverage "sustainability scarcity."** When many companies simultaneously attempt to shift to environmentally sustainable and renewable materials, a new (more temporary) scarcity takes hold in the market for sustainable goods. Build advantage by getting one step ahead of such cascading shortages; embrace the bottleneck, and then work to help solve it for yourself and your industry. Do this either by securing your own supply of sustainable materials, as both Coca-Cola and Pepsi have done through investments in recycled plastic R&D and infrastructure, or by contributing to the formation of sustainable resource markets by advocating for advantageous policy, investing in early innovation, or forming coalitions to address supply chain constraints.

- **Build sustainable business models.** Business leaders must reinvent business models so that companies can thrive even as consumers and governments become more concerned with preventing degradation to the planetary systems that support life. We find that the most successful sustainable business model innovators have reimagined their core business models around new environmental, societal, and financial priorities, rather than simply adding sustainability as a separate consideration. There are many archetypal strategic moves that businesses can make to transform current business models into sustainable ones, including owning the origins, owning the whole cycle, expanding societal value, expanding value chains, innovating in ecosystems, relocalizing or regionalizing, energizing the brand, and building bridges across sectors.

  For example, Cotopaxi made a name for itself in the outdoor gear market with its colorful bags and clothing by expanding societal value, energizing the brand, and expanding value chains. The zany, mismatched fabric combinations come from the company philosophy of using fabric scraps from other, bigger bags. The company made sustainability and waste reduction synonymous with its brand, and in doing so found market success with a model that minimizes the raw inputs required.

In the long term, prepare for a world where material growth may be severely constrained in aggregate. The growth hockey stick, which began with the industrial revolution and created modern business and society, cannot continue indefinitely for reasons of both simple arithmetic and ecological sustainability. We currently have few answers as to how continued prosperity can be reconciled with these escalating constraints. But we can reasonably suppose that the path forward will involve both reducing the material intensity of production and consumption and realigning economic value with what we as humans will value in a resource-constrained future.

- **Stop relying on material growth.** Dematerialize your product offering by taking "reduce, reuse, recycle" to the next level; embracing the service and experience underpinning product offerings; or innovating in the digital realm. Selfridges, the British department store, set a goal of having half of its customer transactions based on resale, repair, rentals, or reuse by 2030. This benefits customers, who will have more options for engagement with the brand, and Selfridges, which will create durable business lines with lower material intensity. Importantly, it will also benefit the earth.

  When it comes to experience, luxury clothing brands are also pioneers. The luxury sneaker brand Golden Goose differentiates itself in a crowded space by promising the highest level of shoe repair. It fits the company's brand of quality shoes that are built to last and creates an immaterial business arm and differentiator. Another tack that luxury fashion brands could lead is expansion into the metaverse; Morgan Stanley projected in 2021 that luxury fashion in the metaverse could be a $50 billion industry by 2030. Whatever method a business takes to dematerialize, the result is both lower cost and a decoupling of revenue from scarcity-induced instability.

- **Change your metric for success.** Become a company that experiments with its metrics for success. Daniel Leventhal, a leading thinker in corporate strategy, posits that leaders might reimagine corporate exploration as experimentation with new metrics of performance. As we value more and more our shared context, it is logical that we will measure and manage it with new metrics that reflect this. The proliferation of ESG and impact investing firms resulted in an abundance of success metrics from which to choose, though at the highest level the goal of a company must of course be dictated by its values. At the level of a nation or society, we could also change our goals. We could, for example, adopt inclusive well-being as an umbrella goal. Or we could adopt inclusive wealth, which is a macroeconomic concept that includes natural capital and human capital, in addition to the more familiar production capital. The US plans to start publishing inclusive wealth metrics, alongside GDP, within the next few years. Such a development would naturally have implications for how companies are taxed and regulated, and therefore how they ought to measure success. Some companies are already experimenting with different ways of measuring value. Everytable, a fast-casual food chain and delivery service, uses economies of scale and central kitchens to beat competitor prices for healthy meals. The company also uses a variable pricing model to reach disadvantaged neighborhoods, capturing customers in more areas precisely because it prioritizes fighting food insecurity as part of the business model.

Ultimately, it will be the companies that use these new cascading constraints to their advantage that will succeed by creating new abundance.

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Doing More with Less

Providers and payers face distinct challenges to their business and care models. The fundamental economic model of US hospitals is broken. Payers need to reduce costs, but facing labor issues they cannot afford to lose hard-to-replace talent by resorting to the time-tested solution of cutting staff. As a new Center for Medicare and Medicaid Services regulation takes effect in the US, both providers and payers will soon be subject to unprecedented pricing transparency. Health systems and health insurers may both need to consider transformational responses.

February 2023

The Existential Threat to US Hospitals

By Szoa Geng, Sanjay Saxena, Ryan Shain, and Natasha Taylor

US hospitals are facing the most challenging economic environment in recent history. Absent significant intervention, we project that the annual financial shortfall of US health systems will total more than $200 billion by 2027. Inflationary pressures and labor shortages are only the tip of the iceberg. The more substantial issues are structural challenges that fundamentally threaten health system economics and their ability to provide care. Even well-capitalized health systems will find it difficult to deliver on their mission.

Addressing the challenges requires collective action. Leaders at many health systems are already making tough choices: curtailing services, cutting costs, and asking their clinicians and staff to do more with less. But they must look beyond these incremental cost-saving measures to transformative changes that will put their economics on a firmer footing and ensure continuous performance improvement going forward. Government (Medicare and Medicaid) and private payers also have a part to play by working with providers on more sustainable reimbursement rates and new value-based payment models that promote more cost-effective approaches to patient care.

If the systemic issues are not resolved, the situation facing health systems will worsen, with enormous consequences for patient care and care equity. Below we outline the challenges ahead and the steps that health care leaders need to take to ensure a sustainable, resilient US health system for years to come.

Systemic Issues Bite Hard

US health systems just completed their worst financial year in decades (See Exhibit 1.) Kaufman Hall found that more than half of US systems incurred negative operating margins in 2022. Last year also saw 19 hospital closures or bankruptcies, according to *Becker's Hospital CFO Report*. This year promises to be worse.

The economic challenges are already being felt by caregivers, such as doctors and nurses. *Becker's Hospital Review* reports 18 strikes by health care workers in 2022. A recent nurses' strike in New York City made national headlines. According to Definitive Healthcare, 117,000 physicians left the sector in 2021. (See "Physicians Feel the Pain.")

The ramifications go further. Losses on the scale we project undermine providers' ability to sustain their missions. Health systems provide essential services to the community, and often there are no viable alternatives. Health systems also are frequently among a region's biggest economic engines and largest employers. Sustained losses could have impacts that extend beyond the health care sector.

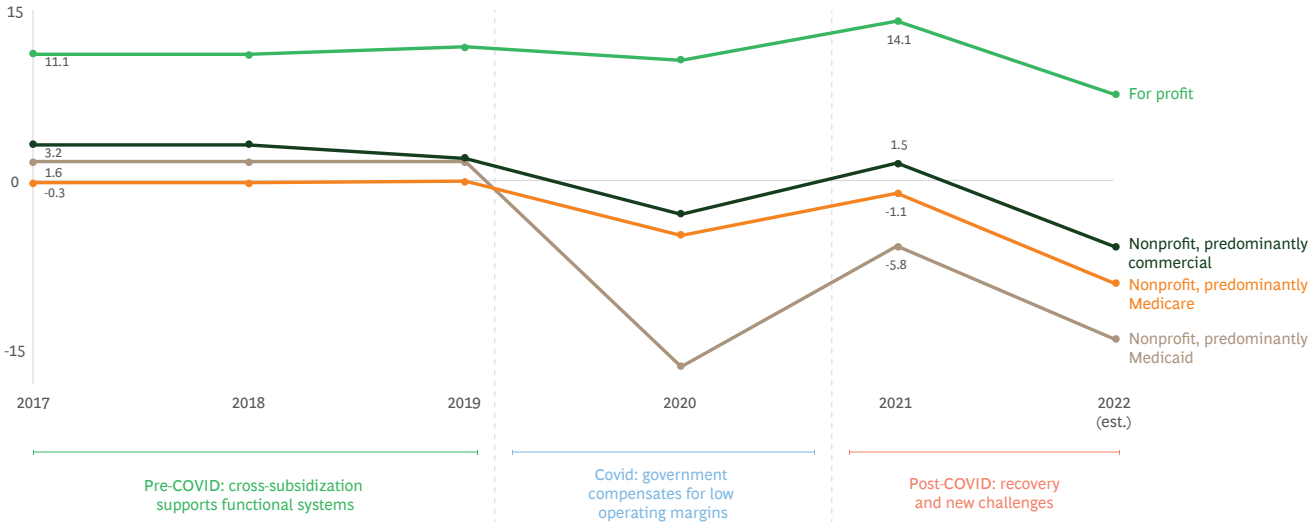
Four entrenched trends are shaping the financial outlook for providers and without intervention will lead to a 10 percentage-point drop in operating margins by 2027. (See Exhibit 2.) These are the migration of patients away from acute-care settings, demographically driven shifts in the payer mix, uneven changes in patient volumes, and inadequate reimbursement rates.

Patient and Service Migration

In a trend accelerated by the pandemic, we expect a continuing exodus from acute settings of high-margin services, such as elective orthopedic, neuro and spine, oncology, and cardiac procedures, which can account for a significant portion of net patient revenues in a typical health system. Patients clearly prefer receiving care in more convenient, consumer-friendly outpatient locations to visiting a hospital campus. Physicians often feel similarly, and payers continue to encourage this shift given the lower costs associated with treatment outside a hospital.

Exhibit 1 - All US Health Systems Face Financial Challenges

Average operating margin of the 100 largest US health systems, 2017–2022 (%)[1]



Sources: Published reports; BCG analysis.

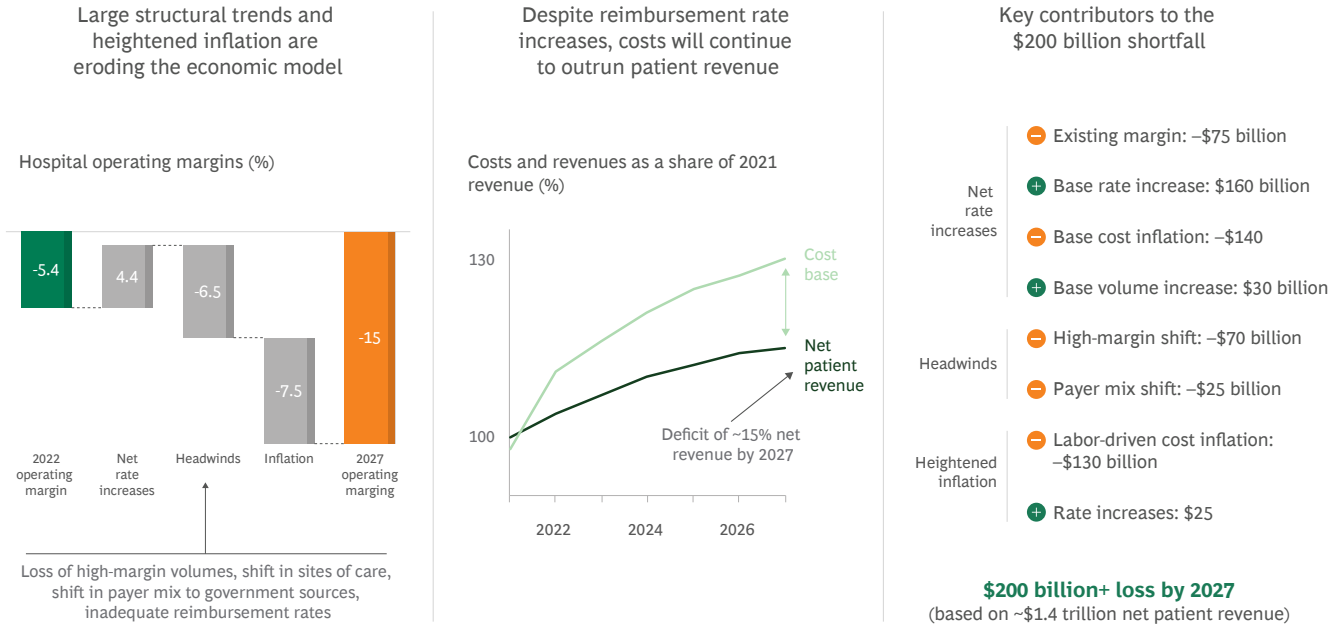
[1]Excluding CARES funding.

Physicians Feel the Pain

More than half of US physicians today are employed by hospitals, a percentage that has been growing in recent years and that accelerated during the pandemic. Not surprisingly, the economic challenges of health systems are trickling down to physicians, some of whom were asked to take pay cuts or furloughs over the past two years.

Worsening economics will make it more difficult for health systems to retain talent in specialties where there are alternative employers, such as private equity-owned practices, or alternative models, such as “concierge” care, which caters to more wealthy patients. The 2% cut in Medicare payments to physicians in 2023, following two decades of flat rates, may push more physicians to opt out of seeing Medicare patients, which will exacerbate access challenges for economically disadvantaged patients and broaden care inequity.

Exhibit 2 - The Factors Contributing to the Looming Financial Shortfall



Sources: Published reports; BCG analysis.

In some cases, these services will move to hospital-managed ambulatory settings, but more often, they will leave the system altogether (to physician-owned, venture capital-backed, or private equity-owned service companies, for example). While this migration offers the potential of similar patient outcomes at lower cost, it also erodes the financial stability of many health systems. Our projections indicate that a typical health system can expect to lose 20% to 30% of current revenue from these high-margin services by 2027, resulting in a 4 to 5 percentage-point drop in operating margins.

Payer Mix

We are in the midst of a steady evolution in the typical health system's mix of payers from commercial insurance to government-funded sources, including Medicare, Medicaid, the Children's Health Insurance Program (CHIP), and subsidized Affordable Care Act (ACA) marketplace plans. As the population ages, some 17 million baby boomers will have moved to Medicare between 2020 and 2030; about 10,000 patients become Medicare-eligible every day. Medicaid and CHIP enrollments jumped by 20 million people between 2020 and 2022, when they totaled roughly 91 million. The increase was driven by the Families First Coronavirus Response Act and by ACA Medicaid expansion in several states.

While these numbers can be expected to fall with the end of continuous enrollment under the COVID-19 public-health emergency, secular trends will continue to push enrollment upwards as the last states implement Medicaid expansion and low-income individuals age into dual coverage. ACA marketplace enrollment has also grown steadily, as many smaller employers move their employees onto the exchanges through Individual Coverage Health Reimbursement Arrangements and other vehicles. ACA marketplace signups increased 13% for 2023.

The hard facts for hospitals are that Medicare reimburses at roughly half the rate of commercial payers, ACA marketplace plans at about 60%, and Medicaid at about 40%. Every lost commercially insured patient puts a significant dent in top-line economics and hits the bottom line even harder. For a typical health system, this demographic shift will lead to a 1 to 2 percentage-point decrease in operating margin by 2027.

Patient Volumes

At the national level, patient volumes have mostly recovered to prepandemic levels, but the recovery has not been evenly distributed. Large, well-capitalized health systems continue to pick up a greater share of patient volumes, while smaller regional hospitals are at risk of permanent volume loss. Volumes have also shifted in ways that are financially detrimental for many systems, which are seeing fewer profitable procedures (such as surgical interventions) and larger numbers of less profitable patients with more acute conditions and longer lengths of stay.

> **Every lost commercially insured patient puts a significant dent in top-line economics and hits the bottom line even harder.**

Non-COVID inpatient volumes are expected to remain flat or show only modest increases (not enough to affect operating margins) over the next five years. While outpatient volumes will grow by about 4.5% during that period, health systems that have not established ambulatory alternatives to the hospital will cede much of that volume to other players.

Reimbursement Rates

Even after the rate hikes of 2021 and 2022, hospitals need further substantial reimbursement increases from insurers to offset the double-digit cost jumps and structural economic challenges faced by health systems.

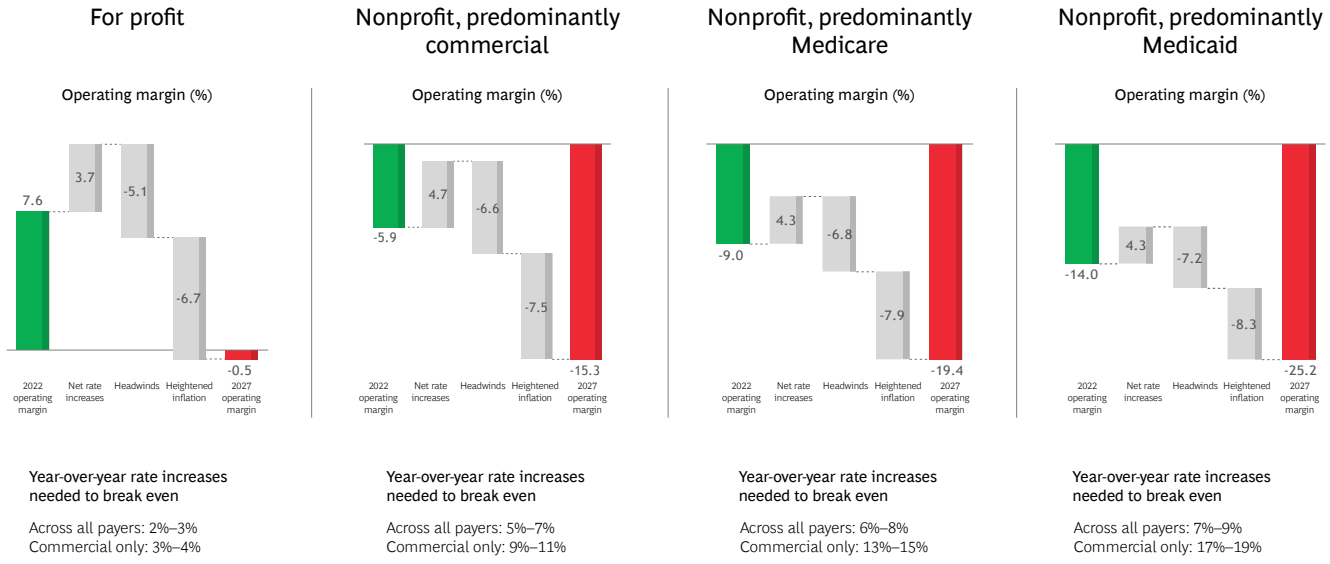
To break even in 2027, the typical health system will need a rate increase of 5% to 8% per year over the next five years across all payer types. This is twice the annual reimbursement growth rate of the past decade. If government payers don't step up, health systems will require a 10% to 16% year-over-year rate increase from commercial payers.

The magnitude of such increases would require commercial payers to raise premiums significantly for individuals and employers, exacerbating affordability pressures and potentially forcing some employers to reduce benefits, shift more cost onto their employees, or drop coverage altogether. Paradoxically, the latter would result in more government-funded volume for providers (in the form of expanded Medicaid and ACA marketplace enrollees), fueling the cycle for even steeper commercial rate increases in the ensuing years.

Provider Vulnerability Rises

No health system is immune from these demographic, social, and financial realities. Hardest hit will be rural hospitals and those in poorer urban areas. (See Exhibit 3.) Systems with a higher-than-average government payer mix, and those with significant cross-subsidization between high-margin and lower-margin service lines, are also at risk. But even for-profit systems that have greater freedom to choose which markets to serve and which services to offer will see margins erode, and they could face financial shortfalls as well. The inevitable outcome will be less access to care among the neediest populations.

Exhibit 3 - Systems With a High Government Payer Mix Will Be Hit Hardest, but Even For-Profit Systems Face Financial Shortfalls



Sources: Published reports; BCG analysis.

Time for Action

Health systems cannot address these challenges alone, but they still need to take action on the factors they can control. Here are three imperative steps for individual systems:

- Assess the magnitude of the financial challenges.
- Look beyond traditional cost levers to systemic issues.
- Recommit to the core mission of the health system and leverage external partners to do the rest.

These steps require a programmatic approach driven from the top. Transformational change starts with a C-suite agenda that encompasses a comprehensive set of revenue and cost levers, aligns enterprise-wide incentives in an ambitious program, and deploys flexible resourcing to ensure that program goals are achieved. Success also requires a continuous-improvement mindset and governance mechanisms that encourage ongoing innovation and optimization, in the same way that the manufacturing sector ekes out incremental improvements in efficiency or quality every year.

> **Health systems need to go beyond traditional cost levers to the harder work of bringing their core operations in line with their ambitions, strategies, and realistic expectations for the future.**

Assess the Magnitude of the Challenges

Multiyear planning is essential to understanding the magnitude of the financial challenges a system faces and setting the ambition for corrective action. Since every s ystem is different, a rapid economic health check can help.

The first step is an objective assessment of the system's current economic state and the likely trajectory of future cost, service, and reimbursement trends. This analysis should include sizing the effect of high-margin services leaving the hospital and the extent to which some can be recaptured in hospital outpatient and system-operated ambulatory surgical settings. Hospitals also need to evaluate their long-term exposure to an evolving payer mix and to more rapid shifts from an economic recession and develop an understanding of the degree of change required to sustain growth.

Address Systemic Issues

While some cost pressures are temporary, others are deeply embedded. Health systems need to go beyond traditional cost levers (such as reducing administrative expenses and optimizing third-party spending) to the harder work of bringing their core operations in line with their ambitions, strategies, and realistic expectations for the future. This will involve redesigning core processes, eliminating low-value activities, and automating labor-intensive ones. Promoting top-of-license work (with everyone spending their time on tasks that require their peak level of skill) is essential to ensuring long-term system efficiency and to paying for the multiyear wage hikes that are being secured by nurses and other clinical staff.

The goal is not only to incrementally improve the efficiency of work but to fundamentally rethink work: does it have to be done, by whom, and in what capacity? For example, in areas such as scheduling and check-in, self-service solutions remove these tasks from staff and not only reduce costs but also increase patient satisfaction.

Recommit to the Core Mission

Health systems exist to deliver care, pure and simple. Ancillary on-site businesses (cafeterias and laundries, for example) and related but noncore functions (such as finance and IT) can be better and more efficiently handled with support from external partners, which also frees up resources for the hospital.

In the face of flattening revenues and rising costs, hospitals need to formulate a long-term strategy to tap into new sources of value and direct their investments. They need to answer existential questions about what the health system wants to be able to do in the future, what this implies about changes to the core business, what options are available, and what tradeoffs those options entail.

The biggest challenge for most systems will likely be footprint and service optimization, because the decisions involved go to the heart of any provider's mission. Ensuring that a system has sufficient scale in procedural volumes at each location—and consolidating where it does not—is necessary to providing responsible care. Diversifying the type and flexibility of facilities in the system's footprint and being creative about how clinicians and patients connect are critical to serving the needs of harder to reach communities. To facilitate clinician-patient engagement, more systems will need to use a mix of "circuit riding" (clinicians moving around the system day to day), air transport services, and virtual services.

An Existential Challenge Requires Collective Action

Health systems can get only so far on their own. Payers—including Medicare, Medicaid, and private insurers—and policy makers must be part of the solution. There are still healthy profit pools in the ecosystem: publicly traded health care companies across the value chain reported significant profits over the last two years (the six largest health insurance companies earned profits of $8.5 billion in the third quarter of 2022). Private equity-backed care delivery startups have found ways to make money, often by providing more convenient, consumer-friendly service.

There can and should be more equitable distribution of private dollars to ensure that hospital closures don't create health care deserts around the country. But the responsibility for financial viability can't rest only on private companies. Traditional fee-for-service Medicare accounts for more than half of beneficiaries in the US. The public sector must also be part of the solution, by finding ways to provide higher overall reimbursements, for example, and by experimenting with new payment mechanisms, such as reimbursements that support rural health care delivery and transport of patients to centers of excellence for more specialized care.

Policymakers can take a page out of the experience of fast-developing economies elsewhere that have turned adversity to opportunity by leapfrogging the lack of traditional infrastructure with lower-cost, more technology-enabled solutions. In China, for example, the government legalized online-only health care providers in 2015 and has since poured billions into developing an internet health ecosystem to address overcrowded public hospitals (which were an issue even before the pandemic, given the lack of a strong primary-care system).

A sustainable and resilient US health system is essential to the well-being of patients and their communities. As we recover from a multiyear pandemic and move through a period of high economic uncertainty, all players in the health care ecosystem would benefit from working together toward this worthwhile goal.

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How Health Insurers Can Keep Talent and Cut Costs

By Nate Holobinko, Kazim Zaidi, and Daniel Gorlin

A confluence of factors means the time-tested approaches to cost control won't work. Insurers need to rethink how they achieve more with less while maintaining a strong customer focus and employee value proposition.

Health insurers are no strangers to controlling costs. The persistent dynamics of aging populations, razor-thin margins, and intense competition have caused most payers to repeatedly transform their operations through multiple economic cycles, typically pushing harder on costs in bear years and emphasizing growth during more bullish periods. Over time, the industry has implemented waves of outsourcing, more robust medical management, and automation. But this episodic approach has left in place inefficiencies, stranded costs, and complexities that are harder to remove. The attacks on costs have also taken a toll on talent, which has endured the ups and downs of hiring sprees followed by workforce reductions.

As we enter an uncertain economy, the confluence of four factors makes the tactics that worked in the past insufficient to deliver the cost savings needed now:

- A new level of pressure on costs stemming from the current inflationary economy and heightened rate resistance among employers and members due to inflation and fear of a downturn
- Continued high service expectations from those same employers and members
- Increased competition from incumbent players and from startups and tech entrants increasingly well positioned to take share by addressing consumer and employer demands
- A talent scarcity that threatens the ability to deliver on day-to-day core services and impedes development of new technological capabilities

Taken together, these factors present payers with a challenge most have not seen before: the need to take massive amounts of cost out of their organizations without cutting staff. Instead, companies must eliminate or streamline basic tasks and redirect their employees to take on higher-value and, in many cases, new, more technology-based types of work.

Incumbents need to upgrade their customer-centric and digital capabilities to meet employer and consumer expectations and keep pace with sophisticated insurgents. Finally, renewed efforts at cost governance will make companies better consumers of products and services from third parties, enabling them to achieve more with less.

We see six moves that serve as the baseline for making this type of transformation happen.

1. Eliminate No-Value Activities

Every company has activities of doubtful value, such as programs that are no longer aligned with the business's strengths or long-term goals. It's time to cut them. A zero-based budgeting-style approach, which applies a clean-slate, bottom-up methodology to resource allocation, can help companies reset their cost base and cost structure so they can redirect funds to their strategic priorities.

> **Rather than concentrating on how best to eliminate jobs, the focus must be on retaining existing talent and making the organization more attractive to tech-savvy workers.**

Many payers are guilty of filling a walk-in closet with forgotten and neglected activities, including care management programs with negative or unproven ROI, products with nearly no members, and "wellness" programs that no one is actually using. While eliminating these programs might seem scary at first, employees will welcome the chance to spend their time, energy, and enthusiasm on tomorrow's health plan rather than yesterday's. The bottom line will benefit as well.

But remember this: in a tight labor market, it's more important than ever to think through in advance the staff impact of any cuts and the opportunities for retaining and redirecting those affected. Communicate these opportunities upfront so team members are not left to worry and consider the exit door.

2. Automate Low-Value Activities

Traditional payer value chains are being reshaped by exponential technologies that promise big improvements in capabilities and performance over a short time. Artificial intelligence and machine learning not only unlock trapped value, they create operating leverage in high-touch functions, such as member engagement and value-based care programs. These and other functions can be automated using existing interfaces and bolt-on tools. In addition to generating cost savings, such tools free up existing staff so they can be retrained or "upskilled" to handle more strategic, service-oriented, and value-added work.

