Hospitals and medical practices have seen rapid growth in headcount and labor costs, primarily in patient-facing roles. That growth was predicated on predictable revenue growth over time, an assumption now in question given the Covid-19 crisis and the resulting dip in procedure and visit volumes. Through a focused effort to re-balance revenues and embrace lighter, more efficient care delivery models, providers can weather the crisis and build healthier enterprises for the long term.

Introduction

In the U.S., Covid-19 is colliding with the largest, most lucrative healthcare industry in the world. And yet, as patients shy away from hospitals and clinics, the crisis is challenging longstanding pillars of providers’ revenue models, many of which focus on in-person visit volume, high-priced procedures, and profitable markups on drugs that physicians buy and bill to insurers and patients. While the shock may prove short-lived, it creates an opportunity for creative, forward-thinking organizations to reconsider purely transactional revenue streams and labor-intensive operating models. Such changes could leave us with a more sustainable healthcare system, grounded in more streamlined and accessible care delivery enterprises.

Labor-intensive delivery model

Over the last 20 years, as U.S. health spending swelled from 13% to 18% of gross domestic product, employment in healthcare also surged. Between 1998 and 2018, the number of staff working in physicians’ offices rose three times as fast as economy-wide employment. In hospitals, headcount is up by almost a third since the late 1990s. Healthcare services are inherently labor-intensive, but they have become much more so in recent years. America’s medical practices now employ more than eight full-time employees per 1,000 U.S. residents, up from just over six in 1998. Hospital
staffing is approaching 16 employees per 1,000 people, up from 14 in the late 1990s, despite a significant drop in admissions per capita and the average length of stay.\textsuperscript{1}

The sheer magnitude of financial resources flowing into healthcare contributes to this marked hiring growth. U.S. hospital revenues, for example, have risen by an average of $44 billion in each of the last ten years. In each of those years, hospitals hired almost 50,000 additional employees (Figure 1). Physicians’ offices have hired almost as aggressively, adding more than 40,000 staff per year.\textsuperscript{2}

Contrary to common perception, the patient care and support roles account for the bulk of that hiring – from physicians and nurses to surgical technicians, health aides and social workers. Combined, hospitals and practices added almost half a million employees in patient-facing roles from 2013 through 2018, while the number of managerial, financial and administrative support staff actually declined (Figure 2). Hospitals, for example, cut office and administrative headcount by almost 30,000 over the last five years, while adding 27,000 physicians and surgeons, 24,000 nurse practitioners and physician assistants, and more than 150,000 registered nurses (RNs). In physicians’ offices, hiring emphasized advanced practice clinicians (NPs, PAs and CRNAs) and medical assistants.
As hiring surged, wages for health workers also ticked up. In aggregate, through expanded headcount and higher pay rates, aggregate wage bills for hospitals and physicians’ offices increased by roughly $100 billion between 2013 and 2018 (Figure 3). Sixty percent of that increase accrued to physicians, advanced practices clinicians and RNs, though these professions account for just a third of the employee base in these care settings. Another 20% went to pharmacists, radiology techs, medical assistants and other clinical and patient support professionals. In contrast, managerial, financial and administrative staff form 23% of the hospital and practice workforce, but collected only 12% of incremental wage spending. Hospitals and medical offices headed into the Covid-19 crisis with much higher labor costs than they carried just a few years ago, and staff in patient-facing roles account for most of the extra expense.
Revenue growth, fee for service and healthcare’s operating model

This hiring pattern tracks the basic financial incentives that shape American healthcare: provider revenue growth stems from rising prices and increased service volume. Face-to-face visits, procedures and drug infusion all require more patient-facing staff, which creates a clear business case to add these workers. Meanwhile, submitting a claim for the same service but with a higher contracted price requires little additional work in business operations. And, as hospitals and physician groups have merged, they often consolidate billing operations, allowing provider organizations to reduce back office staffing even as patient service revenue continues to expand. Research on hospital consolidation is consistent with this pattern, finding that merging hospitals consistently results in higher prices for patients and insurers (and hence revenue for the hospital), while potentially allowing some facilities to lower their own operating expenses, which would include administrative staff costs.

That business model has produced decades of uninterrupted revenue growth for hospitals and other clinical enterprises. While most industries face periodic downturns, hospital revenue has grown by at least 3% in every year since 1965, according to National Health Expenditure data from the Centers for Medicare and Medicaid Services. Physician and other clinical services revenue also increased every year since the 1960s, by at least 2% annually. This left an industry, with an
increasingly labor-intensive and volume-driven revenue model, acutely vulnerable to a sudden drop in tests, procedures and other billable encounters – just as highly-leveraged airlines struggle with a dip in ticket sales. Moreover, given an unbroken half century of growth, many healthcare leaders have little experience handling even short-lived contractions. Finally, while healthcare is clearly less cyclical than many industries, it does contain a layer of low-value services – profitable for the provider, but of little use to the patient – which accounts for 5% to 10% of nationwide provider revenue, by some estimates.⁷

The Covid-19 crisis is a severe shock to that model, simultaneously delaying many surgeries or screenings and encouraging patients to re-consider the necessity of some interventions. One recent analysis showed a drop of 60% to 80% in visit volume in the first week of April for specialties such as gastroenterology, urology and dermatology. Visit volumes have since rebounded significantly, but remain below pre-crisis levels, as of mid-May.⁸ Moreover, the crisis forced providers to embrace service channels, such as video consultations or asynchronous patient communication, which are less labor-intensive and so challenge prior expansion in patient-facing staff. Physicians and nurse practitioners are just as critical when consults shift from the exam room to a video screen, but the daily tasks of a medical assistant or technician do not easily translate to virtual care.

A urology example illustrates how the sudden shift to virtual care can reduce or postpone specialist cash flow, and may encourage more conservative care, lowering provider revenue over the course of an episode. Pre-crisis, a man in his mid-50s with difficulty urinating would generate practice revenue through a billable office visit, a blood draw to rule out prostate cancer, urinalysis to rule out infection and uroflowmetry to diagnose urinary obstruction. Follow-up procedures would likely produce additional billings from cystoscopy to confirm benign prostatic hyperplasia (BPH) and a minimally invasive surgical procedure to improve symptoms. The entire series of interventions could generate roughly $550 at Medicare rates, and would involve several office staff apart from the urologist. With in-person care limited by Covid-19, the same case might be managed through two virtual consults, with half as much revenue (even with virtual payment parity) and little need for staff beyond the physician. Many patients will still need subsequent diagnostic and therapeutic interventions, so some of that revenue will accrue later, but others will choose to forego the surgical procedure altogether in favor of long-term medical management. In a similar way, Covid-19 could require more conservative care for lower back pain, a notorious area for low-value care. Pre-crisis, some patients and clinicians would opt for in-office epidural injections to relieve symptoms. Covid-19 forces a delay in that billable intervention, and a month or two of conservative management through over-the-counter analgesics and physical therapy will likely obviate the need for some of these injections entirely, trimming provider revenue for an equivalent case.

**An opportunity for change**

As Covid-19 fears mounted, hospitals and clinics froze whatever operations they could and directed resources to essential care and pandemic preparation. That shift in emphasis has stressed a set of enterprises accustomed to steady annual revenue growth, through ever-higher prices and, for most services, fairly predictable volume.
As with many crises, that economic shock creates important opportunities to evolve. While the demand for health services is likely to rebound, management of the epidemic may require recurring stay-at-home orders or sustained social distancing over the next 12 to 24 months, prompting some patients to avoid procedures they deem optional, and otherwise prefer virtual contact whenever possible. Provider organizations that adapt quickly can build more resilient businesses and help nudge the broader health system onto a more sustainable and value-oriented path.

"An accelerated transition away from fee-for-service pricing will cushion provider revenues against volatility in volume for discretionary or elective spending."

First, an accelerated transition away from fee-for-service pricing will cushion provider revenues against volatility in volume for discretionary or elective spending. Primary care practices with capitated “per patient per month” contracts have seen little revenue erosion amidst the crisis. Many specialist groups can and should explore similar population-based contracts. Some clinical laboratories, for example, have long participated in managed care capitation, collecting a fixed monthly fee in exchange for handling all diagnostic testing in a given patient panel. Specialists who conduct routine screenings (e.g., colonoscopies or mammograms) could develop similar arrangements, to replace some volume-dependent revenue with predictable, recurring cash flow.