Most payers can also exploit data more effectively. Leading companies have learned from digital natives and built modern technology and data platforms that enable small, agile, and independent teams to operate at speed and scale without being bogged down by platform and data interdependencies. They are also able to assess new platforms and technologies and determine how important they are in supporting business objectives—for example, in risk management, regulatory compliance, and growth. They use technology to automate handoffs between humans and between humans and machines in such functions as call centers and sales support. They use machine-learning algorithms to recognize patterns and data-driven predictive decision making to improve spending transparency and capacity management in areas such as claims analytics.

3. Rethink Medical Costs

Keeping medical costs under control while continuing to deliver the service and features patients expect is a multi-pronged challenge. Providers are wrestling with financial pressures. Many are operating in the red—some losses run into the billions—making it difficult for payers to use traditional utilization management techniques to keep tight control on medical costs. Pandemic burnout and the "great resignation" have hit providers especially hard, and they are being forced to pay up to replace vital staff. Shifting paradigms of care, such as home treatment and the use of remote monitoring, are further exacerbating labor cost pressures by increasing competition for nurses and medical assistants.

> **Payers need to revisit traditional medical management cost levers while recognizing the need to balance cost reduction and customer service priorities.**

Payers need to revisit traditional medical management cost levers, such as utilization management techniques and procedures to mitigate fraud, waste, and abuse, while recognizing the need to balance cost reduction and customer service priorities. They also need to work with providers on the use of new tools, such as telemedicine, and on developing a better understanding of the underlying causes of health care needs, such as the social determinants of health and mental illness.

The full equation of the value-based health care paradigm, which measures outcomes relative to the cost of achieving improvement, has often been overlooked. Bringing consistent quality to care through the implementation of standardized quality measurement is now an integral function at most payers. But more emphasis needs to be placed on better outcomes, since these are what ultimately reduce spending and decrease the need for ongoing care.

4. Upgrade the Approach to Third-Party Expenses

Supply chain complexity and demand volatility have required payers to rethink spending with third-party service providers. This focus should take three forms:

- Building a cost control structure that examines spending across functions, creating greater ownership among business owners
- Maximizing savings opportunities across all spending categories by revisiting specifications, levels of consumption and waste, potential operating model changes, and other factors
- Looking for advanced solutions that go beyond traditional outsourcing, such as end-to-end partnerships that enable new models of cost effectiveness

Cross-functional category management scrutinizes spending regardless of budget (thus combating the "As long as it's in my budget, I can spend it" culture) and helps develop a more cost-conscious mindset. Leaders can maximize ROI from such initiatives as marketing campaigns or automation partnerships while reducing contractor costs and encouraging overall transparency.

Enabling delivery of best-in-class care models through new partnerships requires a shift in thinking. For example, can partnerships with providers such as One Medical or CityMD lead to cost-effective and feature-rich plans for certain patient segments? Health care technology companies, such as Nuna, are working with payers to make more effective use of the wealth of data that payers have available in new-product and service design.

5. Streamline—and Flatten—the Organization

Payers can take a page from digital natives and organize themselves into flatter, more cross-functional structures. Leading companies in multiple industries are redesigning their organizations, and in some cases their operating models, to leverage combined human and technical skills. They work in agile teams that are given the autonomy to pursue designated outcomes, such as increasing time to market for new plan features or reducing call center wait times. These digital incumbents, as we call them, outperform their less digitally advanced competitors, delivering more value to shareholders, customers, employees, and partners. In the process, they focus the organization on the customer and give people the roles, coaching, and authority to deliver real results, making themselves attractive employers, maximizing the value of existing talent, and reducing excess attrition. They also speed decision making, eliminate redundant management layers, and focus managers on supporting frontline service delivery.

6. Embrace New Ways of Working

Companies are keen to bring people back to the workplace to regain the benefits of increased collaboration, creativity, and motivation, but many are finding that the best solution lies in a hybrid approach that leverages the advantages of the office and work-from-home models. This flexibility can appeal to employees and shrink overhead costs by reducing the need for office space. Smart companies will reexamine their real estate, procurement, and other SG&A expenses in light of the working model they adopt going forward.

At the same time, companies need to explore getting more done with the talent they have by creating incentives to increase workers' productivity or ability to perform additional tasks, for example, or providing education and training programs that upgrade their skills. Claims audit teams trained to work with AI can increase audit volumes. Call center reps with access to data and analytics can help patients make decisions at the time of the interaction. Reconfigured workspaces can improve collaboration and creativity.

> **Companies need to explore getting more done with the talent they have by creating incentives to increase workers' productivity or ability to perform additional tasks.**

These sorts of changes help attract and retain staff, who appreciate the opportunity to improve their skills and deliver value. High-performing employees who enable differentiating capabilities for the company can easily walk away from what they see as knee-jerk or shortsighted cost cutting. Moreover, payers are now fighting with the tech giants and others for digital talent that they have not needed before. Company and workplace reputation matter more than ever.

Making the Changes Stick

These six measures form the foundation of a value-conscious enterprise and provide a checklist against which to measure progress. The big challenge for any transformation program, though, is making the changes stick. Cost optimization will fail if the organization does not change ways of working or reverts to old practices a year or two later. Management can take the following steps to help make sure the changes are embraced and long-lasting:

- Institute a new operating model, including clear governance and decision rights for ongoing ownership of fiscal responsibility.
- Set clear policies and target metrics for both financial and organizational health to maintain progress over the long term.
- Upgrade the planning processes so that progress against targets is transparent.
- Build a data infrastructure and metrics that make it easy for individual leaders to see the impact of their decisions and follow progress over time.
- Create a culture that supports all of the above, rewarding business leaders for making the right decisions as well as recognizing and incentivizing key talent for their contributions.

A cost optimization program can only be built on a foundation of strength. Incumbent payers have durable advantages over less experienced new entrants in many core functions, such as actuarial analysis, benefit design, management of the patient experience and outcomes (including Medicare Advantage STARS measurements), and the ability to manage complex B2B and B2C sales processes. Optimizing costs means building on these strengths. How and how quickly companies adjust, rethinking costs while maintaining a strong customer focus and employee value proposition, and will have a lot to do with separating winners and losers going forward.

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Price Transparency in US Health Care Demands Swift Action

By Josh Hilton, Paul Mango, Katherine Donato, and Daniel Gorlin

A new regulation makes detailed pricing data widely available for the first time. Providers and insurers need to prepare now for a changed competitive playing field.

Competitive dynamics are about to get much more intense in the US health care sector. Price transparency will soon be pervasive for consumers and employers, enabling both to "shop" much more effectively for health care plans and services. Providers and insurers that want to be prepared have 12 to 18 months to get ready as the new competitive environment takes shape. They need to plan for an uncertain future now.

The cause for action is the Center for Medicare and Medicaid Services' Transparency in Coverage Rule (CMS-9915-F), which went into effect on July 1, 2022. Among other changes, the rule requires all health insurers to disclose, for every plan and for every provider in their network, the negotiated rate for every procedure. They must publish the data in machine-readable "flat files," which are simple and easy for others—researchers, regulators, and application developers—to access and use. The files must be updated and republished monthly.

The intent of the new rule, according to CMS, is to "give consumers the tools needed to access pricing information through their health plans." But the impact will extend to every player in the US health care system, transforming competition and relationships among providers, insurers, consumers, and employers. For providers and insurers—the primary focus of this article—the ability to better manage costs, price services, and communicate value to the consumer is emerging as a key competitive advantage.

Specific predictions are premature, but we can make some broad assumptions about the coming upheaval and what providers and insurers need to do to prepare. One thing is already evident: time is short. Those that delay may find it difficult to respond to the changing market a year or two from now.

Opportunities, Threats, and Uncertainty

To a large extent, CMS-9915-F supersedes the CMS's 2020 Hospital Outpatient Prospective Payment System rule, which required hospitals to publish their own negotiated rates and with which only a minority of providers have complied. This rule is different. It carries three big changes for insurers: requiring the publication of rates, making out-of-pocket obligation estimates available to consumers in real time, and altering how insurers calculate medical loss ratios (MLRs). (See the sidebar, "How the Transparency in Coverage Rule Changes the Game.")

Four things are already becoming clear. First, insurers intend to comply. A growing number of companies have published statements on their websites detailing how they plan to address the new requirements. United Healthcare, for example published a 46-page Q&A, "Transparency in Coverage," in September 2022.

Second, the extent of price and data availability is unprecedented in health care. Past efforts to provide greater transparency had only limited success and are of little use in assessing how these changes will reshape the marketplace and consumer behavior. This time, we can expect plenty of opportunities for both providers and insurers—especially those that are prepared to move quickly—to develop new products and offerings.

Third, sectors in which pricing has long been transparent don't provide great models. Health care is an extraordinarily complex system, and a change of this significance can be counted on, at times, to produce unexpected and unintended consequences. The uncertainties highlight the need for preparation and for fostering the ability to respond to developments with agility and speed.

Fourth, disruptive regulatory changes often attract new players to the value chain. In this case, the new entrants will likely exploit an ability to aggregate and manage pricing data and potentially marry it with other data, such as outcome studies. They, too, can be expected to develop new offerings and services, such as comparisons of provider pricing and treatment outcomes, enabling consumers to shop for health care based on value. These new intermediaries could alter the sector's competitive dynamics by inserting themselves between consumers and providers, and perhaps between plans and employers. We know from the experience of other sectors that such new players typically move more quickly than incumbents because they are less encumbered by existing relationships.

Where the Big Changes Can Be Expected

We foresee big changes for insurers and providers in at least three other areas crisscrossing the B2B and B2C sides of the health care sector. (See the exhibit.)

Pricing Strategy

Past studies have shown significant price variation among insurer-negotiated rates with providers, both within and across markets. While current data from insurer machine-readable files is incomplete, BCG's analysis of data released in July 2022 shows variations consistent with previous study observations. For example, sample data from one market contained differences between low and high prices of more than 200% for lab tests and a nearly 600% variation for knee MRI imaging, both common services that are typically considered "shoppable."

Cross-provider and cross-insurer price disparities will likely narrow, but the degree of change will almost certainly differ by type of service. Consumers are much less price sensitive when seeking more complex or life-saving services, such as surgery or cancer treatments, than they are with more commodity-like services, such as regular checkups or lab tests.

In response to the expected narrowing of prices, we may see more pricing tactics and incentives similar to those used in other consumer markets, such as retail and travel. For example, higher-priced providers may try to support premium pricing by offering greater benefits or improving the service experience with more convenience, speed, or amenities. They could also unbundle their prices, much as airlines have done, by starting with a lower price for the basic service and then enabling patients to "buy up" for amenities such as private rooms, catered meals, dedicated nursing staff, or valet parking. At the other end of the spectrum, lower-priced providers can be expected to more aggressively market and advertise their price schedules to set benchmarks against which other providers' options are compared.

How the Transparency in Coverage Rule Changes the Game

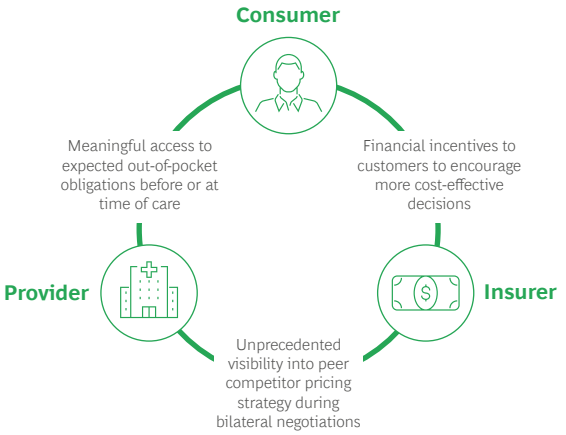
CMS-9915-F has three major components, which collectively will alter consumer behavior regarding the types of health care that they seek, from whom, and at what price. They will also increase the probability that providers will collect out-of-pocket obligations. Each component has varying implications.

Publication of Rates. Perhaps the most significant component is the requirement that health insurers publish two sets of rates. The first includes, for each of the insurer's plans and for every provider in its network, every negotiated rate for every procedure. The second covers any out-of-network provider from whom the insurer has received at least 20 claims in the 90-day period beginning 180 days before the file publication date. The flat-file format mandated for publications will permit third parties to aggregate, analyze, and deliver vast amounts of pricing data to consumers relatively quickly and easily for the first time. Insurers are required to update these files monthly.

Real-Time Availability of Consumer Out-of-Pocket Obligation Estimates. Beginning January 1, 2023, health insurers will be required to provide customers with real-time information on their out-of-pocket obligation for elective procedures, at any chosen provider, given their remaining deductible at any given time. For the first year, this requirement involves the 500 most common elective health care services, as listed in the final rule. Starting in January 2024, the requirement expands to all procedures covered by the health insurer.

Change in the Health Insurer MLR Calculation. Health insurers will now be able to provide financial incentives to encourage customers to select more cost-effective options for care delivery and, for the first time, count the cost of these incentives toward their MLR calculations. This is a powerful lever for insurers and employers because it allows them to provide incentives without cutting into their bottom line; when combined with the new ability of consumers to compare provider prices, it could have a significant impact on consumer choice.

Three Areas of Change for Providers, Insurers, and Consumers



Pricing strategy

Changes in pricing tactics by providers and insurers leveraging new approaches and methods used in other consumer-facing industries

Contract negotiations

Changes in how providers and insurers negotiate with each other as they leverage not previously available market information

Consumer engagement and insights

New methods and tools to engage customers on price, communicate value, and incentivize alternative choices

New need for deeper insights into choice drivers, value propositions, and key tradeoffs for different segments of the customer base

Source: BCG analysis.

As pricing dynamics become more complex and "retail like," insurers and employers could adopt other approaches used in retail, such as coupons, discounts, and gift cards. Developing and using these new incentives will be more complicated than in other industries, given legal and regulatory requirements in health care.

Contract Negotiations

Negotiations between providers and insurers can be expected to become more fact-based and detailed. Both sides will need a good understanding of real costs, procedure by procedure and market by market. Prices are affected by competitive offerings and perceived consumer value. For providers, developing a rich fact base through a combination of the newly released competitive pricing information and a deep understanding of how consumers view the hospital system's services will become essential to designing sound pricing and contract negotiation strategies.

> **Negotiations between providers and insurers can be expected to become more fact-based and detailed.**

Providers will need to develop more sophisticated cost-accounting systems with accurate cost pools and cost drivers. Most do not have such capabilities today, and high fixed costs complicate the task. But as pricing becomes more transparent and consumers become more discriminating, the need for accurate cost accounting as a basis for sound pricing decisions will grow.

Insurers will need similar databases, maintained in real time, that track how other insurers are reimbursing the providers in their networks. They must also understand how consumers make tradeoffs among price, convenience, overall experience, and physician loyalty, all in the context of cost sharing. Both providers and insurers should assume that the negotiators on the other side of the table will have much of this information.

Consumer Engagement and Insights

Consumers are likely to be more directly involved in decisions involving their care, especially when there are price discrepancies, such as two or more in-network providers in the same region charging substantially different rates for the same procedure. The rule's change in the MLR calculation introduces an opportunity for insurers to influence consumers' selection of providers for more commodity-like services, even when cost-sharing arrangements mean that consumers do not directly experience the price difference. This should stimulate innovation in consumer engagement, segmentation, and insights. With price dispersions exceeding 100% in many cases, the impact of guiding patients to lower-cost sites of care could eventually have a material impact on premium levels. Insurers will need to avoid distributing incentives and rewards to those who can be counted on to use low-cost providers, and they will also need to guard against rewards persisting longer than necessary to ensure that consumers remain with their lower-cost providers.

Consumers are likely to be more directly involved in decisions involving their care, especially when there are price discrepancies.

Recent focus groups conducted by CMS revealed that the best venue in which to influence patients' choice of ancillary providers is the physician's office itself. Because many doctors express concern over how much their patients will be obligated to pay for certain services, arming physicians in the insurer's network with the information needed to guide patients to the most cost-effective option may be a potentially powerful tool for modifying patient behavior. Likewise, communicating total costs-of-care differences to employers (and to consumers in the individual market) could be important for customer retention as competition intensifies over time. Preemptively engaging and educating brokers, who will surely encounter tough questions about price and reimbursement differences, will be vital.

Digital engagement with consumers can be expected to grow in importance. The likely bevy of new entrants threatens providers with yet another intermediary seeking to own a piece of the patient relationship while extracting a fee. Providers have some intrinsic advantages that they can deploy to preempt these new entrants, including upgrading their own digital front doors, building on physician-patient trust, becoming an efficient electronic repository for patient medical records, and perhaps even creating their own "rewards" programs.

For providers in particular, segmenting consumers and deriving insights about each segment will become another important capability. Providers will need to be able to answer such questions as:

- What are the discrete and strategic segments of the patient base today?
- Which patients are more price versus service sensitive?
- What are patients' "breakpoints" when making tradeoffs (for example, how far will a consumer travel to save how much money)?

Time to Act Now

The preparation clock is ticking. Some data is available now, and much more will be available in the coming months. Early-stage and more mature companies are already racing to occupy lead positions as the go-to purveyors of information and insights. Aggregating, organizing, and analyzing the data will take some time, so insurers and providers likely have 12 to 18 months before the pricing information becomes widely available to, and usable by, consumers and other value chain participants. This is the window in which to evaluate and prepare for the potential disruptions, threats, and opportunities. Those that move slowly may find themselves outmaneuvered by much better-informed and decisive competitors, partners, and new entrants.

Insurers

Here are some specific steps insurers should take:

- Initiate a member market segmentation process as soon as possible to understand which customer segments are more or less price sensitive, for which types of procedures they are most price sensitive, and what customers' " breakpoints," or tradeoffs, may be.
- Identify a set of targeted clinical services and member segments within which to deploy newly available MLR incentive levers. Use price dispersion data from current negotiated rates with existing network participants. Employ an agile, test-and-learn approach to put minimum viable products (such as app updates and other tools that help members comparison shop more effectively) in the market and evaluate the impact.
- Start to assess how to best build transparency, MLR incentives, and out-of-pocket obligations into your digital consumer engagement approach.
- Evaluate the opportunities to design innovative products for different segments, including fully insured, administrative services only, and Affordable Care Act customers.

Providers

Providers also need to move quickly along the following lines:

- Develop an accurate, detailed cost accounting of all contestable services (such as labs, imaging, ambulatory surgeries, endoscopic procedures, and cardiac catheterizations).

- Segment patients to derive a better understanding of the strength of their loyalty, price sensitivity, and breakpoints associated with switching.

- Determine where you want to be positioned on the price-to-value spectrum, from low-cost solid service at one end to premium high-end care with lots of extras available at the other. (Larger markets will likely accommodate multiple value propositions.) The determination will have follow-on implications for the organization's cost base, talent, culture, asset base, and supporting business management processes.

Providers and insurers should both assume that the Transparency in Coverage Rule will disrupt the markets for health insurance and health care services. The more urgent questions are how much and how quickly. Capturing the opportunities and preparing for the threats will largely be a function of recognizing that the time to plan and act is now. There's a lot that can be done before pricing data is fully available, and incumbents will need the full 12 to 18 months to prepare.

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Technology

The digitization of health care remains a work in progress. Digital technologies can improve outcomes, reduce costs, enhance the patient and provider experience, and deliver real value—but only if digitizing organizations apply appropriate design thinking and strategy, build robust technology, and learn to move forward in an agile way. The need for vastly better use of data is particularly acute among state public health departments, but these agencies need a new data operating model. In one respect, health care is leading digital evolution if not revolution: the metaverse and its underlying technologies, such as augmented and virtual reality, are spurring a transformation in the sector. Innovative companies backed by substantial funding are achieving that rare trifecta of increasing access, improving outcomes, and lowering costs.

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Digital Transformation in Health Care Can Be Fixed

By Ania Labno, Matthew Huddle, Tom Retelewski, Victoria Borland, and Josh Kellar

The promise of the digital revolution has loomed large over the US health care industry for more than a decade. Apps, websites, patient portals, and myriad other tools have each been hailed as *the* game changer in the way that payers, providers, and patients interact. Each advance was supposed to finally tame the chaos of an unbelievably complex ecosystem, to the delight of everyone involved. In 2010, the President's Council of Advisors on Science and Technology said, "Americans [will] soon enjoy the benefits of electronic health records." *Harvard Business Review* predicted, "Innovations in telemedicine will accelerate in poor countries where access and cost are critical issues. Such innovations can transform health delivery in rich countries."

Ten years later, very little of that promise has come to fruition. Millions of Americans have a half-dozen unused health management apps on their smartphones and a fitness wearable collecting dust in a drawer. Meanwhile, they still call their doctor's offices for appointments, fill out paper questionnaires, fax records, write checks. Back in 2006, *Harvard Business Review* first asked, "[W]hy is innovation so unsuccessful in health care?" Now one can reasonably ask: Why hasn't anything changed?

This question gains urgency in light of COVID-19. Greater demands have been placed on still-emerging technologies such as telemedicine, asynchronous visits, and artificial intelligence-informed triage programs. These innovations are facing increased use, new operational demands, and more scrutiny of their user friendliness and accessibility, particularly for older, less tech-savvy consumers. New rules from the Office of the National Coordinator for Health Information Technology and the Centers for Medicare & Medicaid Services have added a federal push to the demand for technologically driven transparency in, and patient access to, electronic health records. The rules would make interoperability more feasible while also raising potential security risks for health systems. These concerns put pressure on design and technology infrastructure, and the clinical implications of falling short are more dire than ever. Meanwhile, consumers are more ready than ever to embrace digital solutions—provided they actually work.

The industry money is there, to be sure: digital startups are highly valued by investors, and Silicon Valley has produced a glut of health care unicorns. (Oscar Health is valued at $3.2 billion, Babylon Health at $2 billion, One Medical, $2 billion, Devoted Health, $1.8 billion, and Phreesia, $970 million.) Eager to support their members and patients, payers and providers alike have partnered with an array of vendors to create a ragged collection of solutions, but these have mainly served to scatter badly needed functionality across health systems and platforms. The fragmentation frustrates consumers and undermines investments. Patients must log in to one app to manage their weight, another to track their chronic condition, another to pay their bills, and yet another to book an appointment for a child. The more individual products they need in order to take control of their health care, the less likely they are to utilize any of them. Why would they, when they can still pick up the phone, call the doctor's office, and have all that work done for them?

Moving Digital Health Care Forward

One large regional hospital system that was trying to transform its technology—and its care—spent more than a year working with BCG to confront the shortcomings. After establishing a mandate to put a groundbreaking product into the hands of patients within a year, and after consulting with experts and consumers to identify potential roadblocks, the system's CEO mobilized the organization in support of his ambitious vision.

The result is a product unlike anything previously available, which in early pilots is generating ample enthusiasm with patients. Along the way, we identified five major reasons that the promise of the digital health care revolution remains unfulfilled. (See Exhibit 1.) Here are the problems we found and the strategies we used to overcome them.

Most Digital Initiatives Do Not Focus on Consumer Needs. In the past, digital health care initiatives typically looked to providers for guidance on content. These experts were thought to know what their patients needed and to have the ability to drive adoption. But most consumer health care technologies have failed to bear out this assumption.

Consumers today take an unprecedented degree of ownership over health care decisions, and the rising costs of care (combined with more high-deductible health plans) mean that they act on it. Consumers want convenient, high-quality, and affordable care—goals that digital solutions such as online booking and telemedicine support. They also want solutions that analog health care cannot deliver, including tools that they can use wherever they are, that help them care for themselves or their loved ones at home, and that help them deal with the health care system.

Exhibit 1 - The Main Challenges in Creating Digital Solutions in Health Care

Source: BCG analysis.

Most health care systems don't design digital tools to meet these demands. Nor do they train their development teams to understand and act on the functional and emotional needs of consumers.

To overcome this blind spot, our client health care system applied a human-centered design approach. Human-centered design is agile and iterative, seeking consumer feedback early in the design and development process and returning for more insight throughout the product's growth cycle. Following this strategy ensures a friendlier product that is better equipped to meet true consumer needs. It also translates into cost savings: patients are given a chance to react to a series of prototypes, and the concept and execution can be tweaked before an expensive software development effort brings the product to life.

Our client sourced feedback from a broad cross-section of its patient population—the chronically ill, caregivers with young children or aging parents, cost-sensitive, tech-savvy young people, and more. It was thus able to tailor its technology not just to a consumer perspective, but to the specific perspectives of actual users. This led to a number of critical insights, such as that the health data the product provides would need to be "translated" from its form in patients' electronic health records. (Consumers don't want to just view their health information; they want to understand it.) Putting these insights into practice enabled the health system to develop a product that consumers appear ready to embrace.

The Value of Digital Solutions Is Difficult to Measure. Tying consumer needs to business objectives in a tangible way is crucial when seeking financial and operational buy-in across an organization. It's easy to determine the value of a product when its return on investment is measured solely in dollars. Consumer digital health care tools tend to deliver a different type of value—longer-term retention of patients within a health system, for example, or higher engagement, better outcomes over time, and more flexibility in the way care is delivered. The industry can have a hard time assessing value, even though these benefits can lead to lower costs, higher revenues, or both.

Given long lead times and unclear pathways to demonstrable success, it's hard to secure investments in ambitious health technology products. Instead, businesses tend to develop point solutions, each one addressing a perceived consumer complaint separately. These products may save on development costs in the short term, and their value may be easier to quantify. But they undermine a comprehensive approach to meeting customer needs, and patients can become overwhelmed by an unsatisfying, disconnected product ecosystem that they are likely to abandon.

While it may often seem difficult to pin down the value of a multifaceted technology, it is not impossible. The health system we worked with began by identifying strategic objectives (such as increased patient satisfaction and engagement) and then quantified the value of fulfilling these objectives (by estimating, for example, how much revenue could be added through higher patient retention). Finally, it introduced tangible ways of tracking progress against those metrics.

The health system's design and consumer insights teams launched research to track the product's projected Net Promoter Score as it evolved over the development cycle. A survey conducted during the pilot program urged users to provide unfiltered feedback. Analytical capabilities were embedded within the product itself, enabling the organization to answer such questions as: Do patients rate providers more highly after a telehealth or an in-person visit? How many people begin booking an appointment online but don't follow through? In the future, these capabilities can be mined and expanded to answer even more complex questions, such as whether high engagement with the product correlates with better long-term health outcomes. All of these metrics, if invested in properly, can prove the value of a groundbreaking health care technology.

Clinicians (and Patients) Are Skeptical of Solutions That Affect Their Workflow. Many digital health care innovations, especially those designed by hospitals and health systems, have a significant impact on care delivery workflows. Clinical workers may be asked to enter data into a new system, or even into two systems rather than one. Doctors—already threatened by burnout before the pandemic—are loath to learn how to use another piece of software that could take away face time with patients and cause yet more administrative work to pile up. In one instance, apps that allow online booking require clinics to standardize their appointment types and data entry, forcing clinicians—including busy specialists—to relinquish control over at least some portion of their schedule. It's not surprising that these innovations—aimed primarily at helping consumers—experience pushback.

There are less concrete challenges as well. Doctors are often rightly concerned that even the best tools will not be fully compliant with the Health Insurance Portability and Accountability Act and protect patient data as well as their existing systems do. Payers worry that technologies will evolve too quickly and they won't be able to communicate the cost-saving benefits of the product to their customers. Even patients sometimes resist changes to the medical system workflow. After logging into several different applications using separate user names and passwords in order to transmit information to a doctor's office, filling out a form on a clipboard might not seem so bad after all.

Our health system's CEO understood that rethinking the technological approach to focus more on customer needs would affect the entire organization, including its providers, and would therefore require a strong mandate from system leadership. He funded the project as a CEO initiative and committed himself to leading the charge, becoming the project's public face to the management team and the rest of the organization. At the operational level, he established work groups for each potential pain point, such as clinical operations, legal and compliance issues, and communications. These groups met frequently to discuss problems and delegate ownership of solutions. Issues identified for escalation were passed on to an executive steering committee for resolution.

COVID-19 exacerbated the challenges but also illustrated how critical it is to address them. The unified front and open communication fostered by the work groups allowed large numbers of decision makers to uncover problems and discuss solutions quickly. With input from clinical and executive leadership, new ideas and proposals, such as remote AI-informed triage and virtual visits via telemedicine, were brought to the table and addressed right away. This streamlined process allowed the health system to meet immediate patient needs and illustrate the value of these tools to frontline physicians.

Most Health Care IT and Electronic Record Systems Are Antiquated, Making Integration Challenging. In addition to being outdated, most legacy systems are disconnected from each other and not governed by universal standards. Although private and governmental initiatives are driving incremental change, developing a product that works across hospital systems—or even within a single one—can feel impossible when the average system utilizes multiple electronic medical records in its central and affiliated practices. Retrieving data from these systems via their rigid, often proprietary, APIs in order to make decisions about patient care, personalize an experience, or just show someone a test result can be extremely complex. This limits integration opportunities and drives up the cost and time involved in product development.

In addition, security concerns have slowed the health care industry's adoption of cloud solutions, preventing health systems and others from reaping the benefits of elastic and cost-efficient infrastructure support. Cloud solutions can be just as secure as on-premise infrastructure, but they do require different security measures. Modernization of infrastructure takes time and requires resources. Despite the demonstrable value, it tends to be delayed in favor of other initiatives with clearer short-term advantages and fewer perceived risks.

The solution lies in teaming with the right feature and integration vendors. The health care system we worked with understood immediately that a good team of vendors could help manage—or at least avoid amplifying—the chaos of multiple health record and API data sources. It recruited two primary types of vendors for the project. Point solution vendors provided plug-and-play tools, such as an external triage tool, to enhance the user experience of the product. Integration vendors brought their experience to bear on navigating the firehose of available data. The health system required that any candidate vendor feel comfortable working within the existing technology framework to provide a seamless, integrated user experience, and that all vendor contributions to the final product were contained under a unified umbrella of user identity management and security.

The Slow Pace of Health Care Innovation Is at Odds with Tech Sector Ideology. A tech industry mantra is "fail fast, fail often, fail forward." Risk taking is the norm. But health care payers and providers tend to be conservative, and the pace of technology adoption is slow. Newly developed treatments take an average of 17 years to be accepted by clinical personnel, even when they clearly outperform old options. Health care organizations often prefer to stick with the tried-and-true rather than seek improvement if it means they may face a lapse in patient care or other issues in the patient experience.

This attitude runs counter to the spirit of agile development methodologies, which seek to push out a minimum viable product as quickly as possible so that iteration and improvement can take over. When payers and providers develop software, they often end up behind the curve, minimizing their own return on investment and creating disappointing experiences for consumers, whose experiences with e-commerce and social media have led them to expect a modern, personalized, and improving experience.

Progress in this area will require health care leaders to step outside their comfort zone and trust their technology experts and partners to guide them through productive risk taking. Careful planning and the implementation of robust procedural safety nets will allow health systems to embrace agile methodologies without putting patient safety or organizational values at risk.

At our client system, executive leadership saw the value in setting up both the organization and its technology in ways that that allow for fast learning (and failing) in the building of digital products. To that end, they put in place a robust learning apparatus, including analytics, user research, surveys, and A/B testing, as well as a pilot approach in which real patients tested new products before they were released. This was a totally new way of working. Initially skeptical organizational stakeholders were won over when they witnessed the rapidity of product deployment to patients, the value of the feedback from human-centered design, and the speed with which products could be adapted based on that feedback.

The Promise of Consumer Digital Health Care, Fulfilled

For any health care organization, the challenges outlined above are daunting. Overcoming them requires mobilizing a broad set of resources and working across organizational silos that often have differing incentives, priorities, and ways of working. This challenge is largely why the promise of digital health has not yet been fully realized.

New digital technologies can improve outcomes, reduce costs, improve the patient and provider experience, and deliver real value. (See Exhibit 2.) We believe that with the right strategic thinking, health care systems can finally deliver to consumers the integrated and seamless experience that they have come to expect from other industries—and that they richly deserve.

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Exhibit 2 - How to Make This Wave of Digital Advances Matter for Patients

Source: BCG analysis.

February 2023

A Code Blue for State Health Data Systems

By Neveen Awad, Satyanarayan Chandrashekhar, Andrew Shane, Jonathan Scott, Daniel Acosta, and Nicole Bennett

One of the most powerful tools in promoting public health doesn't come from a test tube, a vial, or a syringe. It's data—and states are having a tough time extracting its full potential.

Data helps public health departments understand disease trends, plan strategies, and provide residents with a window onto a crisis, so they can become their own best advocates for staying safe. But the pandemic exposed—and expanded—cracks in the foundation. Outdated technology, hard-to-access (and often poor-quality) data, roadblocks in sharing key information: these factors combined to hinder a nimble and precise response.

The solution? A modern data system that fuels—and accelerates—decision making as emergencies evolve. This requires transformation: not filling in the cracks but building a new underlying capability for working with health-related data.

Transformations take time, but with the right approach, they can start delivering value quickly. In a matter of months, states can see dramatic improvements in how they use data to care for their residents. By steadily building out their capabilities, health departments can keep getting better at capturing and leveraging data—and put us all in better position to meet the next emergency.

Outmoded Systems—and the Obstacles They Create

The challenges posed by outmoded data systems became apparent early in the COVID-19 crisis. To respond to the pandemic effectively, health departments needed the ability to capture an array of relevant information, including case counts and hospitalizations at a local level and statewide. At the same time, states needed to report timely and accurate information to the Centers for Disease Control so the CDC could shape and support a national response. But there were obstacles.

First, public-health data tended to be siloed: different providers, agencies, and community organizations collected and stored it independently of each other. Second, antiquated or incompatible infrastructure often made it hard to share this data. Finally, there was the data quality and consistency problem: different health providers often collected different types of data, or they labeled the same type in different ways.

To put it simply, if data paints a picture, health departments weren't getting a Rembrandt but a police sketch. This hampered their ability to respond in optimal ways and at optimal speed.

> **If data paints a picture, health departments haven't been getting a Rembrandt—they've been getting a police sketch.**

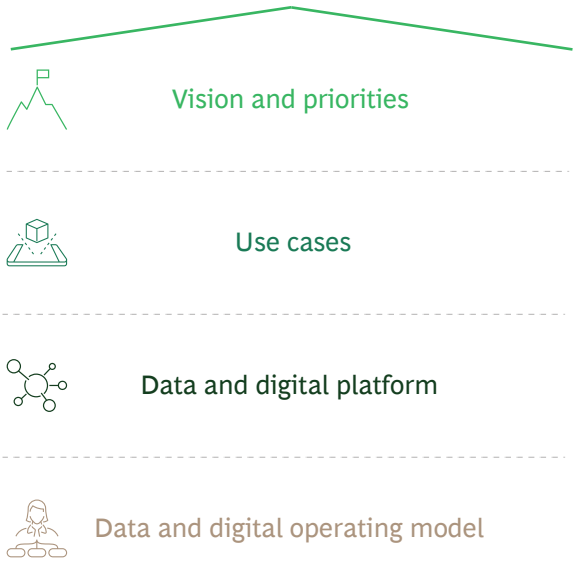
Having recognized the problem, many states have started to implement changes. But these are typically patchwork solutions: ad hoc interventions that seal cracks without addressing the reasons those cracks exist. Preparing for the next pandemic requires a different kind of approach. At the core of the solution is a more flexible data platform—one that makes it easier to capture timely and high-quality health data, develop actionable insights, and make critical decisions on how to allocate limited resources so they can be deployed more precisely, in real time, as situations evolve.

How to build such a platform? The traditional approach to transformation would call for a top-to-bottom redesign, which generally takes three to five years to implement. That's less than ideal. By the time states complete their redesigns, technologies and priorities are likely to have changed. More significantly, such an approach would mean that health departments—and the residents they serve—must wait years before they can reap the benefits of a more modern data system.

But what if you shaped the transformation so that you can start realizing benefits in the near term? If you could deliver value without the years-long wait? And build your new system in a flexible way, so as circumstances change, you can adjust your path forward?

That's the aim of a new approach to modernizing public-health data systems. (See Exhibit 1.)

Exhibit 1 - A Framework for Modernizing Public-Health Data Systems



Source: BCG analysis.

It's a framework built on four pillars:

Setting Your Vision and Priorities. The role of a public-health department—both its mission and how it interacts with residents, health providers, community organizations, and other stakeholders—will vary from state to state. Some jurisdictions take an expansive view of public health: everyone should have access to a broad array of health services. Others may define a health department's role more narrowly; say, to ensure access to essential services. No matter the vision, it's important to articulate it up front. Once you define your mission and your priorities, you can map out how data can help you achieve your goals—creating, in effect, your North Star for data modernization.

Identifying and Prioritizing Use Cases. By building your data system in a modular way, you not only deliver value quickly, but you can prioritize your most pressing health needs. Data use cases—whether they alleviate pain points in the public-health system, provide operational efficiencies, or create value in another way—enable this approach. Instead of trying to do everything at once (the traditional route), you break down your vision and goals into a series of smaller efforts. The idea is to identify discrete use cases and rank them by assessing their impact and feasibility. The use cases at the top of your list are the ones to implement first.

By focusing on high-priority use cases, you can deliver value—often very visibly—early in the journey. These quick wins also help generate buy-in—and funding—for the longer-term transformation.

While the list will look different from one state to another, three use cases serve as a good starting point in fostering nimble and effective public-health responses:

- **A 360-degree view of residents.** By integrating a wide range of relevant but often far-flung data (including electronic health records, socioeconomic data, and screenings performed by other public agencies), health departments gain a richer, more holistic view of those they serve. They can see all relevant factors at once, optimizing decision making—and interventions—on both an individual and population-wide scale.
- **Real-time view of public health indicators.** With ready access to timely, high-quality data, health officials can more effectively tackle emerging, and often rapidly shifting, crises. For example, instead of basing a vaccine distribution plan on months-old case counts, officials can factor in current trends when shaping their strategy.

- **Timely data sharing with the public.** An individual's best advocate for health and safety is often themself. By sharing accurate, up-to-date data, health departments activate the public, enabling—and empowering—individual decision making. Data transparency is especially crucial in evolving emergencies, so savvy health departments will ensure that the information they provide is easy to visualize and interpret.

Steadily Developing Your Data and Digital Platform. Use cases don't operate in a vacuum: they require the appropriate digital services and IT architecture. But this doesn't mean you need to overhaul your entire technical infrastructure in one fell swoop. Instead, build what you need to implement a specific application. As you implement more use cases, you steadily build your capabilities—and build toward your North Star. So instead of waiting three to five years to flip the switch, you're deploying your most critical capabilities quickly, often within two to six months.

Central to this approach is a data and digital platform (DDP). In the DDP model, you decouple data from your legacy technology, creating a separate data layer which systems can access. This lets you develop your digital services and IT architecture in a modular way. It also gives you flexibility. As you add—and start to leverage—new capabilities, you can adjust your path forward to account for changing priorities, technologies, and so on. You're able to fine-tune your journey, adding and reprioritizing use cases as circumstances warrant and building out your DDP accordingly.

Creating—and Continually Refining—a Data and Digital Operating Model. To seize the full potential of a modern data system, health departments need to take a page from the digital-native playbook and combine technology with the right processes, skills, and ways of working. This means developing a new operating model for working with data: the organizational structure, governance, talent, and processes that enable the public-health outcomes the agency prioritizes. Governance is an especially important component given the sensitivities around handling and protecting personally identifiable information and personal health data.

What's the best way to do this? Like your IT architecture, the operating model is something you develop steadily, creating what you need to implement specific data applications. As you add new use cases, you continually build and improve your model.

For both the technology and the operating model, it's important to know your starting point. By assessing your current state, you'll get a picture of what you have and what you need—helping you create a blueprint for delivering digital solutions securely, sustainably, and at scale.

Five Guiding Principles

This framework has been battle-tested by many private-sector entities and their experiences provide valuable insights. Crucially, organizations that build best-of-breed data systems embrace five key principles (See Exhibit 2):

Exhibit 2 - Five Principles for Building a Best-in-Class Health Data System

Principle		Benefits
Scalability	Build the platform in a modular way, so it can adapt to future needs	• Provides flexibility as priorities, goals, and expectations evolve • Helps ensure data consistency and quality
Customer centricity	Prioritize the customer experience, delivering information that is both useful and useable	• Builds trust in—and use of—the data system
Connected data	Ensure that the system can integrate data from multiple sources—and do so efficiently and securely	• Improves efficiency • Reduces cost to serve • Promotes data transparency and accuracy
Clear governance	Establish the organizational and operational processes, roles, standards, and metrics that enable effective and appropriate use of data	• Enables faster, better decision making • Standardizes ways of working • Improves efficiency • Helps ensure data consistency and quality
Adaptable workforce	Foster a culture where people and processes adjust quickly to meet the evolving needs of residents and other stakeholders	• Creates an agile organization that's responsive to change • Reduces time on task • Enables faster, better decision making

Source: BCG analysis.

- **Scalability.** Build the data platform in a modular way that lets you deliver key outcomes quickly—and adjust your path forward as needs and circumstances change. Anchoring your effort on use cases and creating a separate data layer (via a DDP) makes it easy to scale as expectations evolve.

- **Customer centricity.** View data use cases—and how you implement them—through a customer lens, where the customer is the individual, the health care provider, the agency employee, and every other stakeholder in promoting public health. By prioritizing the customer experience, you can deliver information that's both useful and usable.

- **Connected data.** Build your system so that it can integrate data from multiple sources and platforms. This not only improves efficiency (reducing manual effort), but it also enables health officials to see—and share—a richer picture of emerging situations and trends.

- **Clear governance.** Establish and clearly articulate the processes, roles, standards, and metrics that ensure effective and appropriate data usage.

- **Adaptable workforce.** Adopt agile ways of working and foster a culture—and mindset—that embraces change. The goal is to embed adaptability in the organizational DNA, so people and processes can adjust quickly to evolving needs and expectations.

Not all the momentum has been within the private sector. We utilized the framework to help a health ministry set up a data and intelligence unit to improve its ability to understand the pandemic's trajectory and manage key health resources as the crisis unfolded. Familiar factors—complex and manual processes, duplication of efforts, inconsistent data and projections of likely future infection rates and resource demand—hindered visibility during the crisis and made it hard to coordinate resources across the health system.

Partnering with the ministry, we designed and automated processes to create a daily view of all relevant pandemic information and public-health resources (from hospital and ICU beds to staff and critical supplies). And we developed an operating model (including key roles and processes) to make it work. By enhancing data transparency, the ministry fostered faster, more precise decision making and based its planning and coordination on a deeper, more timely risk analysis of COVID-19's spread.

Now Is the Time to Get Started

The pandemic spotlighted states' urgent need to transform the way they use data to address public-health emergencies. Newly allocated resources can help make this happen. Federal funding is growing—with sources that include the American Rescue Plan Act, the CDC's Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases Cooperative Agreement, and the CDC's Data Modernization Initiative.

Now is the ideal time to begin the data-modernization journey. Or at least to get into position—by setting the vision, identifying use cases, and assessing capabilities—for when additional funding sources become available. By better integrating, sharing, and using data, states can better tackle emergencies. And they can let the COVID-19 health-data crisis be the last.

The authors are grateful to their BCG colleagues Jacob Goren and Rebecca Milian for their assistance with this article.

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The Health Care Metaverse Is More Than a Virtual Reality

By Ozgur Adigozel, Tibor Mérey, and Madeline Mathews

It's happening without a lot of attention or fanfare, but the metaverse is spurring a transformation in health care. Innovative companies backed by substantial funding are achieving a rare trifecta—increased access, better outcomes, and lower costs—in areas such as medical and surgical imaging, mental health, and medical training.

Even though the metaverse is still in its early stages of development, most areas of health care are already experiencing its impact. Rapidly advancing technology and increasing adoption suggest significant disruption to come. Providers and payers need to determine now how they will engage with these developments. They should start with an understanding of the range of use cases already in the market, as well as those under development, and then define their vision for how these next-generation technologies can benefit them and their patients. On that foundation, they can decide where to invest strategically and how to prioritize their own use case development so they can evolve with the market rather than follow it.

The Metaverse in Health Care Today

To many, the metaverse invokes gaming and entertainment, but the underlying technologies have real uses in health care today. These include extended reality (augmented reality, virtual reality, and mixed reality, or AR, VR, and MR, collectively referred to as XR); Web3 technologies and applications, such as blockchain and virtual assets; and M-worlds, the live virtual "places" where users gather and create content. So far, the majority of health care use cases involve XR. The technologies are being used in several diagnostic and therapeutic applications, as well as in medical training and meetings and conferences. Companies are also experimenting with blockchain for applications that range from supply chain verification to the storage and management of health care data.

Metaverse technologies can create value for companies in multiple ways, including the following:

- Improving access to care by connecting patients and providers regardless of location
- Enhancing the accuracy of diagnostics and the quality of surgery with advanced technologies
- Reducing costs in care delivery, medical training, and data management
- Opening new possibilities for storage, sharing, and access to data (patient, claims, and provider)
- Enhancing the experience of patients and insurance plan members and diversifying revenues with new offerings
- Lowering operating costs by streamlining such functions as recruiting, learning and development, and payment

As is common with new technologies, startups are driving much of the development activity. (See the sidebar, "Where the Action Is in the Health Care Metaverse.") Many already have viable products in the market that are being used by major providers. For example, in mental health and neurological treatments, XR-based mental-health therapies—many of which are already FDA approved—are being used to treat anxiety, phobias, PTSD, and general stress. They improve both access and quality of care by increasing the number of care options available, and they are often less expensive and more efficient than traditional mental-health therapies. Examples include Sympatient, which offers a VR-based anxiety treatment that addresses agoraphobia, social phobia, and panic disorders through exposure therapy. Similarly, Oxford VR has developed a platform that provides patients with exposure therapy through "in situ treatments" in a safe space where many different conditions can be simulated.

Major providers such as Johns Hopkins and the Mayo Clinic are using AR to assist in medical procedures, including surgical preparation and execution in spine surgeries and catheter placement. The technology, which enables full (as opposed to two-dimensional) visualization of the patient's anatomy, improves error rates, speed, and outcomes. Active companies include SentiAR (interactive 3D displays of heart tissue), Augmedics (spinal-cord visualization), and Medivis (superimposed medical images during surgery).

In physical therapy and rehabilitation, XR improves access to care by providing treatment (including stroke recovery, physical-therapy workouts, and progress tracking) regardless of physical location. XR also can lower care costs with home-oriented treatment models and progress monitoring using built-in body sensors. The technology is already being employed by major providers, such as Northwestern Medicine Marianjoy Rehabilitation Hospital. Innovations include XRHealth's VR-based physical-therapy program, which enables providers to pair patients with therapists who create personalized plans of care administered through VR. GestureTek Health has created VR physical-therapy games that put patients in virtual worlds and allow clinicians to monitor and adjust the parameters of activity for varying levels of treatment.

> **Major providers are using AR to assist in medical procedures, including surgical preparation and execution in spine surgeries and catheter placement.**

To get a handle on how established health care players are approaching the metaverse, BCG surveyed providers, payers, and biopharma and medtech companies in November 2022. We found that a majority of companies are already experimenting with these technologies. Almost three-quarters of health care providers and more than one-third of payers reported using XR, blockchain, or M-worlds in some capacity. While payers reported less use of XR (not surprising, since most XR use cases today are provider centric), they use blockchain more than other players, at 25%. Given the nascency of the metaverse generally, the high levels of use reported by health care companies point to expanding adoption. Indeed, about 90% of executives said they believe that the importance of the metaverse, and their companies' involvement, will increase.

Despite the number of companies experimenting with metaverse technologies, far fewer have implemented formal programs. Only 17% of providers and 6% of payers have started or are scaling pilot programs. Most payers and providers have yet to define their vision and take a strategic posture regarding the use of metaverse technologies.

Where the Action Is in the Health Care Metaverse

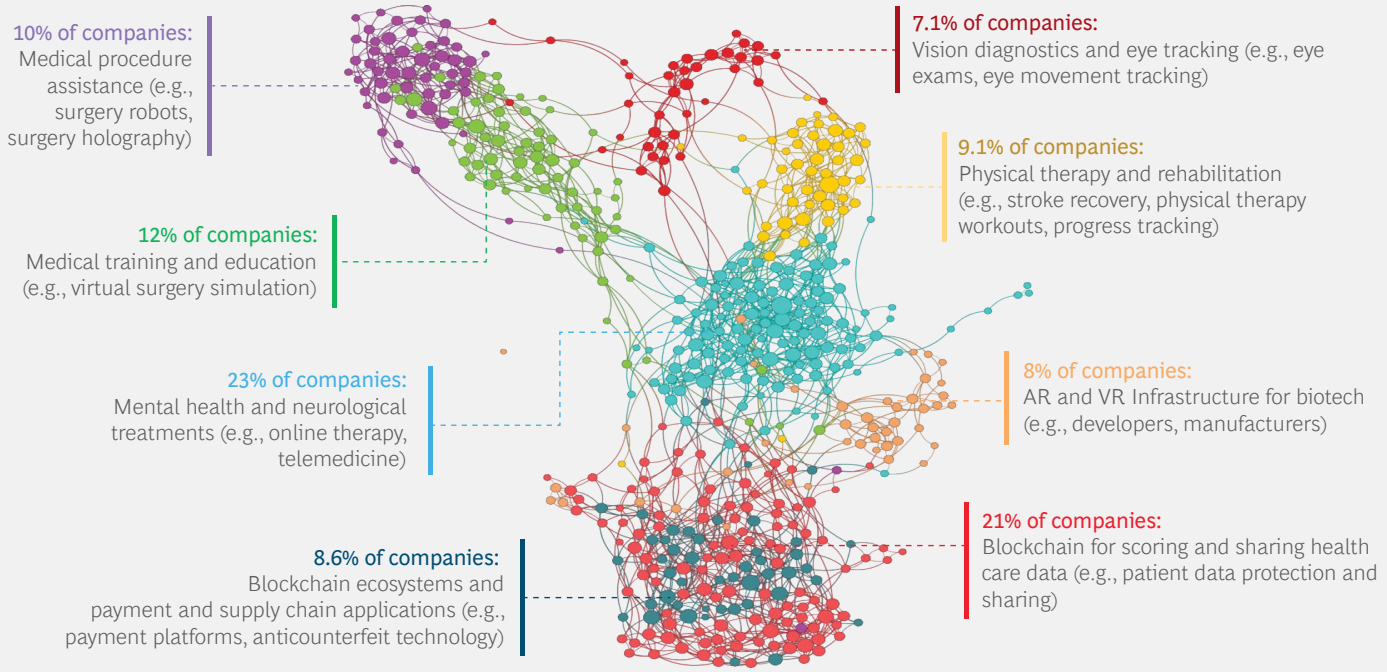
A robust worldwide ecosystem of startups is actively developing metaverse use cases in health care. Using the proprietary technology of BCG's Center for Growth and Innovation and Analytics, we assessed data on millions of global companies and identified 543 that were active in the health care metaverse from the start of 2018 through October 2022. In the exhibit below, each node represents one company, with the node's size representing the company's number of connections with, or its similarity to, other companies. The density of a cluster indicates how related the companies are, and the distance between clusters reflects the number of interrelated companies.

Health care metaverse startups received $2.2 billion in private funding during the period we assessed, with investment increasing at an annual rate of nearly 30%. The funding activity took place in all stages of the patient journey (patient engagement, care delivery and management, and payment), as well as in the backing development of enablers and support functions (such as medical personnel, health care data and analytics, and operations).

The majority of use cases that we identified (70% of companies, 90% of funding) use some form of XR and are relevant to providers or payers. Mental health, medical training, and medical-procedure assistance (such as AR-assisted surgery) are the most active XR-related areas. AR and VR infrastructure, medical-procedure assistance, and medical training receive the most funding. Many of the applications (such as training, mental health, physical therapy, vision diagnostics, and AR-supported surgery) are in use by major providers and payers today.

About 30% of companies are developing blockchain technologies, but they receive only 10% of total funding dollars (suggesting that the technology is more nascent and the funding rounds smaller). Blockchain applications include patient data protection and sharing and payment platforms, which have relevance for payers and providers alike.

Emerging Health Care Use Cases in the Metaverse



Sources: NetBase Quid; BCG Center for Growth and Innovation Analytics.

Note: Each node represents a company; percentages are the share of the total number of companies.

The Pace of Adoption Will Accelerate

Our research suggests that the metaverse in health care is developing in three phases. We are currently moving from phase one, the period of initial experimentation, to phase two (the next five years or so), which will be defined by the broader adoption of current use cases and the emergence of new use cases as technologies advance. Phase three (the following decade) will see the development of more advanced use cases and the establishment of metaverse technologies across many areas of health care. (See the exhibit.)

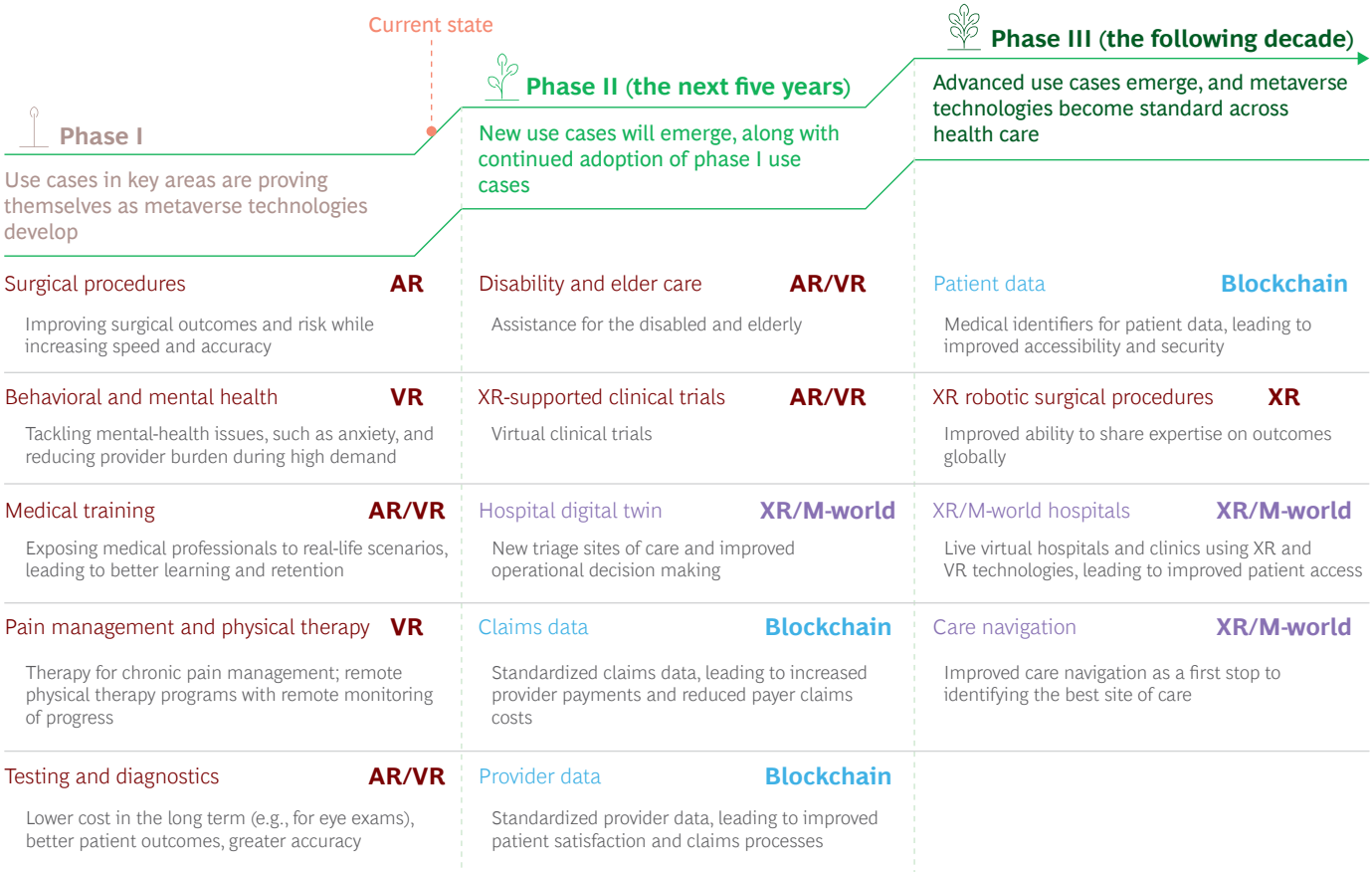
As the health care metaverse develops, there will likely be more disruption in more areas. XR-based use cases have already caused many providers to try new approaches in training, therapy, surgery, and diagnostics. As we move into phase two, these use cases will proliferate, and new blockchain—and, potentially, M-world—applications will emerge in such areas as disability and elder care, clinical trials, hospital digital twins, and claims and provider data management. A bit further in the future, phase three will be defined by a convergence of the various underlying technologies, enabling advanced use cases, such XR and M-world hospitals, end-to-end care navigation, remote-VR robotic surgeries, and storage of patient data on a blockchain. At that point, metaverse technologies will be standard in most areas of health care.