Hospitals have historically favored episode and procedure-based pricing, given that continual price hikes for emergency room (ER) visits, surgeries and admissions ensured steady revenue growth. However, with some chains seeing ER volumes drop 30% to 50%, adding some population-based revenue may become appealing. Trauma centers, for example, carry high fixed operating costs, and are not inherently suited to competition for patients in any case. Hospitals could strike per member per month (PMPM) contracts with local insurers, based on expected volumes. And certainly, volatile visit and procedure volumes make a compelling case for accelerated transition to some accountability for total cost of care. As Travis Broome and Farzad Mostashari have argued, the structure of shared savings ACOs – where medical groups earn bonuses based on performance relative to local market cost trends – inherently insulates those revenue streams amid system-wide volatility. Many of these steps require new contracts with willing and flexible payers, but would also produce more predictable financials for health plans that are also worried about unpredictable Covid-19 costs and the impact on next year’s premiums.

Specialist practices, whose work is inherently more episodic, may be less suited to capitation than relationship-based primary care, but they have other options to revamp their revenue mix. Some bundled payment models, for example, are structured around 90-day episodes of care, which could make revenue less sensitive to precise timing or delivery method in certain components of that episode. Similarly, “buy-and-bill” economics can be very lucrative for oncologists, allergists and other specialists that administer drugs in a practice, charging the patient and insurer a markup on the wholesale price of those drugs. But when Covid-19 fears halt in-office drug administration, those attractive markups evaporate. An alternative approach would pay the clinician for overseeing a course of therapy, irrespective of where or how the drugs are administered. Such a model could...
allow for home infusions when practice visits pose infection risks, and might have the side benefit of eliminating the financial conflict of interest for providers who earn larger margins when they administer more expensive drugs. Finally, specialists could consider adding a new revenue stream by offering virtual “eConsults” to capitated or at-risk primary care groups. This sort of revenue stream might grow as primary care practitioners try to care for patients unable to follow a typical referral path, offsetting lost revenue from in-person patient consults. Several companies, including Thea Health, Sitka and RubiconMD, offer tools to facilitate PCP-to-specialist consultations. State regulators and medical boards could facilitate these models by eliminating burdensome requirements for clinicians to be separately licensed in each jurisdiction, as some states have done on an emergency basis during the Covid-19 crisis.

Second, hospitals and practices should revisit operating models that presume ever-rising revenues will fund ever-larger headcount. If physician practices could deliver care with six employees per 1,000 Americans in the late 1990s, before ubiquitous email and videoconferencing, it is unclear why they need eight employees per 1,000 today. In a matter of weeks, many practices shifted to telehealth, video-consults and asynchronous patient communication. For some, a higher virtual-to-in-person visit ratio will allow for a lighter in-office footprint. Fewer in-office visits may allow for gradual reduction in on-site nurses, medical assistants or nursing aides: jobs that account for 45% of incremental headcount in medical practices over the past five years. Similarly, if states eliminate physician oversight requirements for nurse practitioners and physician assistants, it would remove administrative overhead costing $5,000 to $15,000 per nurse practitioner per year.11

Finally, fully implementing digital solutions for referrals and documentation would also boost practice efficiency. Scribbling on a patient face sheet and passing it to a medical assistant, who then faxes a letter to a referring physician, inflates the practice’s operating costs, creating financial vulnerability when revenues dip. Most practices already use electronic health records and practice management systems that include tools for electronic referral management with little or no incremental cost. Other systems, such as the eConsult products mentioned above, may carry an incremental cost, typically in the range of $1,000 to $4,000 annually per physician. In contrast, an additional medical assistant or support technologist in a medical practice, would, on average, cost $35,000 to $50,000 annually in salary and benefits, a much higher figure, even if spread across multiple physicians. Lighter support staffing, coupled with work-from-home arrangements for administrative employees, can shrink real estate needs, offering additional savings in the medium term.

In recent decades, healthcare organizations have built an increasingly labor-intensive business model, hiring large numbers of patient-facing staff and boosting wages. Covid-19 is a sudden, unfamiliar shock to that volume-driven model. It may also spur salutary change. Hospitals and
practices that shift revenue away from pure fee-for-service pricing, while embracing virtual care delivery and eliminating unnecessary operational overhead could exit the crisis with more resilient businesses, while boosting the financial health of the system as a whole.

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