The speed of metaverse development in health care depends, of course, on the broader adoption of the underlying technologies. There are strong indications that this is underway in three key areas: technology, content, and enterprise use.

Better and cheaper XR headsets are coming to market. Both incumbent and new hardware players (such as Meta, Microsoft, and Apple) are expected to drive advances in XR technology, which, in turn, will push the installed base toward critical mass. Our research also suggests the continued convergence of AR and VR devices toward MR headsets with improved capabilities (such as Meta's Cambria and Apple's rumored 2023 device). Meta's Mark Zuckerberg has pointed to 10 million units as the basis for a self-sustaining ecosystem, a milestone that the company's Quest 2 crossed in the first half of 2022.

As more companies in both B2B and B2C industries interact with users in metaverse environments, new content and solutions from both incumbents and startups are powering a maturing ecosystem and accelerating broader adoption. The integration of new technology with current systems will help to eliminate current content bottlenecks.

New Use Cases Will Emerge As the Metaverse Develops



Source: BCG analysis.

Perhaps most important, the number of enterprise strategies incorporating the new technologies is expected to grow in the coming years. Hybrid work will make the metaverse a strategic necessity for attracting talent. Much of the metaverse action to date has been in B2C, but B2B applications are increasingly catching up and may ultimately be where much of the business value is generated. Retail, fashion, and apparel companies have been among the first movers, and a growing list of major companies in the technology, telecommunications, health care, and automotive industries, among others, have become active.

New content and solutions from both incumbents and startups are powering a maturing ecosystem and accelerating broader adoption.

In health care, 77% of providers in our survey and 94% of payers expect their metaverse involvement to increase over the next few years, and none believe their involvement will decrease. Almost two-thirds of providers and half of payers believe investment is needed now or in the next two to three years, suggesting that investment in metaverse technologies will increase, driving advances and adoption.

Assessing the Potential

The metaverse has acquired sufficient traction in health care that providers and payers need to develop a strategy based on the vision they set for their involvement. Some companies and health systems may aspire to be leaders in metaverse adoption. Others may choose to experiment with the technologies, and still others will want to stay on the sidelines and watch. A few may decide that the metaverse has only limited application for them.

Whatever the assessment, it should be made while the window of opportunity is fully open. Early adopters can gain extra value in multiple ways, including the following:

- **Learning curve.** Early participation enables companies to stay ahead of the curve and move quickly as use cases scale up.
- **Network effects.** Early movers can establish valuable partnerships and alliances ahead of competitors.
- **First-mover advantage.** Organizations can accumulate data and talent ahead of the competition.
- **Reputational impact.** Early movers gain a disproportionate share of voice and recognition as leaders.
- **Innovation.** Companies can create new channels for engagement with patients and members.

To extract the most value from the metaverse, providers and payers need to evaluate how the technologies best fit with their current strategies and operations. The first step is developing a perspective on how the metaverse will grow in areas important to the company or health system and then identifying high-value use cases that align with its strategic goals. This analysis should include an assessment of investment patterns, technology advances, and adoption trends, particularly with respect to high-potential use cases. It should also encompass the health care-specific hurdles that need to be overcome, including factors related to digital infrastructure, regulation, patient data, and reimbursement.

Once management sets a metaverse vision and prioritizes use cases, payers and providers can take four additional steps to build the necessary capabilities for successful implementation. First, explore designing a user experience (UX) for metaverse interactions that delivers both value for users and ROI for the organization. An appealing, user-friendly UX design is essential in health care, as the efficacy of therapeutic use cases is directly tied to the user experience. Good design includes ease of use for a broad patient audience, the ability to customize to specific patient needs, and an engaging interface that users enjoy.

Second, create a digital-twin strategy. Start embedding metaverse use cases into regular operations early. Look for opportunities to develop use cases that support the current strategy and future business development. For example, digital twins—virtual, real-time representations of patients generated using multiple data sources—have a host of current and potential applications in treatment, monitoring, management, and training and development.

Third, develop the capabilities you need to compete. Assess internal talent, identify gaps, and establish a plan to hire or otherwise acquire the necessary skills and technology. Finally, establish a mission control office, including a control center with clear mandates and processes to monitor and oversee the metaverse effort.

Organizations need not make this journey alone. Partnerships with other health care organizations, technology developers, and vendors can accelerate progress and help ensure selection of the best use cases and establishment of the proper supporting infrastructure.

Getting Started Today

Whatever their vision turns out to be, organizations can take a series of no-regret steps to build understanding and relationships:

- **Experience the metaverse.** Buy some headsets, organize demonstration sessions, and expose the organization to new possibilities. For example, BCG has opened an "office" in the metaverse to help build awareness, interest, and experience among our partners, staff, and clients.
- **Form a crew.** Bring together experienced and passionate people in a loose structure that facilitates regular interaction and collaboration.
- **Collect use cases.** Create ways to brainstorm and evaluate the highest-value use cases.
- **Foster partnerships.** Initiate discussions with potential partners and peers to build knowledge and experience.
- **Follow the trends.** Stay up to date on technology investments, adoption trends, and changes in regulation.

Metaverse technologies are already increasing patient access to care, improving medical training, improving outcomes in several diseases and surgeries, and lowering costs in multiple areas. Providers and payers that move quickly can drive these use cases to scale while developing other applications. Early movers stand to reap significant value from the emerging technologies.

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Workforce Pressures

In addition to inflationary wage pressures, health care organizations—providers in particular—face acute and complex labor challenges. Pandemic burnout and the great resignation have taken a toll, especially in primary care and nursing. The sector's workforce is also evolving toward more part-time workers and greater demand for more flexible hours and schedules. The rise of alternative delivery channels, both real-world and virtual, is further affecting staffing needs. Providers and others need to take a strategic approach to labor requirements.

December 2022

Health Care Has a Purpose and Productivity Crisis

By Ben Horner, Jennifer Clawson, Irina Stati, and Zack Toussaint

The World Health Organization estimates that the global shortage in the health care workforce will reach about 15 million by 2030. Many doctors, nurses, and other health care workers are burnt out. Others are approaching retirement. But demand for health services remains high. And while the pandemic did not create these problems, it did exacerbate them.

There is no easy solution. Traditional approaches to workforce shortages focus on increasing the size of the pipeline by persuading more people to enter a particular profession. That's necessary but not sufficient. Too many people are leaving positions in health care prematurely, creating a revolving door of arrivals and departures. In many countries, especially the US, care is inefficient, requiring more people and more drudgery than necessary.

To not just attract but also retain employees, health care needs to become more purposeful. Purpose is a magnet that draws people to a field and keeps them there. Most people choose jobs in health and medicine to do good. But along the way, long hours, constant pressure, and busy work tend to disconnect employees from the values that drew them to their professions in the first place. Burnout among physicians has reached 38%, compared with 28% for the general population, and it's even higher for frontline practitioners in family, internal, and emergency medicine.[1]

Providers also need to manage demand by making the machinery of health care more productive and less bureaucratic. There needs to be more direct care and more experimentation with operating models that do not merely increase the size of the health care workforce.

The workforce crisis in health care demands both short- and long-term solutions. Many of the long-term solutions, such as innovative models of care, are structural and will require multiyear efforts. Enhancing purpose and productivity should serve as guideposts along the way toward a resolution to the current crisis and the creation of a new health care operating model.

The Crisis Is Real

"If I had a mandate to define the priorities for the OECD ministers of health, at the top of my list, especially in light of the coronavirus pandemic, would be addressing health care's growing people crisis," said Francesca Colombo, head of the OECD's health division.[2]

Workforce shortages have real-world consequences in patient outcomes. Nursing shortages increase the frequency of medication errors, which, according to the National Library of Medicine, can increase hospital stays by an average of two days. Meanwhile, a 10% increase in the number of nurses is associated with nine fewer deaths per 1,000 patients, the *Journal of Nursing Administration* reports.

Shortages also have real-world economic consequences. Shaving a year off residents' life expectancy lowers a country's per capita GDP by 4%. Between 2019 and 2021, average US life expectancy dropped by three years, from 79 to 76, the sharpest pandemic decline among wealthy countries, many of which showed improvements in 2021.

Who's Leaving Health Care and Why

We recently surveyed more than 1,000 "deskless" health care workers in seven countries. These workers need to be physically present to perform many of the jobs that health care requires. A third of them are at some risk of leaving their jobs in the next six months, the survey found, with those in Japan and the UK most likely to do so and those in the US least likely. (See Exhibit 1.)

The younger the employee, the more open he or she is to leaving. Half of Gen Z employees in health care are at risk of leaving their jobs in the next six months, compared with less than a third of Gen X employees and less than a fifth of baby boomers.

Deskless health care workers are contemplating leaving for reasons not necessarily related to the pandemic. The two most common are career advancement (49%) and pay (43%), both of which predate the pandemic as factors. Flexibility (26%) and work-life balance (24%) were cited far less often, despite their relevance in a post-pandemic world.

Every health care workforce shortage is unique. Different nations have different types of productivity challenges. The National Health Service in the UK, for example, has more employees than at the start of the pandemic but is performing fewer procedures, and Australia saw a 2% increase in general practitioners that coincided with a 21% decrease in appointments between December 2019 and December 2021. Other countries face shortages stemming from global labor patterns. India, for example, is struggling with a nursing shortage despite being a leading exporter of nurses to other countries. Socioeconomic factors are also at work. In the US, medical school debt pushes many new doctors into higher-paying jobs and away from rural and remote regions with the greatest health care needs.

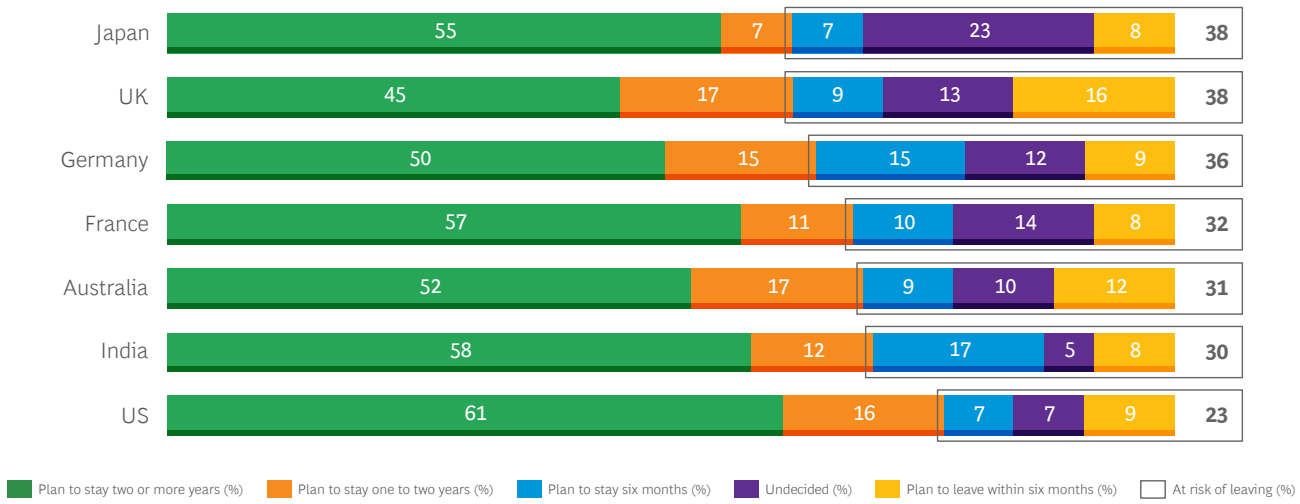
Diagnosis at the Local Level

Health care and health care delivery are ultimately local in nature. While the shortage may require long-term changes in national policy, individual health care systems need to understand the size and nature of shortages in their local markets. They should be breaking down overall trends and averages to understand why people leave certain jobs and why some jobs are particularly hard to fill. Health system leaders should also understand whether personnel in roles experiencing a surplus of employee capacity can be retrained to fill other roles.

[1] S. De Hert. "Burnout in Health Care Workers: Prevalence, Impact and Preventative Strategies." *Local and Regional Anesthesia*. 2020 Oct 28;13:171-183.

[2] Stefan Larsson, Jennifer Clawson, and Josh Kellar, *The Patient Priority: Solve Health Care's Value Crisis by Measuring and Delivering Outcomes That Matter to Patients,* New York: McGraw Hill, 2022, 21.

Exhibit 1 - Japan and the UK Are Most at Risk of Losing Deskless Health Care Workers



Source: BCG future of work deskless worker survey, March-April 2022 (N=1,045).

Before the pandemic, we projected the health care workforce needs of a midsized US state in 2024. Analysis of qualitative and quantitative data allowed us to identify not just which jobs had the most openings but where the mismatch between supply and demand was greatest. In this one state, the largest number of openings was for registered nurses, but the need for medical assistants, who do not require a four-year college degree, would in the future be more critical, according to experts. (See Exhibit 2.)

This type of detailed analysis can help leaders address specific shortages in specific places with a targeted plan. By answering questions about a given workforce, including its size, retention rate, and the attitudes of employees, organizations can design and execute more effective solutions.

From Diagnosis to Action

Fundamentally, all workforce shortages stem from an imbalance between supply and demand. Any solution must therefore provide a mix of tools aimed at managing supply and reshaping demand. (See Exhibit 3.)

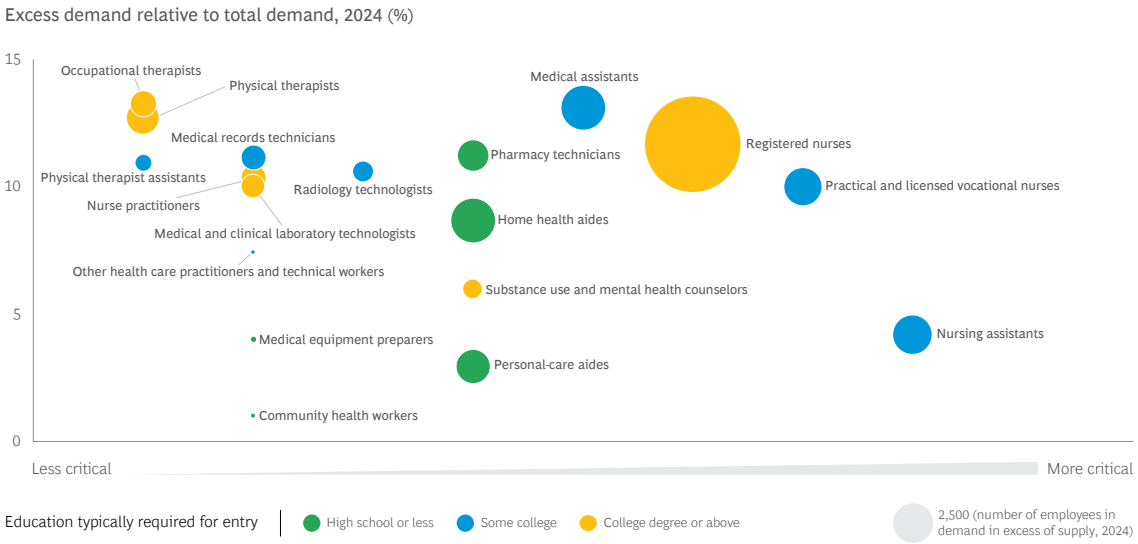
Managing Supply By Enhancing Purpose

A common denominator across many successful initiatives, including those described below, is that employees are not just offered higher pay. Rather, the health care system tries to understand and address employees' frustrations and restore their dedication to helping others by offering training, mentoring, and career opportunities. In other words, they try to make work more purposeful. Recruits want to join organizations that have a passionate and engaged workforce. And existing employees are more likely to remain in such jobs.

Four primary factors influence the supply of available health care workers. Interestingly, many providers have discovered that improvement in one dimension often has positive spillover effects in other areas.

Retention. Amedisys, a health care system based in Louisiana, was able to lower voluntary turnover by 20% by combining traditional approaches to hiring and retention—such as onboarding interviews, quarterly pulse surveys, and exit interviews—with new, data-driven techniques. Detailed analysis of the resulting data uncovered 36 factors that could trigger voluntary departures. This type of predictive analysis has the potential to address such retention risks as early retirement and to sharpen the employee value proposition, which can help in recruiting.

Exhibit 2 - Projected Health Care Openings in a Midsized US State



Sources: BCG labor market model, 2017; US Bureau of Labor Statistics; BCG analysis.

Note: Degree of criticality based on industry experts and regional workforce analyses.

Meanwhile, HCA Healthcare, which operates more than 180 hospitals in the US and UK, is addressing nurse burnout by providing real-time assistance from psychologists and social workers. It also offers a mobile app that allows nurses to connect with mentors and network with peers.

> **A common denominator across many successful initiatives is that employees are not just offered higher pay.**

Talent Pipeline. Partnerships between institutions of higher education and employers can power the talent pipeline. West Michigan's Grand Valley State University and Corewell Health (formerly Beaumont Health Spectrum Health) partnered to expand the number of Grand Valley nursing graduates from 1,000 to 1,500 a year through increased financial aid, curriculum enhancements, student support services, and clinical experiences. Corewell hopes the $19 million initiative will reduce its workforce gaps by improving access to local jobs and training in the medical field.

Mobility. Rather than rely on static or outdated views of staffing levels, organizations can allocate personnel to areas of greatest need. Baystate Health, which operates in western Massachusetts, created a team of professionals in anesthesia, radiology and imaging, emergency medicine, and other disciplines that it dispatches to one of four hospitals depending on need. A set of common protocols allows the practitioners to maintain the quality of care as they move from hospital to hospital.

Reskilling and Upskilling. Training and education allow an organization to develop talent within its own workforce rather than hiring from outside. LHC Group, a provider of home health services in the US, invested $20 million in the College of Nursing and Allied Health Professions at the University of Louisiana at Lafayette. The arrangement allows LHC to provide employees with discounted tuition and nurses with career progression opportunities as adjunct professors or through postgraduate training programs.

Exhibit 3 - How to Address Workforce Shortages

Source: BCG analysis.

Reshaping Demand by Improving Productivity
Barring another pandemic or some other health care crisis, demand for health care is likely to remain fairly constant in the coming years. Providers can meet that demand with greater efficiency, innovation, and sophistication in the short to medium term, while working to improve the overall health of the population in the long term.

The first three initiatives described below have improved the productivity of the health care systems that undertook them, while the fourth is contributing to a healthier society. In all cases, greater productivity is reducing the need for medical care and services.

Efficient Care Delivery. The pandemic set in motion innovations in self-care, remote care, and delivery. Telemedicine and remote patient monitoring have both been around for a while but have not yet reached their full potential. BCG estimates that at least $1.6 trillion can be saved globally each year through virtual consultations and other digital services.

As part of a larger effort to eliminate defects in care, University Hospitals in Cleveland focused on discharging acutely ill patients to their homes rather than to skilled-nursing facilities. Before discharge, the hospitals schedule a follow-up visit with a primary-care or specialist physician within seven days. After one year, 61% of patients were receiving these visits, up from 25%. Readmission rates within 90 days of discharge fell from 32% to 27%.

Innovative Care Models. In the future, health care delivery is likely to be faster, cheaper, and closer to home. More than 40% of industry leaders anticipate an increase in procedures performed in outpatient ambulatory settings, and more than 60% expect to see more care delivered in nonclinical settings such as the home. We project that as much as one-third of all hospital volume could move into ambulatory, home, and virtual-visit settings over the next ten years. Solutions are already expanding to cover more points of care—including diagnostics, urgent care, primary care, specialty care, and postacute care. The merger of Teladoc and Livongo in 2020 is one example of the convergence of telemedicine and remote patient monitoring in a single company.

End-to-End Patient Journey. Every stage in the patient journey—from provider selection through posthospitalization—can be reshaped and improved through personalization. Personalized health care recognizes patients as unique individuals with unique health histories and circumstances. It aims to achieve better health outcomes by providing a tailored approach to care and a hassle-free experience.

> **Providers can meet the demand with greater efficiency, innovation, and sophistication, while working to improve the overall health of the population.**

In just 6 to 12 months, some payers that have implemented personalization have seen the patient experience improve by 10%, administrative costs drop by 5% to 10%, and quality increase by 20% to 25%. Similarly, providers have seen significant improvements in consumer satisfaction, in the length of hospital stays, and in 30-day readmissions.

The UK's Royal Marsden, for example, coordinated cancer services through the London Cancer Hub during the pandemic. Despite an overall decrease in cancer referrals and the potential for increased cancer-related deaths, the Cancer Hub ensured continuity of care by sharing resources and staff across ten hospitals.

Population Health. Oak Street Health, a US health care provider focusing on the elderly in underserved neighborhoods, aims to keep patients out of acute-care settings through preventive and public-health measures. The organization places clinics in areas with high foot traffic, provides transportation to patients who cannot travel on their own, and urges primary-care doctors and nurses invest time in getting to know their patients. Oak Street identifies potential risks by segmenting patients into one of four tiers based on age, comorbidities, recent utilization patterns, and degree of social support. This helps target interventions and allocate resources to maintain patient health. Oak Street reports that the approach has helped to halve hospital and emergency room admissions and to lower readmission rates by almost as much.

The health care workforce crisis is real. Money is not the only answer. Many health care organizations are still able to recruit, but they struggle to retain employees. Health care organizations can heal rather than bandage their current operating model by letting productivity and purpose be their guides.

In undergoing this work, leaders should consider the following questions as prods to action:

- How will your organization harness purpose to address workforce challenges?
- What are the most effective levers with which your organization can address its workforce challenges?
- What are the partnerships your organization can establish to invigorate workforce supply?
- How big an operational and workforce benefit can your organization gain by pivoting from stopgaps, such as hiring traveling nurses, to long-term, systemic solutions?
- How can your organization ensure enduring workforce stability through targeted investments in training, retention, and efficiency?

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June 2022

Health Care's New Promise to Employees

By Ozgur Adigozel, Julie Jefson, and Madeline Mathews

Companies in the health care industry have an imperative to renew their employee value propositions (EVPs)—the tangible and intangible commitments an organization makes to its people in the form of compensation, rewards, culture, and other offerings. All workplaces are experiencing significant change brought on by the pandemic, technology, demographics, industry consolidation, and sharpened social awareness. Health care companies specifically are undergoing dramatic industry change and facing new competition. An EVP can help these companies keep current employees and attract new ones.

Payers, providers, pharmacy benefit managers, and health care services companies are merging, bringing together distinct employee groups. At the same time, advances in treatments, data and analytics, technology, and consumer expectations are creating the need for new skills. Companies need to hire talent who can design solutions that bridge the worlds of health and technology: data-enabled care management programs, personalized patient engagement campaigns, digital care delivery channels, and so on.

An employee value proposition can help companies keep current employees and attract new ones.

In this new world, health care companies are more than ever competing for talent with companies from other industries. They also need to respond to increasing employee demands for flexibility and work-from-home options.

At its best, health care is a purposeful and resourceful industry filled with people who want to save lives and improve health. That's a strong starting point from which to create an EVP that excites employees and attracts skilled candidates not just in digital roles but also in traditional roles such as nurses, doctors, strategists, and product developers. But in a hyper-competitive labor market, past reputation and success are not enough. Even seasoned employees have higher expectations of work and employers than just a few years ago.

Companies with well-designed EVPs benefit from stronger and larger candidate pools, faster hiring, and higher acceptance rates. Employees are more deeply engaged, leading to greater productivity. And good EVPs also lower turnover, which is both costly and disruptive. (Experts estimate the cost of turnover for midlevel employees can be as high as 1.5 times their salary at health care companies.)

The Changing Workplace

The workplace in health care and all other industries is undergoing a transformation as dramatic as the rise of industrialization more than century ago or the entry of women into the labor force after World War II. Four forces explain the transformation.

COVID-19. The extraordinary conditions created by the pandemic dramatically revealed the industry's strengths and weaknesses. As companies try to bring people back to offices, they are running into new employee expectations. More than a third of knowledge workers are now working from the office full-time, reports the Future Forum, a future of work consortium of which BCG is a member. These in-person employees are less happy and have higher levels of work-related stress and anxiety, compared with those working remotely or in hybrid arrangements, according to a 2022 survey of 10,000 knowledge workers in Australia, France, Germany, Japan, the UK, and the US.

Social Awareness. Employees increasingly expect their employers to demonstrate a commitment to racial and social equity and the environment. Governments, investors, consumers, and NGOs have also been pressuring companies to become environmentally responsible and sustainable.

Technology. Digital tools have enabled remote work and created intelligent physical workspaces.

Demographics. Despite a brief uptick in 2021, the US birth rate has been declining for decades along with workforce participation. Both factors are contributing to the shortage of workers for many companies.

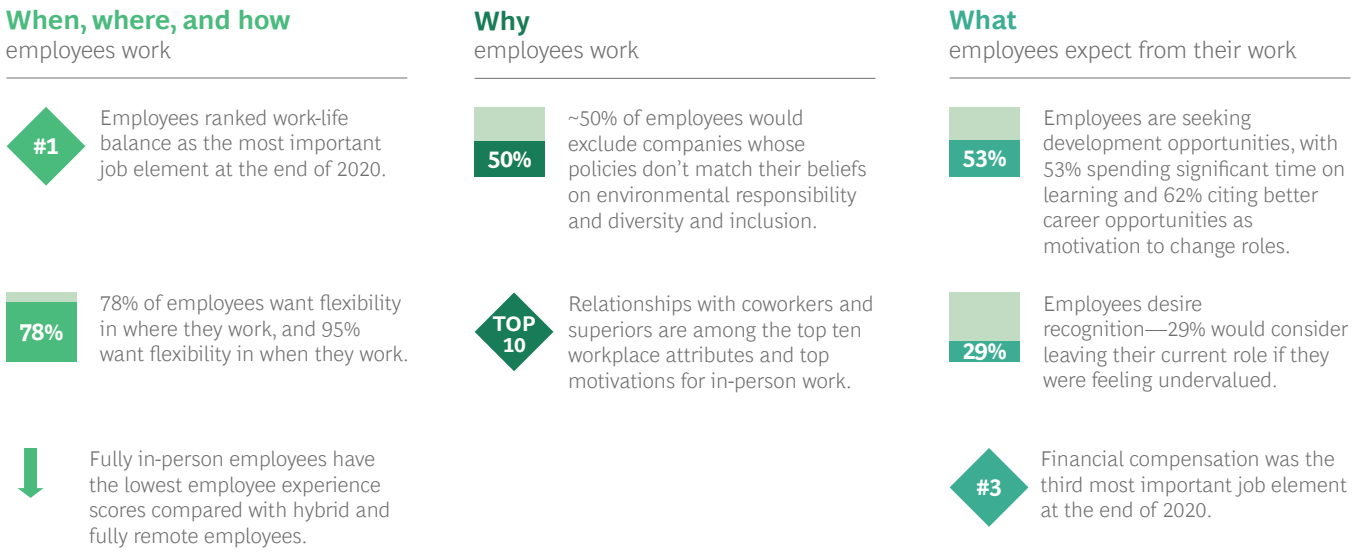
New Employee Preferences

Employees have far different views of their work and aspirations than pre-pandemic three years ago. And their conception of and relationship to their jobs continue to evolve rapidly.

- **When, where, and how** employees work. Employees want flexibility. The recent Future Forum survey found that 78% of US knowledge workers want location flexibility and 95% want scheduled flexibility.
- **Why** employees work. Fifty percent of employees would not work for companies whose policies don't match their beliefs on the environment, diversity, and inclusion.
- **What** employees expect from their work. Employees are seeking development opportunities, with 53% already spending significant time on learning and 62% citing better career opportunities as a motivation to change jobs. Employees also desire recognition—29% would consider leaving a job if they felt undervalued. (See Exhibit 1.)

In addition, employees who work for health care companies have specific concerns about who they work for, according to a BCG analysis of employee ratings on Glassdoor, the online employer review site. Employees in the health care industry were less satisfied than their peers in technology and financial services on a range of attributes such as culture and values, career opportunities, and work-life balance—attitudes that an EVP can address. (See Exhibit 2.)

Exhibit 1 - Catalyzed by the Changing Workplace, Employee Preferences Are Shifting



Sources: 2020 BCG Decoding Global Talent survey and analysis, US respondents; Future Forum Pulse Survey conducted April 26–May 6, 2021 and January 27–February 21, 2022, US respondents only; BCG analysis.

The Promise of Employee Value Propositions

The Glassdoor ratings should be a strong signal to health care companies that they have work to do in improving their EVP. A company's proposition should be tailored to different employee groups and include a wide range of considerations beyond compensation and benefits. In creating an EVP, most companies will review the following broad attributes:

- **Mission.** The purpose of the company and what it stands for—the attributes that get people excited to go to work in the morning
- **Opportunities.** Career advancement, training, development, job rotations, personal challenge and growth—and the opportunity to work with curious, caring people
- **Working conditions.** Innovation, work-life balance, minimal bureaucracy, flexible work hours, and remote or hybrid work—the things that mattered so much during the pandemic
- **People.** Senior leadership reputation, diversity, and behavior—the ability to work with people you respect and whose values you share
- **Rewards.** Salary, variable compensation, and benefits—the "hard" components of an EVP that still matter
- **Culture.** Meritocracy, collaboration, entrepreneurship, and other attributes—the way work gets done at the organization

It might be tempting to play follow the leader and simply reproduce a package of benefits and attributes that others in the market or industry are offering. Unfortunately, the task is not so simple. A health care company is competing for talent not only against peers in its industry and geographic market but also against companies sourcing similar talent—a data scientist can work for a bank as easily as for a health care company. An EVP should also speak directly to the essence of a company, and that will vary even within the same market or industry.

Exhibit 2 - Health Care Companies Have Room for Improvement

Scale 1–5

How do you rank…	Payer average[1]	Provider average[2]	Integrated payer/ provider average[3]	Technology average[4]	Financial services average[5]
Company overall	3.7	3.6	3.6	4.4	4.1
Culture and values	3.6	3.6	3.5	4.4	4.2
Diversity and inclusion	3.9	3.8	3.8	4.4	4.3
Work-life balance	3.6	3.5	3.3	4.2	4.1
Senior management	3.2	3.2	3.1	4.0	3.7
Compensation and benefits	3.7	3.6	3.5	4.4	3.9
Career opportunities	3.4	3.6	3.6	4.2	3.7
How likely are you to…					
Recommend to a friend	66%	64%	66%	89%	80%
Positive business outlook	61%	60%	58%	84%	75%
Approve of CEO	75%	65%	66%	93%	91%
Number of reviews	40,973	14,069	17,190	177,587	28,098

Lowest value — Highest value

Sources: Glassdoor ratings as of March 2022; BCG analysis.

[1]United Healthcare, Aetna, Cigna, Humana, Centene, Anthem, GuideWell, BCBS Michigan, Horizon BCBS New Jersey, Highmark, Blue Shield of California, Cambia, HCSC.

[2]Ascension Health, HCA, Tenet, CommonSpirit, and Providence.

[3]Kaiser Permanente, Intermountain, UPMC, and Spectrum.

[4]Google, LinkedIn, Adobe, Salesforce, Amazon, Meta.

[5]Capital One, Discover, American Express.

Health care companies should understand what attributes matter to their employees, what their competitors and peers are offering, what offerings are table stakes, and where they can be differentiated. And it is important to recognize where employers cannot compete. A local health system, for example, cannot offer global opportunities.

Most health care companies do not have the resources to invest fully in every attribute employees desire. They should identify those that are most important to workers and that are competitive sources of strength for the company. Organizations can then selectively invest in attributes that employees care about but are relative gaps for the company today. Finally, they should not prioritize investment in or communicate those attributes that do not matter to employees. (See Exhibit 3.)

Just because employees say in a survey they want a certain benefit does not mean they will actually use it. Companies should design a set of promising initiatives so that they can test and refine what they offer their employees. Flexible work schedules, for example, come in many flavors, and companies are unlikely to design the ideal flexible work package on their first attempt.

Once a company has developed and pressure-tested a set of initiatives and attributes, it needs to communicate the new EVP to employees and develop an implementation, socialization, and branding plan. An EVP will be only as good as the work that the organization invests in building awareness of it and putting it into action.

Exhibit 3 - Companies Should Prioritize EVP Attributes Based on Employee Value and Company Advantage

Evaluate potential EVP attributes across two dimensions

1. Employee value

- What matters to employees and recruits, informed by external employee surveys

2. Company advantage

- What we should do based on competitive activity, informed by external communications
- What we can do based on our right to play, informed by starting position and employee perception of the company compared with competitors

Establish priorities among EVP attributes

Source: BCG analysis.

How Health Care Companies Can Start

Health care companies have a good story to tell employees and recruits about purpose and mission. Many have strong reputations based on groundbreaking research, world-class medical care, and top-ranked programs. All health care companies can emphasize their commitment to improve health within their communities. They can also tie that commitment to concrete actions, such as investing in housing, providing employment opportunities in less-advantaged communities, and improving the social and physical environments of vulnerable populations. These organizations can also use their recent investments in technology and innovation to demonstrate their commitment to creating health care that is affordable, high-quality, and accessible.

Health care companies have a great opportunity to refresh their employee value proposition and attract, retain, and develop the best talent. They can get started by following a four-step process:

- Create a fact base showing the attributes that employees are satisfied or dissatisfied with, attributes that potential recruits value, and those that competitors are offering.
- Build a fact-based, aspirational, authentic, and crisp EVP that resonates with your people.
- Develop a set of supporting initiatives and allocate sufficient resources to bring the new EVP to life.
- Embed the new EVP in the organization through disciplined execution of these initiatives and a complementary internal and external communications plan.

With the health care industry in such flux, a powerful EVP can signal a company's commitment to its people and their ability to be an enduring source of competitive advantage. It can also immediately start to see benefits of increased retention and faster hiring.

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New Care Channels

Care models are evolving, and astute providers and payers have opportunities to improve services to patients and members at relatively low cost. Advances in digital and clinical technology—such as predictive analytics that anticipate health problems, cameras and sensors that monitor patient safety, and telehealth for consultation and other services—as well as new models, such as aging in place, are changing the care game.

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An Aging-in-Place Strategy for the Next Generation

By Jon Kaplan, Aaron Brown, Sarah Thom, and Julia Baker

The trend of aging in place is gaining popularity and credibility around the world. This alternative to living in senior residences revives a traditional way of thinking about elder care, but with an innovative edge. People over age 65 remain in their existing homes or with family, abetted by responsive, flexible, technologically adept home care services. The experiences and outcomes are as good as, or even better than, those of residents in assisted-living facilities or nursing homes—and the costs are lower, too.

Private-sector providers—with support from payers, government regulators and policymakers, referral agencies, and community groups—can serve this population by providing higher-quality services at relatively low cost. They can accomplish this in two ways. The first is with advances in digital and clinical technology: predictive analytics that anticipate health problems, cameras and sensors that monitor patient safety, and telehealth for consultation and other services.

Innovative technology and practices are allowing payers and providers to give the elderly what they want most: better care at home.

The second way is through new business models in health care. The aging-in-place model goes beyond the role of visiting nurses to provide a holistic group of services related to health care value, including:

- Clinical services: access to allied health, nurses, primary-care doctors, and specialists, such as for memory care
- Personal care: help with bathing, dressing, and grooming
- Daily-living assistance: meal services, cleaning, gardening, paying bills, and similar support
- Social care: transportation, help with shopping, and providing opportunities to connect with others

For payers, this growing trend represents a viable opportunity to reduce costs while raising customer satisfaction. For providers, it establishes a better business model, where they can charge for comprehensive caregiving that blends different types of services together, rather than managing the constraints of a fee-for-service model, where crossovers are limited. Government regulators and policymakers benefit because of the overall lower costs to public health care systems, the value of preventive care, and the greater overall quality of life. Referral agencies and community groups gain customer and constituent satisfaction.

The overwhelming majority of elderly people prefer to remain in their existing home rather than move to a senior residence.

In general, everyone benefits. Aging in place relieves the pressure on institutionalized care. It allows people to remain in their homes and communities, maintain control over their environment, and live more independently than they might otherwise do in a residential care setting. What's more, doing so helps elderly individuals to preserve close ties with their families and communities. As research on the social determinants of health suggests, this in itself can reduce the risk of disease or vulnerability to injury.

Giving Elderly People What They Want

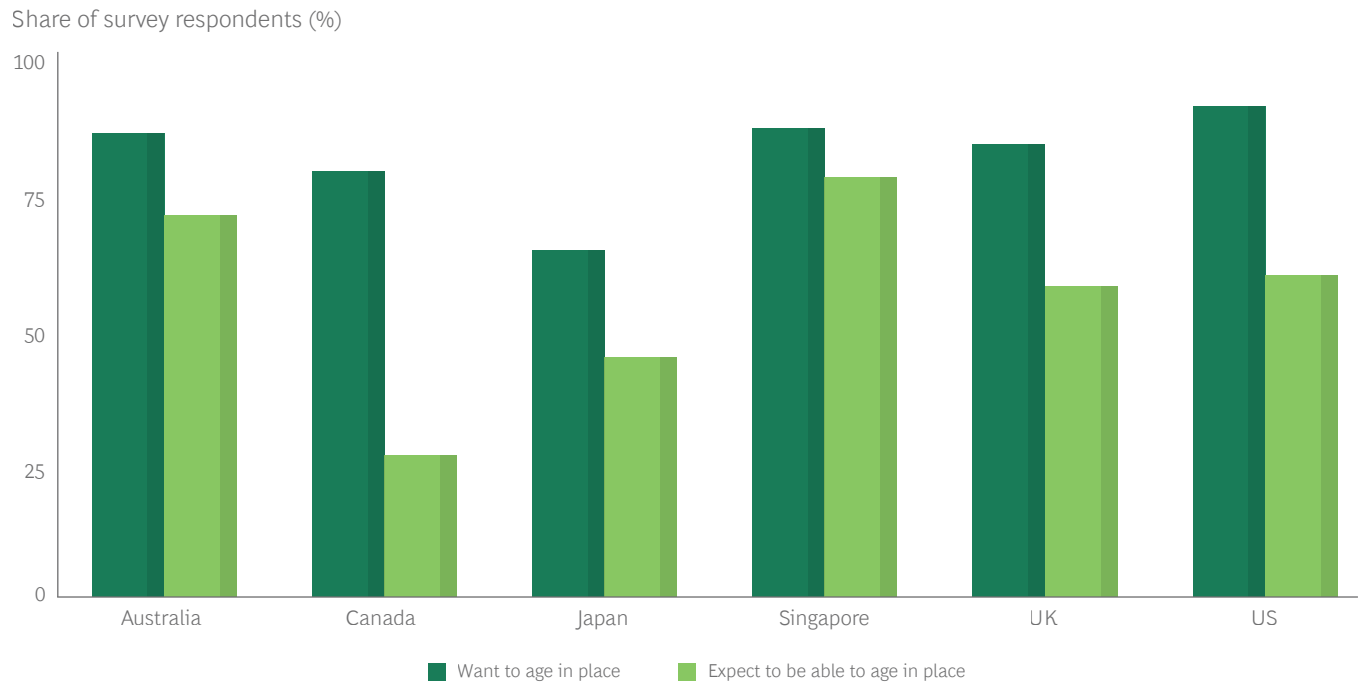
Researchers around the world have found that the overwhelming majority of elderly people prefer to remain in their existing home rather than move to a senior residence. (See Exhibit 1.) Indeed, recent studies have shown that even when contemplating a future in which they might need regular assistance with dressing, eating, or other daily functions, more than 60% of elderly people say that they would prefer to age in place if they could. But they aren't sure they'll be able to.

In many places, the current path of least resistance for elders leads to a dedicated senior residential facility. Before the 1990s, such a move was seen as a last resort; so-called old-age homes were often regarded as inhospitable places with mediocre food and few amenities. But since then, the high end of the senior-living industry has adopted more of a concierge hotel model, revamping some facilities to be cleaner, safer, friendlier, more upscale, and more convenient than they had been. Some facilities are also equipped to house and care for people throughout the aging process, from full independence through all the stages of cognitive and physical decline, with round-the clock skilled nursing support available on the premises. Although such premium residences can be expensive, and so are often financed by the sale of a resident's home, they have gained wide acceptance.

Nevertheless, some of the challenges and difficulties of senior residential facilities are now coming to light. The COVID-19 pandemic, for example, led to new concentrations of morbidity and mortality among the elderly, and the need to suspend in-person visits caused elderly people to become severely isolated in these environments.

Costs, of course, continue to be an issue, especially for people who have limited resources and may need to support themselves for many years with marginal income. The cost of care in senior living facilities in the United States is, on average, roughly twice the expense of an existing home or apartment, depending on the needs of the individual and the availability of local providers. The overall difference reflects the complex care required for residents of senior facilities, which have nursing staff available at all hours and must meet regulatory requirements for a minimum staff-to-customer ratio.

Exhibit 1 - While Most Elderly People Want to Age in Place, Many Don't Expect to Do So



Sources: AARP; AHURI; the Built Environment and Sustainable Technologies Research Institute; March of Dimes; Japan government agencies; Japanese Nursing Association; Singapore's Housing and Development Board; BCG analysis.

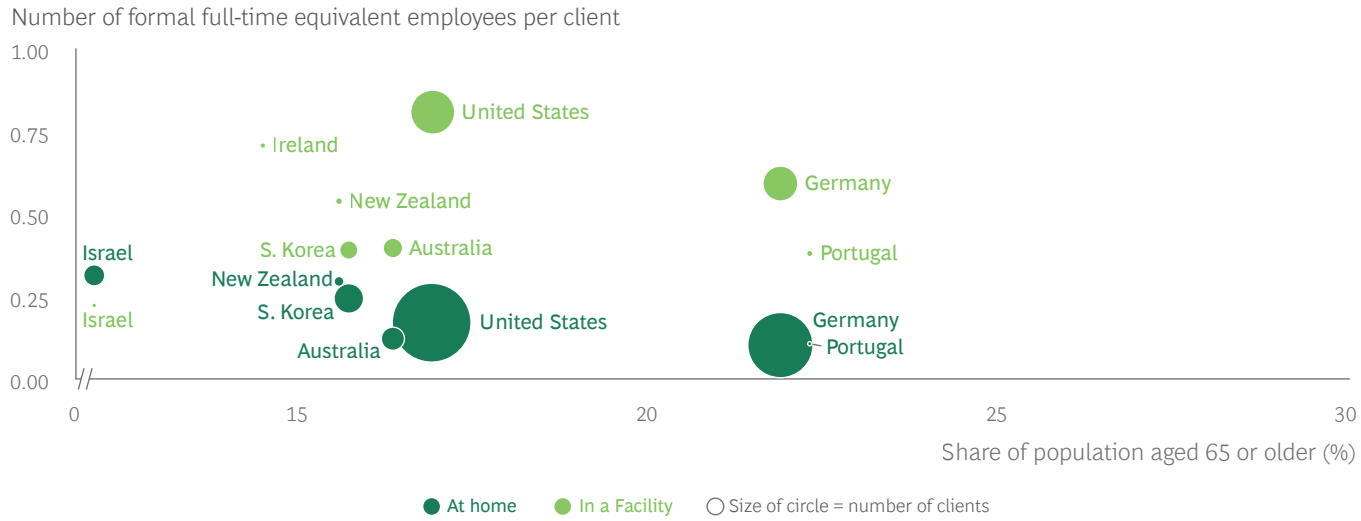
In recent years, aging in place has become an increasingly popular alternative. In contrast with the traditional route, aging in place offers blended care, in which formal staff is mixed with informal labor—the largely unpaid caretaking and housekeeping provided by family, friends, and elderly people themselves. (See Exhibit 2.)

Facing Up to the Trends

If history is any guide, the cost of elder care will almost certainly increase during the next ten years. Since at least the mid-1990s, spending on geriatric care has outpaced overall health spending and GDP growth in OECD countries. This has been driven by increasing investment in therapeutics and clinical practices for aging consumers, the labor costs for skilled workers who must deliver them, and the general ongoing inflation of health care costs, which run at twice the rate of consumer price inflation.

Another critical challenge is the growing need for elder care, driven by demographics and the declining overall health of the population. Currently, even during the COVID-19 pandemic, there is a shortage of facilities for senior residential care, and demand is expected to rise when the pandemic subsides. Many people who are now 65 years old are expected to live into their 90s. From 2020 to 2030, the proportion of the population over age 65 will have grown by 3%—a much greater rate than that of the overall population. And chronic health conditions are prevalent in this population. 85% of the elderly people in the US and 80% of those in Australia are affected; 37% of aging people in Singapore have more than three chronic health issues.

Exhibit 2 - Providing Care in Senior Residential Facilities Is More Labor Intensive Than Providing Care at Home



Sources: OECD; BCG analysis.

Note: The size of each circle represents the number of clients (care receivers) using this type of care (residential or home care for the elderly). Figures do not include unpaid or informal care.

Moreover, as the elderly population continues to grow, the population of taxpayers who support the expense of caring for them continues to shrink in relative terms. Each year, there are fewer workers paying taxes for every aging person who depends on the government safety net; today the global age-dependence ratio stands at 16%, up from 7.7% in 1970 and 9.1% in 1990. A sample of OECD countries, for instance, shows that while some may vary in the rate by which their population ages, all of them are aging. (See Exhibit 3.) By 2029, when the tail end of the US baby boom group reaches age 65, there won't be enough residential facilities to provide care for everyone who needs them—and many of those facilities are likely to be overcrowded and substandard.

Staffing shortages are also likely to increase. Health and social care workers currently constitute 10% of the total workforce in industrialized countries, but many are leaving the field. They can now find better-paying jobs in less complex and more prestigious working environments.

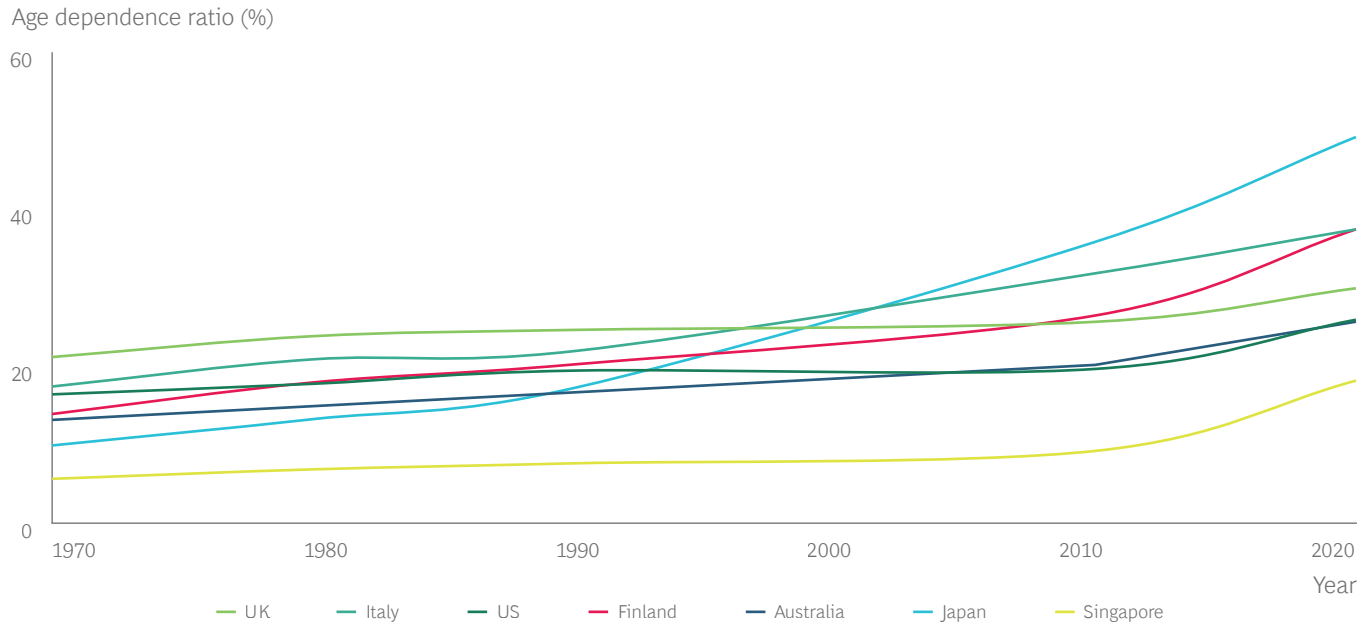
One way to mitigate the effect of these trends is to support aging in place, which is:

- the preferable choice for most seniors
- less staff intensive
- more diverse and generally innovative
- flexible—when acute care is needed, remote monitoring and other automated technologies are available

> **For many elderly people, aging in place represents a better experience, at a relatively affordable total cost, than the one offered by the traditional route.**

It also makes the most of all the resources in a person's life. It can complement informal care from family and friends more easily than institutional care, and it fits the demographic, economic, and technological trends of today.

Exhibit 3 - Aging Populations Lead to Greater Demand for Long-Term Care



Sources: OECD; BCG analysis.

Note: The age dependence ratio = the proportion of elderly and retired people to working people.

Care in the home won't be suitable for everyone. But for many elderly people, aging in place represents a better experience, at a relatively affordable total cost, than the one offered by the traditional route.It is estimated that the care needs of half of the global population over age 65—about 3 million people in OECD countries alone—are unmet but could be delivered by better home care services. Because such services involve preventive medicine, they can reduce the need for more expensive, more intensive care later in life. And they can be organized and managed in a more coordinated manner than in the past, avoiding the problems of fragmented care from competing providers.

The biggest hurdle is getting the support structures in place to make it feasible. That's where governments, businesses, and not-for-profit organizations, which haven't always been highly supportive in the past, can make a difference.

Five Barriers to Change

Some private-sector firms have enthusiastically stepped into the business of serving those who want to age in place. In Boston, Massachusetts, for example, a not-for-profit organization called the Commonwealth Care Alliance sends nurses, physicians, attendants, and counselors to the homes of about 7,000 elderly people. These individuals, generally 70 years or older, need help at least several times a week. Their care includes assistance with medical issues—such as diabetes, coping with depression, and Alzheimer's—as well as with daily activities, such as feeding themselves, traveling to the store, and generally managing their lives.

Buurtzorg, a home care agency based in the Netherlands, serves more than 70,000 aging people per year in 24 countries. The 10,000 nurses on its staff work in self-managing teams and are referred to as health coaches. The agency's care model focuses on listening to clients rather than directing them.

A few governments have also recognized the utility and value of the aging-in-place concept. In Singapore, where the number of people over age 65 is expected to reach 1.4 million (about one-quarter of the total population) by 2030, the government is encouraging most elders to live in their own homes or with family. What's more, the Singaporean housing development board is investing in R&D for smart sensors and home care robotics, with some commercial enterprises—hospitals, payers, and medical tech firms—participating. These continually evolving technologies are used to monitor the safety of elders at home and help them manage the travails of everyday life.

But in most developed economies, home care services remain relatively underutilized. Although 68% of care recipients (more than 15 million people) receive home-based care in OECD countries, the business of providing that care currently represents less than 30% of the $1.1 trillion market for aged-care services.

Five barriers limit the supply of support.

Inertia in the Referral System. Few business ecosystems have changed as dramatically as that of elder care. Before the 1990s, comparatively few people lived long enough to require a systematic means of handling their needs. When the elderly population boomed, some of the traditional sources of guidance for elders and families—primary care physicians and community services—recognized the value of senior residences and began to make referrals to them. At the time, such facilities were becoming an increasingly acceptable option.

The quality of home-based care has been rising in recent years.

Today, residential care is often treated as the best choice, even as circumstances are changing. Some sources of guidance—including the commercial referral agencies that advertise elder care services—have limited knowledge of recent advances in home care. Their guidance does not always serve seniors well. A 2011 OECD report estimated that in the United States, 48% of the referrals of elderly people to institutional care were inappropriate—either too costly or did not meet their needs. That figure was 36% for the United Kingdom, and 7% for Canada.

Inaccurate Perceptions of the Quality of Home Care. Home care providers are often small organizations with limited oversight, and they vary in capability. For those reasons, home care has had a poor reputation, with mixed levels of acceptance, in the past.

But the quality of home-based care has been rising in recent years.Reviews, observations, and analyses of care quality have found that current outcomes of home-based care are at least equal to, if not better, than those of residential care. One well-accepted measure of quality, for example, is the rate of infections that occur after health interventions. For people aged 65 or over, such infections occur at a rate of 5% to 8% in senior residences, compared with 2.8% elsewhere. As their capabilities grow, home care providers are increasingly interested in advertising their quality of care and providing services to customers with complex needs, such as dementia.

Inherent Challenges in Delivering Home Care. A provider's ability to deliver quality services systematically is difficult to monitor. Because most providers are small, they partner with other providers to meet the full spectrum of their clients' needs. Records and observations about an individual's well-being, therefore, may be fragmented across multiple organizations. What's more, a customer's own behavior can be problematic, especially if they are experiencing cognitive decline; they may forbid entry to caregivers, treat them with suspicion, forget to take medication, or ignore self-care. Caregivers can also face challenges with hygiene and clutter, poorly maintained or hazardous homes, and ill-disciplined pets. All of these factors, together, make it difficult for home care providers to offer consistent, reliable service.

The greatest challenge, however, is recruiting and maintaining staff. In three-fourths of OECD countries, demand has outpaced the supply of qualified, experienced caregivers. The resource-intensive, high-touch nature of caregiving, along with fragmented schedules, exacerbates the difficulty.

Home care providers are beginning to address these issues with such digital technologies as remote monitoring, virtual care, predictive analytics, and automated productivity tools for frontline staff. But adoption is still too slow. A 2020 survey of Australian home care providers shows that only 19% employ data analytics, 51% use telehealth solutions, and 58% automatically upload information captured during home care service.

Finally, a more subtle challenge is the ambiguous role of informal caregivers, such as family members and friends, who can make an enormous difference to an older person's quality of life. But it is not always easy to integrate the activities of informal caregivers with those of a home care provider.

The role of informal caregivers, and how best to make the most of their help, tends to vary by culture. For example, elderly Chinese, Japanese, and South Korean people are more likely to live with their adult children because their cultures ascribe to the Confucian teaching of filial piety. Some countries have even codified this approach into law: the Maintenance of Parents Act in Singapore, for example, entitles older parents to claim financial support from their children. In other countries, such as those in North America, adult children may accept varying levels of responsibility. But informal caregivers exist in every culture and context. Giving them better support and guidance will pay off in more cost-effective, more skilled home care.

Cost of Service. Few countries have come to terms with the immense costs of elder care. A 2020 OECD study of 26 countries concluded that the out-of-pocket costs for a middle-class elderly person could represent up to five times that person's disposable income, depending on the number of hours of care they need per week.

In some respects, senior residence care is more efficient than home care. Clinicians who visit institutions and group homes see, on average, 20 to 40 patients per day, compared with 5 to 7 when visiting people at home. The cost of home care is even higher in the vast rural areas of Australia and North America, where travel costs and time expended make it hard for providers to break even financially.

In other respects, however, home-based care can be less expensive than senior residence care, especially when labor costs are managed well. Most tasks can be managed by personal-care assistants, who typically earn much less per hour than visiting nurses. Administrative and residential costs are lower as well, especially for long-term homeowners who no longer carry a mortgage. The efforts of informal caregivers and elderly customers themselves, who often prefer to prepare food and participate in their care at home, also help lower costs: the United States has estimated the combined annual economic value of informal care to be about $350 billion. In OECD countries, 55% of the elderly receive only informal home-based care, with no professional assistance at all. A comprehensive, cost-effective, home-based care system could be very welcome in such situations.

Regulation and Reimbursement of Home-Based Care. Developing an oversight regime that motivates caregivers to provide high-quality service at an efficient and affordable price, and meets community expectations of fairness as well, is a complex task. All the challenges of delivering home care, such as fragmented record keeping and inconsistency in staffing, also apply to regulations and reimbursement. An effective approach must take into account the inconsistencies built into home care: the large number of widespread locations and providers, along with the disparate skills and responsibilities of staff members, many of whom work part-time. And the need to schedule visits to an individual's home also rules out the opportunity for surprise inspections. In addition, payers may worry about fraud, waste, and abuse—such as when providers submit a claim for services that were never delivered.

Many governments rely on providers to regulate themselves or, worse yet, base oversight on consumer complaints and adverse events. This laissez-faire system tends to coexist with very strict coverage constraints, which closely limit the types of services that can be subsidized. The subsidies themselves are typically structured on a fee-for-service basis, which is not ideal. The best schemes are those that reduce fraud through better standards and incentives, subsidize comprehensive full-service support, and focus on paying for value.

A Complement of Comprehensive Solutions

No one solution will address the barriers to adoption of the aging-in-place model because they are interrelated. But a comprehensive package of changes at both the business and the regulatory levels will work well for older customers.

Payers. These organizations should rapidly release protocols and support for home care providers:

- Delineate a menu of reimbursable services, which may differ from those provided in senior residences.
- Support preventive care, digital monitors, and training for staff and informal caregivers, which may decrease overall costs in the long run.
- Develop shared reporting and technology platforms, providing scale and convenience for information, claims, and reimbursement activity.
- Support consumer choice and convenience through comprehensive, easy-to-navigate online user interfaces, and include insights into what typically works for consumers like them.

Providers. These organizations should invest in innovative approaches that put customers first:

- Create a value-based package of services tailored to customer needs, including preventive care, early monitoring of symptoms, practical guidance, and social and emotional support.
- Form partnerships with specialized health care providers and hospitals for integrated care, clinical governance, and consumer-focused referrals.
- Invest in improving the abilities of the company's workforce, ideally with the support of other stakeholders, such as payers and government. An optimal frontline workforce comprises people with a range of qualifications, skills (including leadership), and qualities of emotional intelligence (including compassion, commitment, and resourcefulness).
- Manage staffing shortages by adopting methods that have helped other businesses, such as hotels and clinics, address them. These include more flexible and part-time working arrangements, incentives for quality, and training in complementary skills.
- Give staff more autonomy and accountability, so they can respond quickly to customer needs. In Buurtzorg, for example, case managers in self-managing teams make all the necessary decisions. This also has great value in recruiting and retaining staff.
- Take advantage of digital technology, again with the support of payers and governments if possible. In Singapore, sensors and devices collect data about the daily living patterns of elderly people—such as what time they typically wake up in the morning or leave their home. When the data has been aggregated and analyzed, a platform can suggest improvements in overall care or alert designated family members if there is an accident. Sensor-enabled medication dispensers are being tested now; they can track when individuals don't take their prescriptions and remind them to do so.

Government Regulators and Policymakers. These public-sector entities should redesign their systems to meet the unique needs of home-based care, complementing or adapting existing rules to the new realities. Among the individual measures that may apply in particular locations:

- Help cut the unnecessary red tape that constrains providers from offering new models of care. Look to simplify administrative processes, such as reporting systems, claims standards, and worker accreditation registries.
- Set new regulatory frameworks that provide better support to help the ecosystems of payers and home care providers work together—for example, in sharing information, setting standards, and maintaining quality control. Calibrate these frameworks for the unique attributes of home-based care and for the opportunities inherent in digital technology.
- Ensure the development of a higher-quality, more compassionate home care workforce by following best practices in professional training, licensing, and accreditation for a broader range of skills. Establish and enforce high standards for professional care. Establish a system of ongoing monitoring for quality. Develop public-sector support for upskilling and training home care employees, especially in areas related to care coordination. In 2018, for example, the Norwegian government funded a project to improve nurses' skills in communicating with formal and informal caregivers. And the German government trains nurses in case management, communication with other professionals, conflict management, collaboration, and care oversight, which includes ongoing evaluations of the quality of care and the resulting health and well-being of the patients.
- Further support the attraction and retention of the workforce through incentives, benefits, and opportunities. Specific measures might include immigration rules that favor people with health care aptitude and the willingness to work in personal care, along with incentives for quality.

Referral Agencies and Community Groups. These organizations, which include for-profit and not-for-profit entities, provide information and guidance to elderly people. They help people navigate through the range of options for senior living, and they make referrals to residential and home care services. Their engagement would be extremely valuable and could include the following measures:

- Support home care as an option, feature it more prominently in the menu of options offered, and find ways to be compensated for this if necessary.
- Explore more comprehensive approaches to referrals and marketing. In Austria, for instance, referral services act as brokers and advocates for the elderly, helping them to navigate government services.
- Strengthen connections with health care professionals, psychologists, social workers, family members, and community volunteers. People who spend a great deal of time with the elderly can spot early indications of decline and so may be in a good position to provide referrals and guidance at the right time.

The Entire Industry. Payers, providers, referral agencies, and community groups—ideally, with the support of government regulators and policymakers and the elderly themselves—should collaborate on several areas:

- Develop and support a value-based payer reimbursement model that would favor payments for bundled services over fee-for-service or day rates and provide incentives for higher-quality care. Take into account the savings that payers and governments would gain because of costs that would be lower than those associated with senior residences. For example, in the US, the Centers for Medicare & Medicaid Innovation extend supplementary benefits to include nonskilled home care services, such as enhanced benefits for food, companionship, and other services related to social determinants of health. This encourages the development of comprehensive care solutions in the home.

- Build a talent pipeline at scale, continuously recruiting people who have the caliber and compassion needed to care for older people. Support measures, such as flexible and part-time work models, that enable people to work in this field who otherwise could not be available.

- Provide better training and support for informal caregivers, who don't always have the skills needed for the job. Set up interactive learning and groups so that caregivers can benefit from one another's experience.

- Work together across organizational boundaries to collect and analyze data related to provider quality and consumer outcomes, including standards for safeguarding privacy. This use of data will raise awareness of value and quality. Providers and others can use predictive analytics to continually improve their services and refine the model of home health care.

- Bring policies and practices into harmony with adjacent health and social care systems. For example, make it easier for one provider to handle all the issues related to aging and disability. Design the system so that it covers the full consumer journey, without awkward handoffs, such as the gap between hospital stays and home rehabilitation care. For example, Japan has created a new role, called long-term care managers, who are licensed to coordinate the provision of health care and social services for elderly individuals.

Aging in place could transform health care for the elderly around the world. Together, the stakeholders—payers, providers, government regulators and policymakers, and referral agencies and community groups—have a choice. They can leave old practices in place and bear the extra long-term financial and human costs. Or they can pay attention to the trends in cost, demographics, and labor and change their ways of working. That's the change that consumers—who are better informed, with ever-higher expectations of convenience, quality, and price—want.

These issues are personal. None of us is getting any younger, and many will turn to this visionary, realistic way to achieve superior care in our existing homes. If we can make it work for others, we will benefit directly ourselves.

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Reaching Medicaid Members Where They Are: Online and On Their Smartphones

By Lisa Vura-Weis, Kazim Zaidi, Ben Shaffer, Jonathan Scott, Jonathan Lim, Yoonjin Min-Morrison

The COVID-19 pandemic accelerated a shift to digital engagement in health care, including expansion of telehealth, growth of digital outreach, information, and communication, and an increase in mobile apps for health management.

We conducted a survey from May through June 2022 of 465 insured adults to evaluate how consumer sentiment toward digital health has changed, and how consumers want to be engaged moving forward. We specifically sought to understand how the experiences and preferences of Medicaid members, who have traditionally been viewed as digitally naive or disinterested, differ from those of commercially insured members.

Our findings debunk outdated views that Medicaid members do not have internet access, that they are not digitally savvy, and that they do not want to engage with their payers and providers in digital ways.

In fact, the data show striking similarities in the preferences for digital engagement across Medicaid and commercially insured members. Both groups have an increased appetite for telehealth (especially for behavioral health care), want to shift from in-person and phone to digital channels to seek information and engagement with their provider or payer, and are interested in apps to help manage their health. We also found that Medicaid members are digitally underserved (that is, they are not offered the same level of digital engagement as their commercially insured counterparts).

These findings imply that Medicaid-managed care organizations (MCOs) and providers that serve Medicaid patients should prioritize digital engagement to improve care navigation, provide information, reduce cost to serve and free up time for more valuable activities, and keep beneficiary information up to date as eligibility changes. We believe there is opportunity for MCOs and providers to not only lower their own costs but also improve care and increase member or patient engagement and loyalty by expanding use of these underutilized channels.

Medicaid state agencies also have an important role to play: pushing their MCO and provider partners to offer the same digital engagement opportunities as they offer their commercial members. Medicaid agencies can achieve this by raising the bar on digital engagement in their MCO procurements. As we approach the eventual end of the public health emergency (PHE), and the Centers for Medicare & Medicaid Services proposes new rules to address churn, Medicaid agencies can also think about how to use these channels to engage members with their MCO and provider partners.

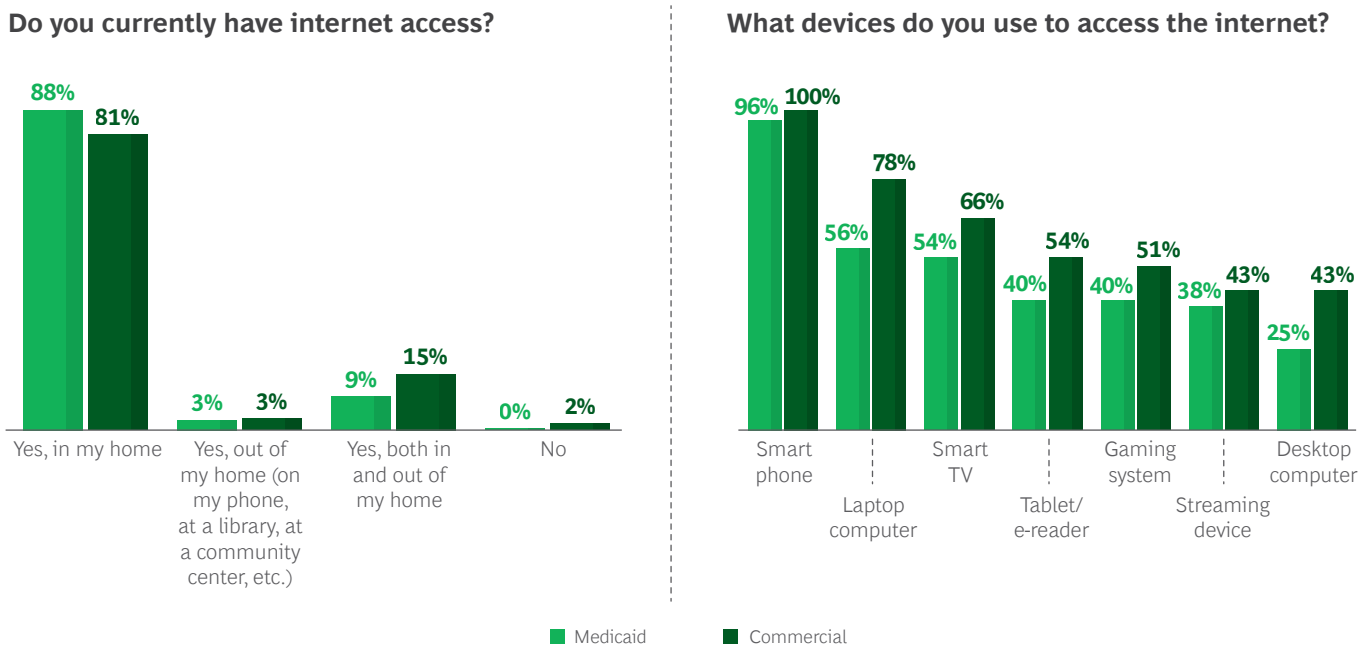
Medicaid Members: A Misunderstood Demographic

Are Medicaid members digitally naive or digitally savvy? Based on historical rates of internet access and smartphone ownership by low-income individuals, an assumption exists that Medicaid members do not have consistent access to digital channels, and that those who do are not digitally savvy.

To the contrary, our survey found that 91% of Medicaid member respondents had internet either in or out of their home (for example, on a phone or at a library), while 9% had internet access both in and out of their home (See Exhibit 1). When asked which devices they use to access the internet, 96% of Medicaid members said they use their smartphone, vastly outpacing the second device selected—only 56% of Medicaid members reported using a laptop to access the internet.[1] While there is no question a digital divide exists across income levels and geographies, a large majority of respondents across payer types noted regular use of mobile apps.

1. *It is worth noting that inherent sampling bias exists in the survey, as it was conducted digitally. However, the findings for internet and smartphone access are consistent with the upward trend in access across all income levels. Findings from the Pew Research Center in 2021 showed that, in total, 97% of Americans own a cell phone and 85% own a smartphone. In that same year, for those with an annual total household income (HHI) of less than $30,000, 76% owned a smartphone, while 87% with an annual total HHI between $30,000 and $99,999 owned a smartphone. Interestingly, for the same two demographics, home broadband usage was at 57% and 83%, respectively, indicating that when it comes to internet access, smartphone usage dominates the <$30,000 HHI segment. This suggests a strong use case for expanded app- or phone-enabled product offerings.*

Exhibit 1 - Medicaid and Commercial Respondents Have Access to Internet in Their Homes; Most Medicaid Respondents Have Smartphones, All Commercial Respondents Do



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

When it comes to social media and communication apps like YouTube, Facebook, e-mail, or text, Medicaid members are regular users (89%, 87%, 82%, and 74%, respectively). Eighty-six percent of Medicaid members use mobile banking at least weekly, signaling an ability to perform more complex or sensitive transactions on a mobile device, as well as an interest in doing so (See Exhibit 2). Medicaid members clearly want and are equipped to engage with brands and perform daily tasks through digital channels.

Medicaid members are digitally savvy, and they want health care platforms to know and serve them.

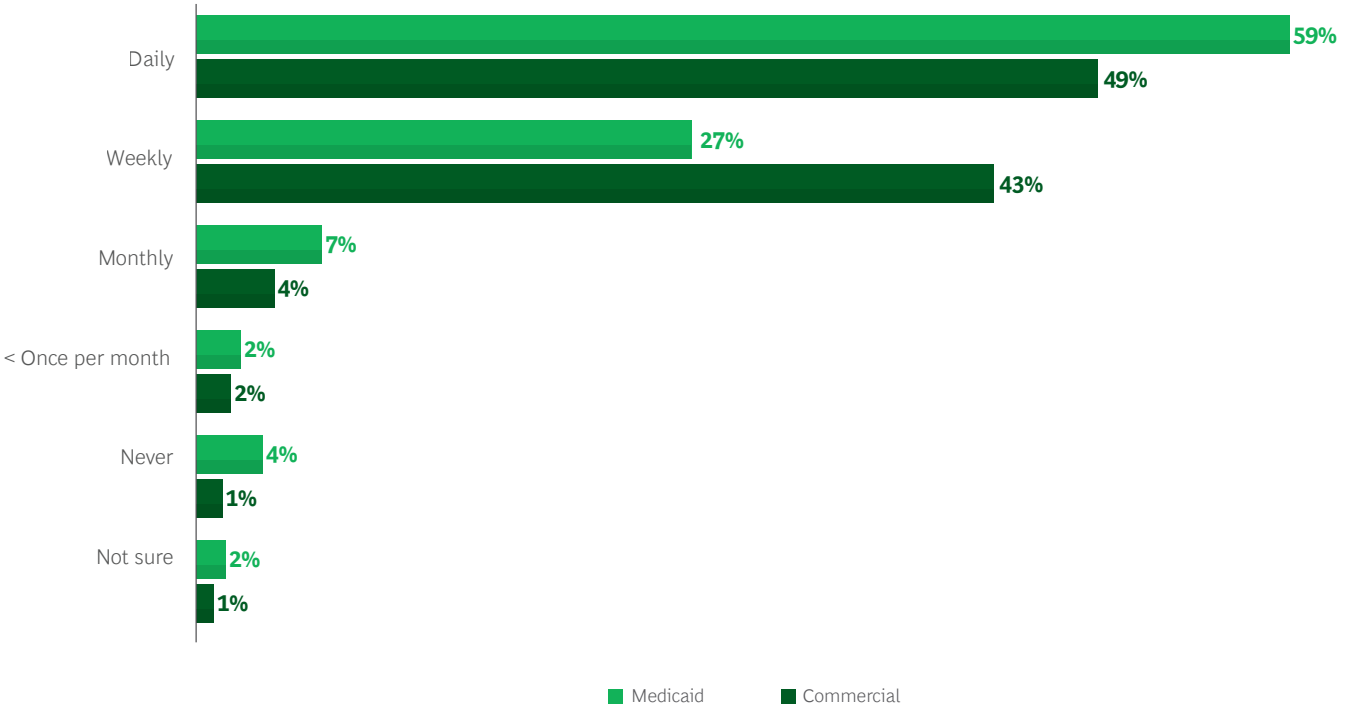
Payer Interaction

Medicaid members want and are able to engage digitally, and this extends to interactions with their health plan. Members are less satisfied, however, with their digital offerings than those with commercial insurance are.

When asked whether digital capabilities were important when choosing an insurance provider, the majority of Medicaid and commercially insured members agreed that being able to engage digitally to view insurance coverage information like claims, access health management apps, and engage with payer representatives and providers is important. While commercially insured members agreed at slightly higher rates on the importance of digital interaction, the similarities in sentiment across commercial and Medicaid members are striking (See Exhibit 3).

Exhibit 2 - 59% of Medicaid Respondents Use Mobile Banking Daily, Signaling an Ability to Perform Complex Transactions on a Mobile Device

How often do you use mobile banking services (e.g., check balances, pay bills, transfer money, deposit checks, etc.)?



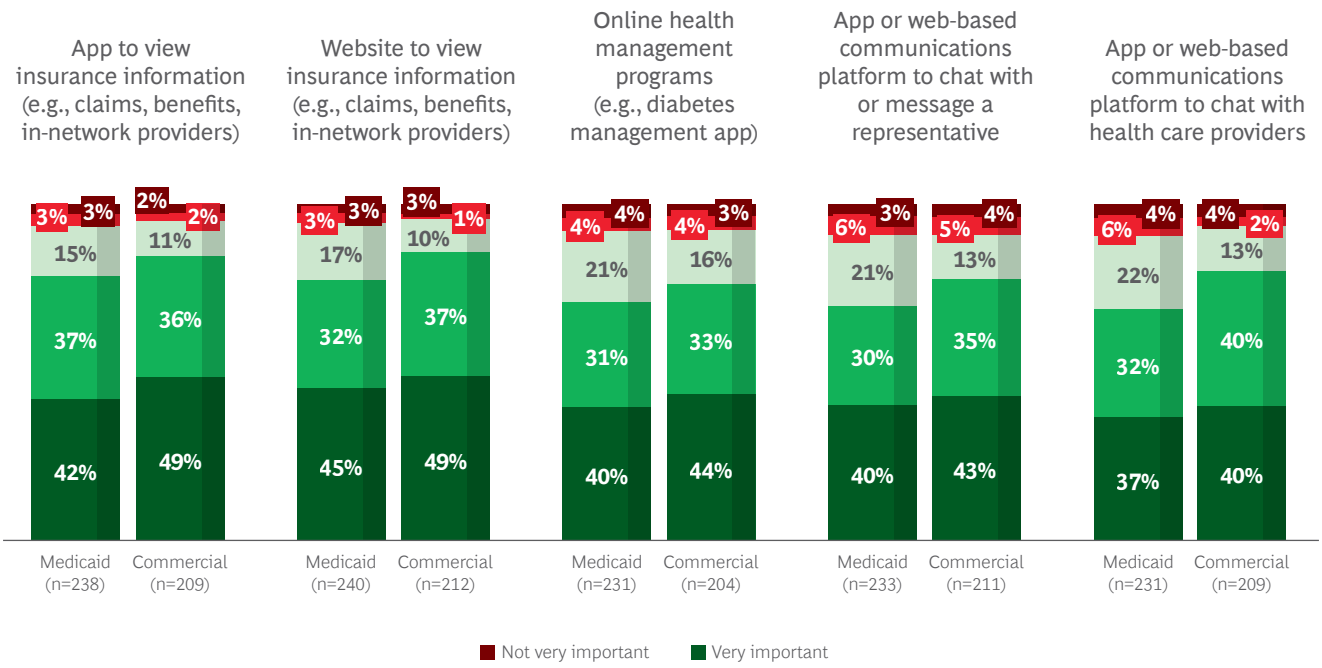
Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

When considering satisfaction with current health plan platforms or apps, however, Medicaid members are not satisfied at equal rates to commercially insured members with their health plan's online platform. For example, while 83% of commercially insured members are satisfied or highly satisfied with their ability to understand what services were covered online, only 72% of Medicaid members were. Across similar questions, Medicaid members were consistently less satisfied on average (See Exhibit 4).

Medicaid members were also offered health management apps by their MCOs at lower rates than commercially insured members were by their health plans. Forty-one percent of Medicaid members and 35% of commercially insured members had not been offered any health apps by their plan (See Exhibit 5), despite generally high satisfaction among Medicaid and commercial members who did utilize apps. Satisfaction among Medicaid members who utilized health apps was high, but survey results show room for improvement, particularly for weight tracking or weight loss, prescription management or reminder, and diabetes management apps (See Exhibit 6). For payers, there is a clear opportunity to leverage the types of apps they already offer in their commercial lines to members in their Medicaid lines.

Exhibit 3 - Medicaid Respondents Value Digital Capabilities Almost as Much as Commercial, with Respondents Slightly More 'Neutral' Toward Digital Capabilities

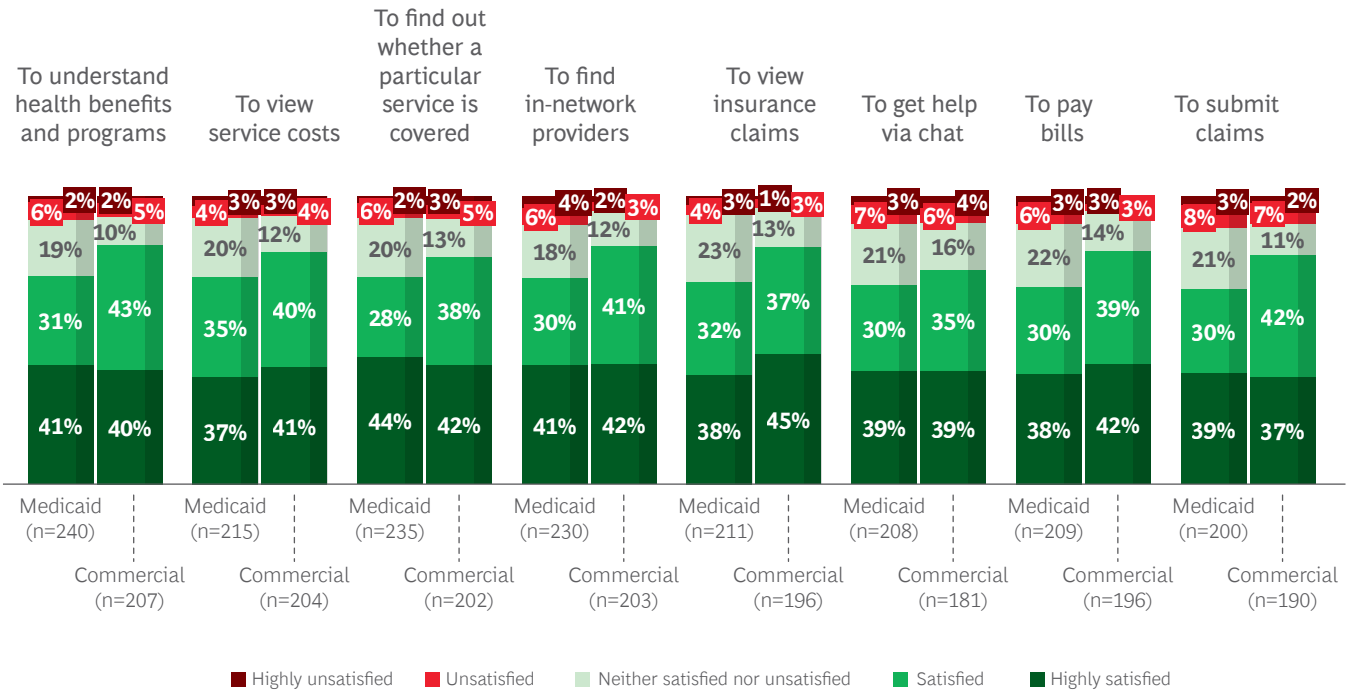
How important are digital capabilities to you when selecting an insurance provider?



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

Exhibit 4 - Medicaid Respondents Are Less Satisfied with an Online Platform/ App Especially with Respect to Insurance Coverage, Claims, and Bill Pay

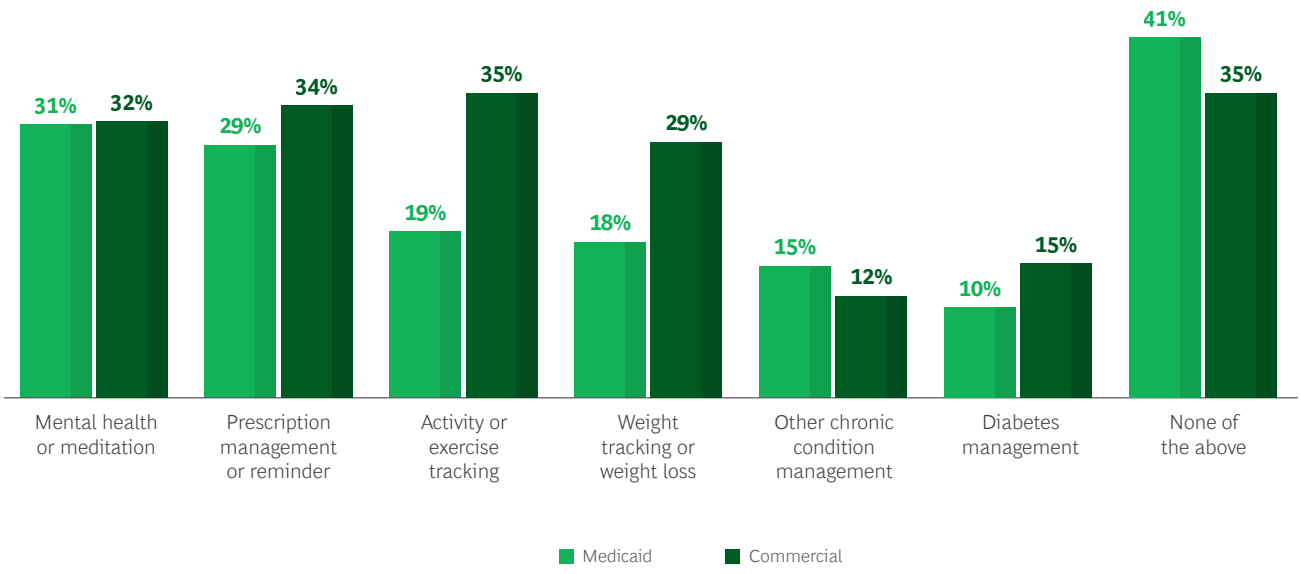
In the past year, how satisfied were you with the online platform or app from your health plan?



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

Exhibit 5 - 41% of Medicaid and 35% of Commercial Members Have Not Been Offered any Health Apps by Payer

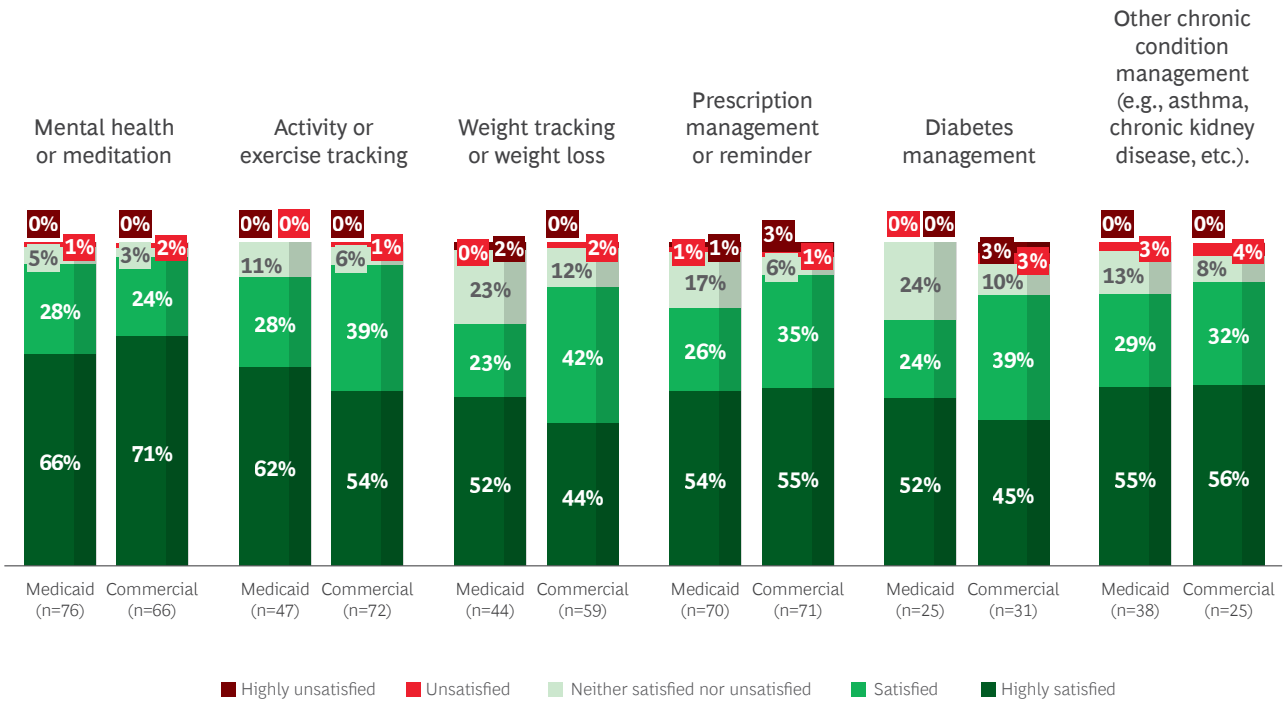
Has your insurance provider offered you any of the following applications to help manage your health or wellness?



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

Exhibit 6 - Those Who Utilized Apps Were Generally Satisfied, but Opportunities Exist to Cater to Medicaid Members Using Weight, Prescription Management, and Diabetes Apps

How satisfied were you with the app?



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

Provider Interaction

We also sought to understand how digital interaction and preferences with providers differed across Medicaid and commercially insured populations.

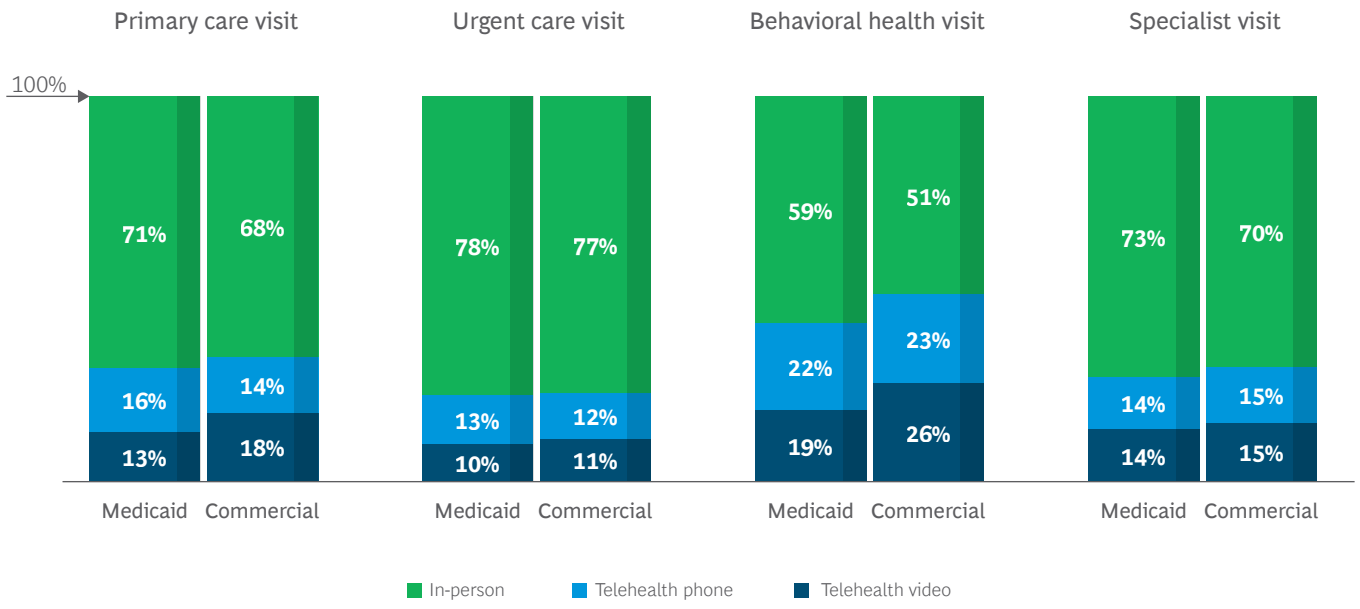
Nearly 30% of both Medicaid and commercially insured respondents indicated a preference for telehealth for primary care visits—rates much higher than pre-pandemic and current estimates of actual virtual care visits. Consistent with other research, the interest in virtual behavioral health visits was even greater, with more than 40% of respondents preferring virtual behavioral health care (See Exhibit 7). For Medicaid members, satisfaction across in-person and virtual visits was similar, though there was a slight preference for the comfort provided by an in-person provider—Medicaid respondents prioritized provider engagement and short travel time when asked what makes a positive experience with a care provider.

While in-person care remains the preference of a majority of respondents, both Medicaid and commercially insured members expressed a strong desire to shift from in-person and phone to digital channels for routine administrative tasks with their providers. For example, only 44% of Medicaid members used a digital channel to request or view their medical history in the past two years, while 59% would prefer to use a digital channel in the future. While commercially insured members also expressed a desire to use digital channels more frequently, the increase is not nearly as pronounced.

In our sample, Medicaid members expressed using digital channels over the past two years significantly less than commercially insured members (See Exhibit 8 and 9). We hypothesize that this is because Medicaid members are not offered digital avenues as frequently as commercially insured members are. This may be because they are less likely to be served by providers that do not have the ability to invest to the same extent as larger systems that cater to the commercially insured.

Exhibit 7 - Medicaid Respondents Have a Slight Preference for In-Person Visits, Although Preference Across Respondents Is Lower for In-Person Behavioral Health

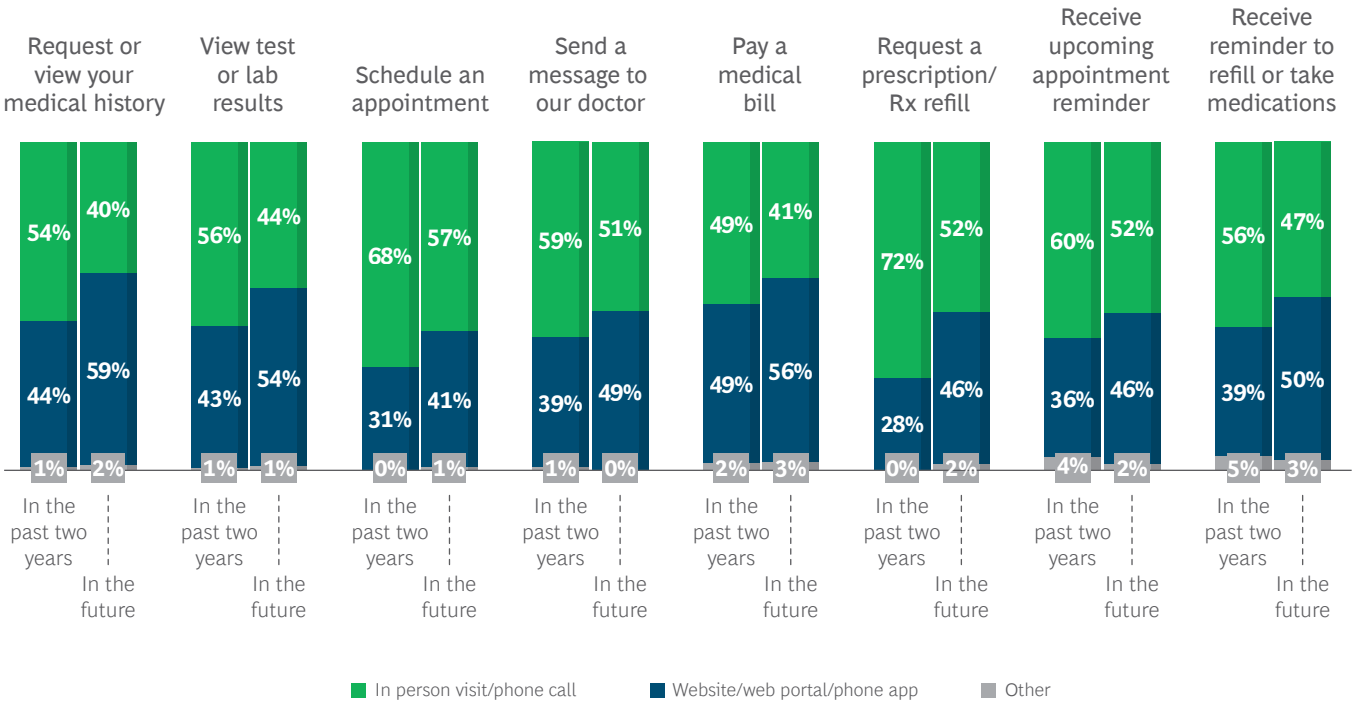
How would you prefer to have the following types of medical visits?



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

Exhibit 8 - Medicaid | Desire to Shift From In-Person and Phone to Web and App Across All Activities

In the past two years, how have you completed the following actions with your doctor(s) or health system?
In the future, how would you prefer to complete the following actions with your doctor(s) or health system?



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

Use of Tech Tools for Health

Despite Medicaid members' interest in interfacing digitally with health care platforms and apps for administrative tasks and telehealth provider visits, members have low or infrequent adoption of additional health management application offerings (for example, mental health, activity tracking, or disease management apps). Forty-one percent of Medicaid members reported never having used an app to manage health, compared with 27% of commercially insured respondents.

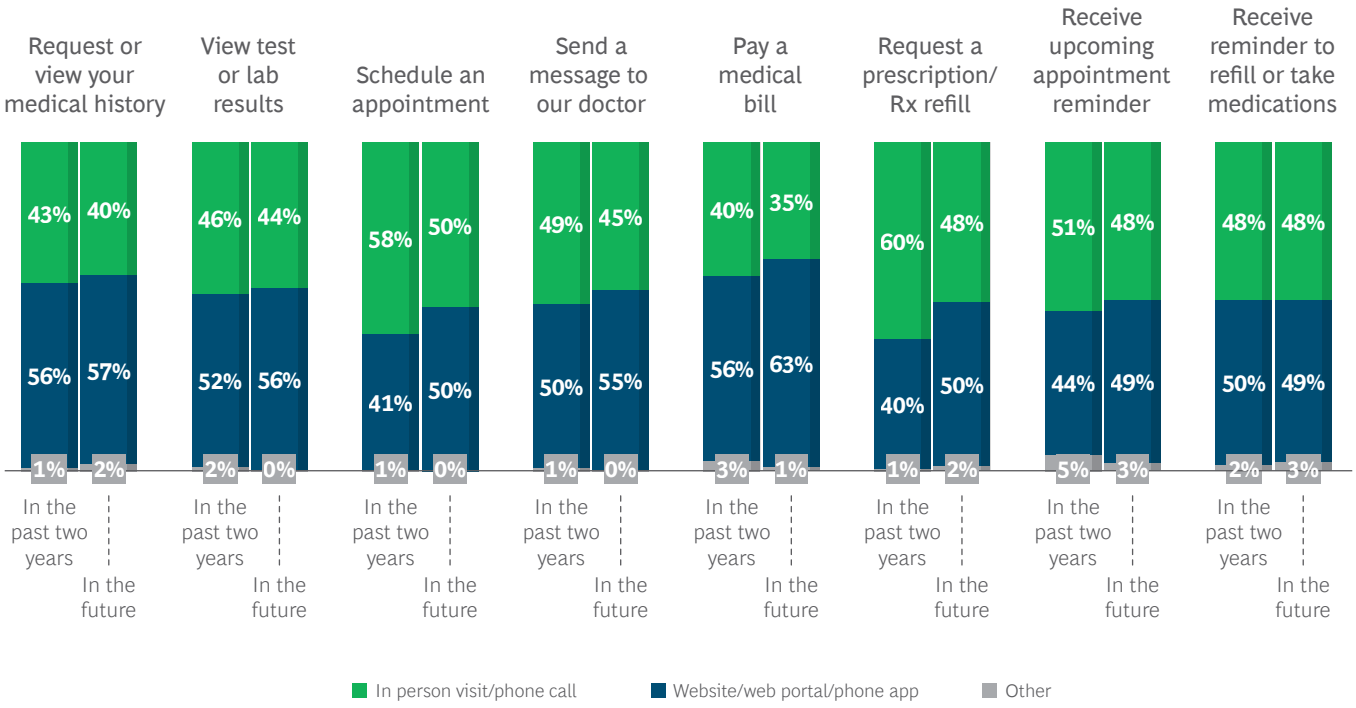
When asked why they did not use a device or app to monitor health, Medicaid members cited lack of interest and cost as the main barriers, although 49% said they would use a device to monitor health issues like blood sugar level, respiration, blood oxygen, and heart rate if it was provided to them (See Exhibit 10). Given Medicaid members' digital capabilities and interest in engaging with apps, health plans and providers should consider offering apps and devices that have proved effective with their commercially insured populations.

Implications and Recommendations for Payers, Providers, and Medicaid Agencies

Our survey findings show there is a gap between existing digital options available and how Medicaid members want to interact with their MCOs and providers. While in-person visits will remain critical, by improving or developing digital options for Medicaid members, health plans and providers can improve engagement, patient care, and care management and navigation. In doing so, both payers and providers can communicate with members or patients in a lower-cost way, freeing up time and cost for more valuable activities amid provider and health care worker shortages. We see significant opportunity for MCOs, providers, and Medicaid state agencies to learn from our findings.

Exhibit 9 - Commercial | Relatively Lower Desire to Move from In-Person and Phone to Web and App Compared with Medicaid Users

In the past two years, how have you completed the following actions with your doctor(s) or health system?
In the future, how would you prefer to complete the following actions with your doctor(s) or health system?



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

Payers

Payers can both reduce administrative costs and improve care for Medicaid members with smart expansion of digital engagement. Many MCOs already offer or are required by states to offer care management and navigation or other services that could be improved by expansion of digital offerings.

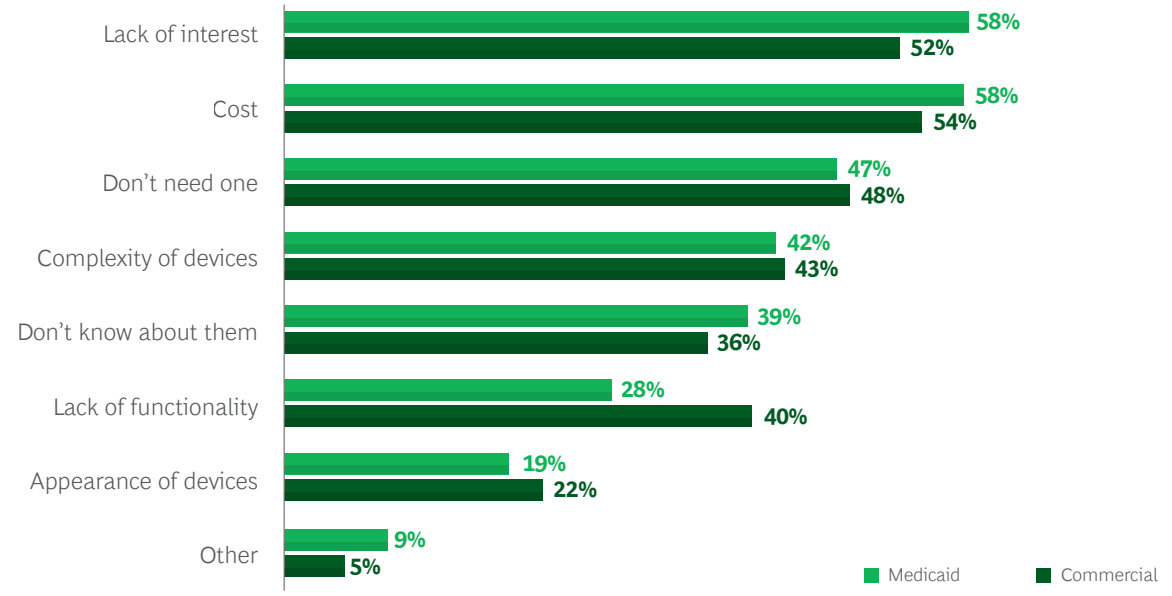
Most Medicaid members are aware of their insurance provider and if given the option will likely choose their existing insurance provider as a commercial consumer, especially if existing plan satisfaction scores are high. With a strong, standardized digital offering, payers have an opportunity to reduce consumer attrition, capture additional data through apps, and reduce administrative costs (for example, reduce walk-ins or call centers in favor of self-service digital applications).

MCOs should:

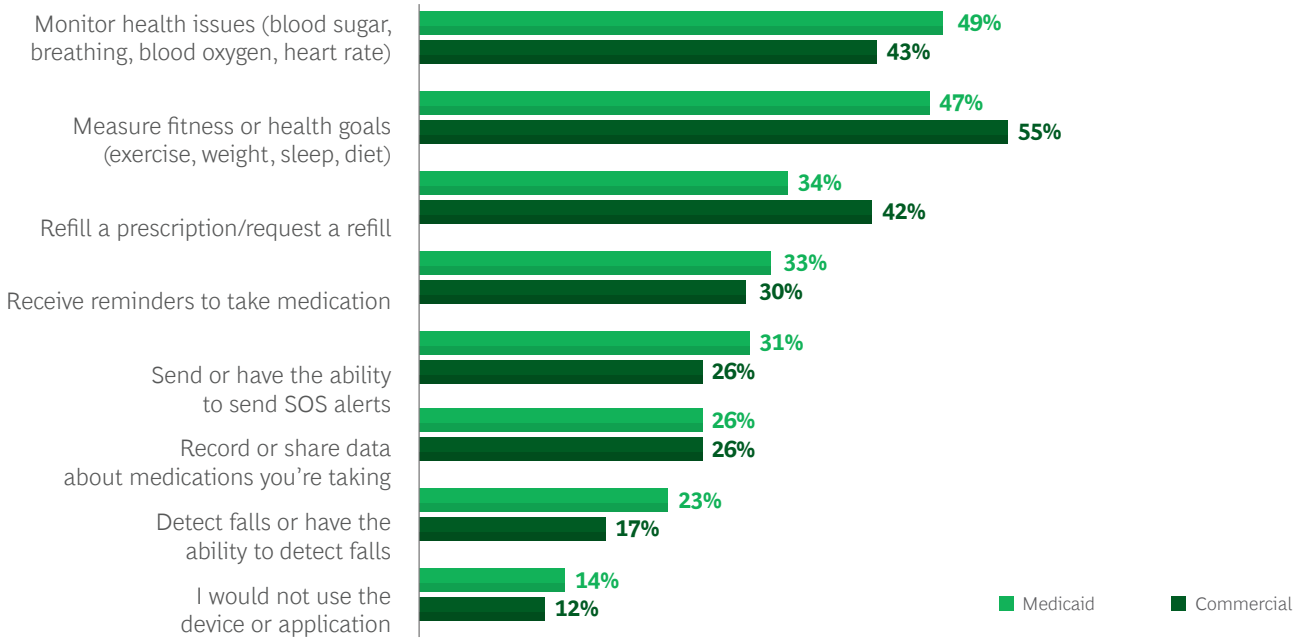
- Improve information accessibility: Develop digital channels for understanding benefits, specifically focused on in-network provider options, referrals, and potential copays service coverage.
- Integrate digital in care management: Develop care management and disease management mobile solutions to go along with disease-specific interventions tied to specific outcomes and value-based payments (for example, vaccination reminders or well-child visit reminders that can help improve Healthcare Effectiveness Data and Information Set [HEDIS] scores).
- Utilize already built offerings: Provide and promote products currently available to commercially insured members to Medicaid members (for example, if a mental health app is available to a payer's commercial clients, it should also be available to Medicaid members).

Exhibit 10 - Lack of Interest and Cost Are Cited as Reasons for Low Adoption (Cost May Be Driving Lack of Interest); There Is High Interest in Health & Fitness Tracking

Please select your top three reasons for not using a device or app



If a health device— wristband, wearable monitor, or phone app—were provided, which of the following would you use it for?



Source: Medicaid is n=251 and Commercial is n=214 unless otherwise specified.

Providers

Providers are stretched to provide quality care amid increasing demand; shortages of clinicians, nurses, and other healthcare workers, especially in primary care, behavioral health, and home health; and increasing administrative demands and complexity. Digital channels have been shown in commercial insurance and outside of health care to be a lower-cost and reliable form of communication, that over time can reduce administrative burden as it is incorporated into workflows. In health care, giving patients the ability to understand their options and navigate care digitally can help improve outcomes.

Investing in digital tools can help providers differentiate themselves in the market and gain competitive edge through:

- Lower administrative costs. If patients are able to manage their own scheduling, medical records access, and vaccination information, the burden of service is reduced for the provider and the care team.
- Higher retention. As the network becomes easier to use through automated appointment reminders, streamlining of referrals, and online prescription refills, Medicaid members are incentivized to remain within the provider system.
- Continued focus on preventative care. The utilization of prescription reminders, chronic care treatments, and even specialist referrals continues to put the patient at the center of their care.
- Innovation and experimentation: Recognize the willingness of Medicaid members to try monitoring devices if they are provided free of cost and seek partnerships to provide devices to patients as part of care management pilots.

Medicaid agencies

Our research suggests that Medicaid members are not receiving the kind of digital engagement they desire, with potential negative consequences to cost, retention, and health outcomes. With the need for continued engagement with members at the end of the PHE, Medicaid agencies should be asking their private partners to think beyond traditional service.

To capitalize on the growing interest in digital channels, Medicaid agencies should:

- In their plans for the end of the PHE, partner with MCOs and providers with their own digital channels to market upcoming deadlines for renewal or to report any changes.
- Expand mobile offerings. Integrated eligibility and enrollment systems were meant to help promote new kinds of usability and access. Work with technology vendors to expand mobile uses of integrated eligibility systems and reminders.
- Push partners to use digital. With many states utilizing MCOs for care management and expecting MCOs to help providers address health outcomes, the importance of understanding your MCOs' digital offerings to members or to providers is increasingly important. Use contract levers for engagement and expectations for care management to push for more engagement.

About the Research

Background

This article is based on data drawn from an online survey of consumers that was conducted in 2022 across a representative sample in the United States. The goal of the research is to provide our clients and health insurance providers with information on shifts in trends and Medicaid member sentiment to inform product offerings and decision making that improve health care for Medicaid members. A team composed of BCG consultants and experts completed the survey analytics.

Timing

From May 26, 2022, to June 13, 2022, 465 Medicaid and commercial insurance holders responded to a survey about their past health insurance experiences and future preferences.

Demographics

Seventy percent of respondents were between the ages of 25 and 66. Fifty-six percent of respondents were female. Sixty-eighty percent identified as White/Caucasian; 21% identified as Black/African American; 1.5% identified as American Indian, Alaska Native, Native Hawaiian, or other Pacific Islander; and 5% identified as other race or multiracial. Fifteen percent identified as Hispanic or Latinx. Forty-three percent were from the South, 22% from the Midwest, 19% from the Northeast, and 15% from the West. Fifty-seven percent had a total annual household income before taxes of less than $50,000, 21% between $50,000 and $74,999, and 22% more than $75,000.

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Growing Inequity

The pandemic highlighted long-standing gaps in equitable access to health care, both globally and in individual markets such as the US. These disparities not only fuel political and social tensions, they threaten the ability of underserved populations to access new therapies going forward. Addressing this challenge requires greater emphasis on social determinants of health and formulation of government policies to help protect vulnerable populations.

April 2022

Health Care + Social Services = Healthier Populations

By Emile Salhab, Jad Bitar, and Michelle Rocha

Often the best health care a country can provide happens before and after a person actually sees a doctor. Preventive care, counseling, and even logistical support, such as a ride to a follow-up appointment or to a pharmacy to pick up a prescription, can have a huge effect on health outcomes. Yet such services are all too rare. In many countries, government efforts to ensure a healthy population are split in two: medical care (the treatment of disease and injuries) and social services (preventive care in support of vulnerable citizens and counseling for ongoing issues such as addiction). This is a fragmented and unsustainable approach that increases the cost of care and leads to poor outcomes. Instead, governments need to link excellent medical care with proactive, comprehensive social services.

> **To meet people's needs and make their health systems as efficient as possible, governments need a coordinated approach to care.**

The challenge is growing. Chronic lifestyle problems such as obesity, heart disease, and diabetes are becoming more prevalent, requiring ongoing, integrated care to address root causes, and they are stressing health systems around the world. Countries also face fiscal pressure to reduce health care spending, even as they must provide for larger and often older populations. The COVID-19 pandemic has highlighted the need for prevention, education, and other measures that have a large impact on health but lie outside of traditional care settings.

Payers and providers have a role to play in integrating health care and social care, but governments bear the biggest responsibility. Some countries have already taken steps in this direction, and others can learn from their experience. It's a smarter approach that leads to more efficient care, reduces the need for invasive and costly procedures, and—most important—fosters healthier populations.

Social-Service Interventions Lead to Better Health Outcomes

To understand what can go wrong when medical care and social services aren't linked, consider a hypothetical situation. A patient arrives in the emergency room complaining of shortness of breath and is diagnosed with hypertension. Her doctors prescribe medication and recommend some changes in diet, along with an exercise plan. The patient gets the prescription filled but does not consistently take her medication. Her income is low and she struggles with depression, making it tough for her to take steps to improve her condition. She misses one follow-up appointment, then another. Six months later, her blood pressure has dramatically worsened, and she winds up in the emergency room again, now requiring more comprehensive and expensive care and a hospital stay.

Social services are a strong determinant of good health outcomes because many health issues have underlying social causes. For that reason, social-care workers are ideally positioned to improve medical care. They can help identify vulnerable peoples' needs early on, help them stay well longer, and reduce the likelihood that they will need health care services.

Yet in many countries, social care is underfunded and notoriously difficult to fully integrate into traditional health care systems. People often need support for a range of problems—from mobility challenges to mental health issues to learning disabilities to addiction—which require different types of support that can be hard to coordinate. Insufficient governance means that stakeholder roles and accountability are unclear. Patient eligibility rules can be opaque because of rigid categorization schemes. Most social-care networks lack enablers such as data and technology, which would help them make the case for a more direct role in supporting medical care.

> **Payers and providers have a role to play in integrating health care and social care, but governments bear the biggest responsibility.**

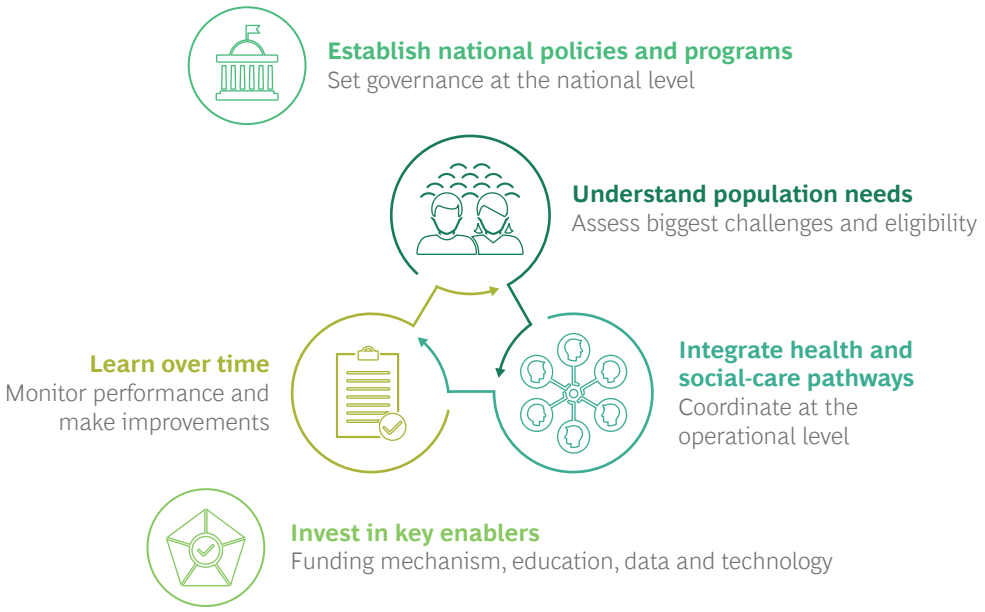
Despite these challenges, governments and other stakeholders that integrate social services and traditional health care are getting results. In addition to improving people's health outcomes and quality of life, integrated health and social services give governments an opportunity to target services more effectively and thus spend more efficiently at a time when health and social-care budgets continue to balloon. One estimate found that England's national health service could save more than $6 billion if all citizens 65 and older had free social care.

Five Key Steps to Integrated Care

There is no universally applicable way to integrate health care and social services. The right solution will vary by country and region. Still, from our research and client experience, we have identified five steps to establishing a basic framework that virtually all governments can apply and potentially adapt to meet their needs. (See Exhibit 1.)

Establish National Policies and Programs for Integrated Care. First, governments need to set national policies establishing an explicit link between social services and health outcomes. Our analysis indicates that systems with a high level of integration succeed because they are aligned on policy, which enables coordination, governance, capacity planning, funding, and data sharing. When designing solutions and programs, policymakers in these systems use a population-centric lens, considering the interdependencies among different domains—for example, education and drug dependency—rather than crafting isolated solutions for each one. This approach requires agility and multidisciplinary teams that can consider all facets of a specific health issue.

Exhibit 1 - Five Steps to Integrating Social Services and Health Care



Source: BCG analysis.

Approaches to integration vary by country. France, Sweden, and England have a single integrated health and social-care ministry, with distinct administrative departments. Other countries, such as Australia and the Netherlands, have separate health and social-service ministries. (See Exhibit 2.)

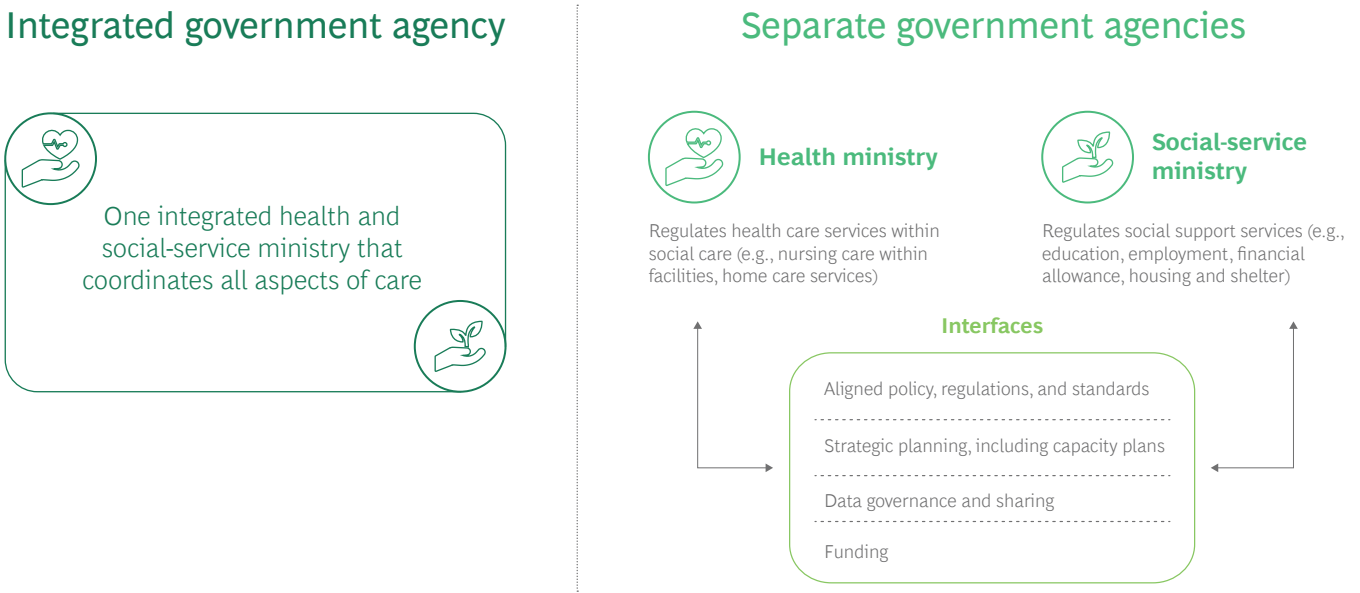
Additionally, health systems must rethink health sector governance and regulation, with the goal being to set clear objectives, generate robust policies and regulations, define stakeholder roles, and monitor system performance.

Understand the Population's Overall Health and Social-Care Needs. Second, governments need to understand and prioritize their citizens' most pressing health and social-service needs so they can deploy resources effectively. It's essential to use a needs-based approach in order to identify the population segments that will benefit the most from targeted care. This approach considers populations holistically, assessing people's overall physical, mental, and emotional well-being. The needs-based approach is different from the traditional, medical-based approach used by some governments and providers, which establishes rigid categories but oversimplifies patient needs and potentially overlooks the needs of those whose conditions can't be neatly categorized.

For example, the medical-based view categorizes a person's disability along a spectrum from least to most severe, looking solely at its physical impact, such as on mobility. The needs-based approach puts more weight on the impact that the disability has on the person's daily life, which may include—in addition to mobility—the ability to attend school, work, and develop relationships. This more complex way of understanding health and social-care needs ensures that services are more targeted—and ultimately more effective.

Integrate Health and Social-Care Pathways at the Operational Level. In addition to integrating health and social care at the strategic level, governments need to establish the same level of integration at the operational level. In countries such as England, France, the Netherlands, and Sweden, a case manager (typically, a nurse or social worker) performs an initial assessment of a person's eligibility to receive social care and then acts as the point of contact for coordinating all health and social services from different providers. Another approach is to structure health and social care though a single entity or provider that offers people one-stop access—and often a more seamless and intuitive experience.

Exhibit 2 - Two Models for Government Oversight



Source: BCG analysis.

By making it easier for vulnerable people to navigate the array of services they need, both approaches offer a range of benefits, including:

- Improved patient outcomes
- More cost-effective care owing to the targeted use of the right resources at the right time, which reduces avoidable hospital admissions
- Higher satisfaction for recipients, who spend less time and effort finding, navigating, and accessing services

To achieve this level of operational integration, social-care workers must be empowered and have a clear mandate within the ecosystem. Governments should devise programs to support volunteers and family members as caregivers. (See "The Formal and Informal Care Workforce.") In addition, social-service networks should include not only formal medical providers but also private-sector and nonprofit entities, which may be able to offer specialized services to certain individuals. In Scotland, for example, nonprofits operate residential care centers and work closely with community authorities to coordinate social and health care. The broadest possible array of providers means more choice for users, which unleashes competition to potentially increase quality and reduce costs.

Keep Learning to Improve Quality. Systems that integrate health care and social services need to evaluate the quality of the outcomes they deliver on a continuing basis. One way to do this is to apply value-based health care principles.

In essence, value-based health care refers to the outcomes achieved by an individual or a population in the context of the expenditure required to deliver those outcomes. Measuring outcomes ensures awareness and transparency regarding performance and creates opportunities to identify best practices, share lessons learned, and drive a culture of process improvement centered on what matters most to patients. Health systems that do this gain confidence that their services are providing patient-centered outcomes in the most cost-effective way. Governments, too, should continually assess and improve their coordination with payers and providers. (See "How Payers and Providers Can Support the Shift to Integrated Care.")

Invest in Key Enablers. Finally, to create an efficient integrated health and social-care system, governments need to invest in critical enablers such as funding, education, and technology.

The Formal and Informal Care Workforce

Worldwide, health and social care are delivered by a mix of the formal and informal workforce. Formal professionals (physicians, nurses and allied health professionals, clinical social workers, and personal-care workers) are supplemented significantly by volunteers, who provide companionship and promote social activities at community centers. The role of family members in providing informal care should not be underestimated, and it's important to make sure these people have the support they need to provide care at home and in the community. England, France, Sweden, and Australia have adopted various policies to support informal family caregivers. These include monetary allowances, tax credits, paid leave from work, flexible work arrangements, and dedicated career support programs.

How Payers and Providers Can Support the Shift to Integrated Care

Government regulators have the biggest role to play in integrating care, but providers and payers also need to do their part.

All providers—public, private, and nonprofit—need to transform their services to better integrate social care. For example, a major provider in the US had struggled to meet the needs of people with limited access to primary health care. That population segment experienced more complex health issues and worse outcomes because of the delay in getting medical assistance. But relatively straightforward interventions significantly improved these patients' health outcomes. The provider started offering transportation to medical appointments. It also provided community rooms for older people to offset isolation, more accessible pharmacies, and even behavioral health specialists to help monitor the health and quality of life of patients.

Similarly, payers need to incorporate social services within their coverage policies as a complement to health care. They are in the best position to incentivize the transformation system-wide while reducing the overall cost per individual.

Securing adequate funding and resources is a well-known challenge for social care, leading to variations and gaps in coverage and eligibility. For example, the US has an income-tested system that provides social-care services to low-income groups, but the rest of the population must pay out-of-pocket to access similar services. At the other end of the spectrum, Sweden provides a much broader population segment with a wide range of coverage at minimal out-of-pocket costs—but per-capita public spending on health-related social care is much higher.

Some countries tackle social-care funding shortages in other ways. Australia has developed a tax-funded system, and England recently announced tax increases to plug the funding gap for social care. Ireland has a consolidated procurement process for health and social care to ensure budgetary control and financial sustainability.

Integrated health and social services give governments an opportunity to target services more effectively and thus spend more efficiently.

Social-care workers should undergo professional training and licensing, with regulatory oversight from government. The UK's Social Care Institute for Excellence provides training, consultancy, topic expertise, and research to empower and increase the capabilities of social-care teams. Social workers undergo periodic examinations to renew their licenses, and the system includes reporting protocols to ensure that care meets quality metrics, along with a mechanism for patients to register complaints of substandard care.

The last enabler, technology, is an important means of improving awareness of the quality of care being delivered and received. Telemedicine platforms increase access to care, and data from those platforms increases the visibility of outcomes. Health systems also need to put data into the hands of both patients and health and social-care professionals. This can provide patients with helpful information (such as when a prescription is ready for pickup or delivery) and alert caregivers to problems (such as a patient's failure to attend physical therapy due to a lack of transportation) that they can then address to improve care. Sweden's national health and social-care service features a web platform that allows practitioners to see patient outcomes around the country. This data transparency has helped providers identify and adopt best practices, leading to higher-quality care in Sweden than in countries where the technology isn't yet in place.

With the emergence of social-care systems globally, the time is ripe for governments to consider integrating them with their health care systems. In doing so, they can ensure that resources are used most effectively and generate the biggest positive impact on the health of their citizens.

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Youth Mental Health

The pandemic exacerbated the crisis in youth behavioral health. The complexity of the health system is a significant barrier for families seeking treatment for their children. Public sector leaders need to spearhead development of a data-driven map of the current system's supply, demand, and gaps to support perspectives gathered from youth and family. This can highlight urgent bottlenecks and reveal differences in need across regions and subpopulations.

November 2022

Centering Youth and Families in Behavioral Health

By Colleen Desmond, Lisa Vura-Weis, Nicole Bennett, Emily Garvin, and Natalia Khoudian

Introduction

Youth behavioral health is in a state of crisis, exacerbated by the disruption and isolation caused by the COVID-19 pandemic.

A significant driver of the crisis is the complexity of the youth behavioral health system. The landscape is large, fragmented, and uncoordinated, often creating insurmountable challenges for families seeking treatment for their children.

There is an opportunity now to take advantage of the influx of both attention on and funding to the system in order to change the paradigm, address the existing crisis, and create a more child- and family-centric model going forward.

In order to do so, public sector leaders should first focus on developing a data-driven map of the current system's supply, demand, and gaps to support perspectives gathered from youth and family directly. While gaps and shortages are typically understood anecdotally, a data-driven view can both highlight urgent bottlenecks that may not be obvious and reveal differences in need across regions and subpopulations.

Having a data-driven view will enable more-effective investment and advocacy toward building a robust, patient-centric youth behavioral health system.

The United States Has a Youth Mental Health Crisis

The COVID-19 pandemic brought significant attention to the state of youth mental health in the United States. The experience of children, parents, and teachers facing a pandemic of mental distress and anxiety has been covered by recent articles and research reports.

The data paint a grim picture:

Behind the statistics are thousands of children and their families who are not receiving the care they need or deserve. News reports documenting youth "boarding" in emergency departments for days or weeks awaiting a therapeutic inpatient bed are heartbreaking—and underscore the need for urgent fixes to the system.

The Youth Behavioral Health System Is Complex and Not Youth- or Family-Centric

The youth behavioral health system is currently government-agency, provider, and payer centric. Access points for care and handoffs are driven by funding source (e.g., Medicaid vs. commercial insurance), location of assessment or care (e.g., school system vs. community), and government agency involvement (e.g., child welfare involvement or not). Youth and families dealing with these issues are incredibly resilient and resourceful, but they have to navigate a mire of red tape, eligibility rules and endless waitlists to reach the care they need, adding confusion and stress to an already difficult situation.

Exhibit 1 - The United States Has a Youth Mental Health Crisis

MH disease burden is significant among youth…

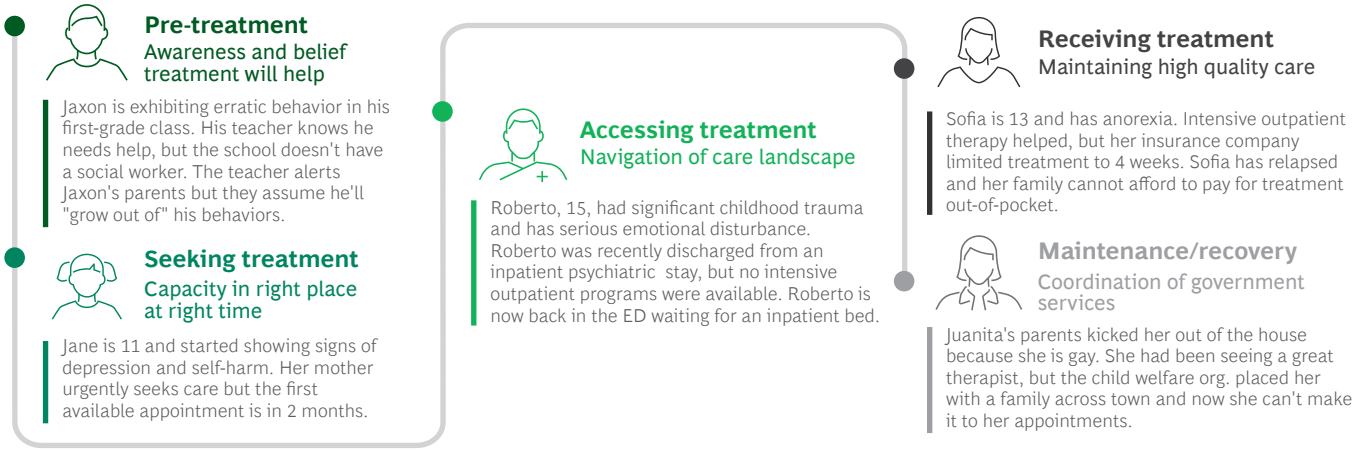
- **Suicide** is the second leading cause of death in among young people 10–24
- **44%** of high schoolers reported feeling persistently sad or hopeless in the past year
- **23%** of adolescent girls had a past-year major depressive episode, **>2.5x** the rate of male peers
- Youth in poverty are **2–3x** more likely to develop mental health problems than wealthier peers

…and deeply worsened by COVID-19 pandemic

- **24%** Increase in mental health ED presentations for children 5–11
- **31%** Increase in mental health ED presentations for adolescents aged 12–17
- **55%** Proportion of high-school students reporting emotional abuse by parent or adult in the home

Source: CDC MWR Surveillance Supplement to the Adolescent Behaviors and Experiences Survey (ABES); Behavioral Health Equity Report 2021: Substance Use and Mental Health Indicators Measured from the National Survey on Drug Use and Health (NSDUH), 2015–2019 (samhsa.gov), Marginalized Youth, Mental Health, and Connection with Others: A Review of the Literature (springer.com), American Academy of Child and Adolescent Psychiatry.

Exhibit 2 - Youth Face a Complex Patient Journey With Multiple Roadblocks to Care



Source: BCG analysis.

The roadblocks to care are myriad:

- Navigating multiple government agencies, often including the local school district, state Medicaid agencies, and state and county child welfare and behavioral health agencies, many of which lack youth and families' trust due to a long history of inequity or absence of appropriate services
- Poor insurance coverage of youth mental health services across both Medicaid and commercial payers, causing necessary care to quickly become unaffordable for families
- Shortages of care – and specifically culturally-competent care - across the continuum, particularly for specialized care (e.g., for eating disorders), intensive outpatient programs, inpatient care, and step-down services
- Breakdowns in care coordination as patients require different levels or types of care, moving across siloed agencies and service providers for each phase of care

Data-Driven Capacity Mapping Is Needed to Understand Bottlenecks, Investment Needs

Given the complexity and widespread need, where should policy leaders start?

Conducting data-driven capacity mapping is critical to understanding the highest-value investments and identifying urgent bottlenecks. Capacity analysis uses insurance claims data, provider surveys, behavioral health surveillance data, and provider and family stakeholder interviews to estimate the current supply of behavioral health services, current demand for the services, and key shortages. The analysis is done in a segmented fashion: by patient age group, type of service, acuity of service, and geography. This enables leaders to identify the segments with urgent shortages.

Exhibit 3 - Capacity Analysis Identifies Bottlenecks Based on Data – Not Anecdote

Scenario: Roberto has been boarding in the ED for five days waiting for an adolescent inpatient psychiatric bed.

Assumption: The state doesn't have enough adolescent beds and should invest in building more inpatient capacity.

Roberto was the victim of abuse as a young child. Data show that **minimal trauma-informed intensive services are available** in his county and **rates for such services are well below** benchmarks.

Roberto **needs intensive outpatient therapy** for his condition. However, there is a **two-month wait to access such services**.

All regional inpatient beds are full. The children's hospital has **lengths of stay well above benchmark due to inability to discharge** patients to safe, therapeutic settings.

The **county lacks therapeutic step-down facilities** for adolescent boys. The only option is to be placed on a **wait list for services two hours away**.

Insight from capacity analysis: Investing in more inpatient beds alone won't solve the problem. Investments are more critical in intensive outpatient services and therapeutic step-down services.

Capacity analysis takes a **data-driven approach** to identify where behavioral health service demand exceeds service supply

The **analysis is segmented** by:
- Patient age (e.g., 0–4, 5–11, 12–15, 16–24, 25–64, 65+)
- Specialty (e.g., eating disorder, SED)
- Acuity (e.g., outpatient, partial hospitalization programs, inpatient)
- Geography (e.g., by county)

Current supply within segments is estimated using claims data, provider surveys, expert interviews

Current and projected demand for each segment is estimated using claims data, gov't survey data, expert interviews

Output includes: **estimate by segment of shortages, with identification of priority segments for investment**

Source: BCG analysis.

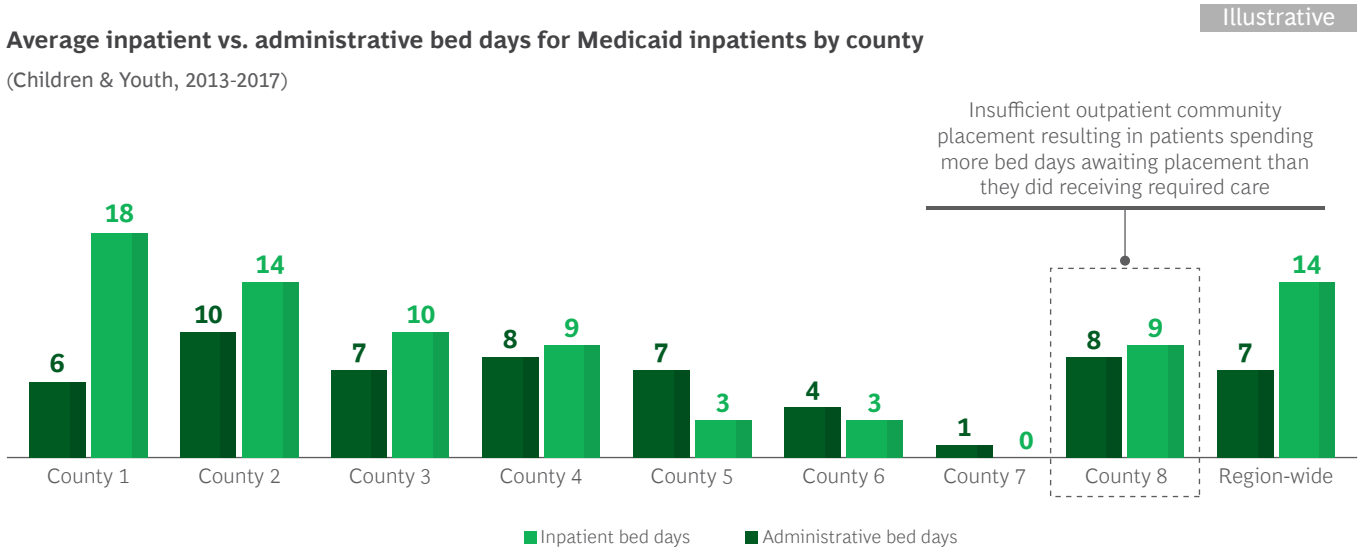
As an example, addressing shortages of adolescent inpatient beds is often identified as a top need for investment. However, when a capacity analysis is conducted, other bottlenecks become apparent. In one analysis BCG conducted using Medicaid claims, hospitalized youth spent more time in the hospital on "administrative days" than "inpatient bed days"—meaning that after youth completed their therapeutic course of inpatient psychiatric treatment, they were unable to be discharged to an appropriate step-down setting. The time they spent awaiting an appropriate discharge setting was greater than the time they actually received therapeutic care. This type of service mismatch uses resources inefficiently, but more importantly can be harmful to the patient and their families as they remain in trauma-focused medical setting or are discharged away from their homes and communities.

This analysis highlights the need to invest resources in not just more inpatient psychiatric beds, but also the types of step-down services that are needed to discharge patients and keep them on a therapeutic path. These services can include therapeutic group homes, partial hospitalization programs, and intensive outpatient programs. Equally, youth and families report that navigating services becomes a 'full time job' that is not designed with their needs in mind. Only by involving those stakeholders in the understanding of the barriers – and in the eventual transformation of the new system – can government officials fully understand how to close the capacity gaps.

This finding is one of many outcomes that become apparent when taking a data-based approach. Other takeaways can include identifying the following:

- Regional shortages of specific services—which could lend themselves to a tele-behavioral health solution to connect those in shortage areas with care

Exhibit 4 - Sample Output: Insufficient Step-Down Outpatient Care Shown by Inpatient Discharge Delays



Source: Medicaid data.

- Differences in theoretical vs. actual supply of care based on workforce constraints (e.g., less in-school care available due to social worker shortages or fragmentation)
- Equity concerns, such as barriers to care due to language or lack of culturally appropriate providers

Conclusion

Having concrete data on the most critical service shortages is an important first step for public sector leaders working to center youth and families in a reimagined system. Capacity mapping can serve as a guide for where to invest the significant federal and state dollars flowing into the system—and pinpoint areas that require more collaboration among government agencies. It can also serve as leverage to push insurers to improve their youth behavioral health provider networks and rates. With this starting step, states will be better positioned to make impactful, meaningful investments in more youth-centric behavioral health systems.

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