# Realizing the Future We Want:
## Leveraging Technology to Achieve a Better Health Care Experience for All

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**The health care ecosystem is evolving rapidly. Technology must be leveraged to achieve better outcomes and meet the goals of providing more coordinated, patient-centric, and high-quality care. Premier, Inc. is a Charlotte-based health information technology company working to build efficiencies and innovate in this area to help health care practitioners deliver the best results for patients.**

To succeed in a rapidly changing environment, each health system must build an integrated information technology (IT) ecosystem that enables providers to find the gaps in prevention, diagnosis, and care delivery, and then close them—patient by patient, system by system, community by community—until *best practice* becomes *standard practice*.

While the vision may appear to be clear, delivering on that promise is decidedly more challenging.

Most providers have already reviewed cost and quality outcomes and acted to eliminate outliers. But too often, these efforts have focused *inside* individual facilities or medical practices. In a world where providers are accountable for total costs and overall outcomes, that's no longer enough. Providers need a broader perspective, looking not just at their individual contributions to outcomes, but across patient cases, service lines, practices, populations, or disease states, and even across time horizons.

Providers also need predictive and prescriptive capabilities that isolate specific markers of disease. It's well known that 20% of the population drives about 80% of all health care spending [1]. Not only do providers need to find these high utilizers and manage them effectively, they need to identify those who are likely to join their ranks, targeting specific patients, at specific times, with specific outreach.

Beyond identifying and managing high-cost patients, providers also must eliminate low-value decisions. The United States spends more per capita for health care than any other industrialized nation [2], yet a third of these resources are spent on treatments that aren't necessary or effective in improving outcomes [3]. The key is knowing exactly which interventions should be made and those that shouldn't, either because they are duplicative, or they fail to add value.

Last, providers need insights into the totality of delivered care. Problems typically arise when a patient moves from setting to setting, from one organization with a specific team, way of collecting data, and set of incentives, to another where the team, data, and incentives change.

Delivering on this vision is not just important for patients and care delivery. It's crucial for providers looking to ensure they can remain competitive as new entrants vertically integrate and stitch more information, more access points, and more insights together to deliver an on-demand experience without the blind spots.

Adding it all up, the technology implications are significant.

At Premier, we see five major, interrelated issues that need to be solved to get to this vision of the future: transitioning from data overload to actionable data; moving from actionable data to informed clinicians; supporting informed clinicians with a robust infrastructure; leveraging the robust infrastructure with innovative apps; and having interoperable, liquid information to foster healthy populations.

### Transitioning from Data Overload to Actionable Data

For years, the buzzword that defined the future of health care was "big data." But now that we have big data, we see how overwhelming it is for everyone.

For example, within an individual health system, we've got data about costs, quality, claims, supplies, and outcomes. Then add on the lab and imaging data, labor data, genomic and patient-reported data, and billing and scheduling data. Each source is important and needs to be understood, analyzed, and normalized or benchmarked.

The challenge, not surprisingly, is in making sense of it all: isolating information that's relevant to a care choice at a specific moment in time and serving it up to a clinical

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decision-maker in a way that enables them to take appropriate action. The bottom line? We need to convert big data into small data—actionable data.

The technology that enables small data is here today, albeit not wholly prevalent in health care. We can look to other industries for a glimpse into how this data could be used if fully operationalized and leveraged.

Consider the retail experience. Companies like Target and Walmart all operate central systems where point-of-sale data are analyzed and pushed back out to support day-to-day operations and mine purchasing trends, tying this information to specific individuals and using algorithms to predict future outcomes.

Imagine this in health care: big data gets smaller and more granular, to the point where it can be used to predict future health events and enable doctors to make better, more customized decisions prior to the patient arriving with an issue, all in compliance within the guidelines set forth by the Health Insurance Portability and Accountability Act (HIPAA). Patients could be targeted based on their utilization of the health care system in their communities using integrated data coupled with technologies such as machine

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learning and artificial intelligence. This small—and smart—data could help health systems parse this information and serve it up in a simple-to-understand, actionable manner.

## Moving from Actional Data to Informed Clinicians

Once we've tackled the data overload problem, we next need to extend this actionable information across the continuum.

Just like the health system, individual physicians need a performance architecture that can evaluate their cost and quality outcomes, pinpoint opportunity areas, and provide information in an actionable format, regardless of where the patient turns to receive care.

This is a new frontier for physicians as they transition from the fee-for-service world, where everything is measured in terms of access, volume, and productivity, to the value-based care world where quality, utilization, prevention, costs, and outcomes are key.

All too often, integrating these views is more than any one medical practice can do on its own, which is why we see so many doctors joining larger organizations to help manage the risk associated with value-based payments. However, when physicians seek partners to achieve that safety in numbers, the integration can get messy. And all too often, the data and technology pieces of the puzzle aren't fully thought through [4].

We must create a common management platform guided by standard measurements that satisfy the need for performance data that accounts for patients over time and at all care touch points. If partner organizations invest

in measure-tracking and reporting infrastructure for physicians, administrative tasks can be handled somewhere else, freeing them to focus on care. But this isn't just about optimizing physician performance or ensuring a common architecture. Increasingly, it's also a competitive concern. Because if health systems don't offer up a solution, someone else will. Practice management companies, insurers, and private equity firms are already doing this, which means that in competitive environments, physicians can vote with their feet, taking their data, their insights, their patients, and their revenues elsewhere.

## Supporting Informed Clinicians with a Robust Infrastructure

Recent mergers leading to vertically integrated health care services (eg, CVS and Aetna, Cigna and Express Scripts) have been remarkable to watch. In each case, buyers moved into other parts of the health care value chain to acquire data and "own" a greater share of—and overhaul—care delivery models.

At the same time, health systems are pursuing integration strategies of their own, to expand their networks, achieve scale, pioneer alternative payment, and provide value.

But health systems are not just building these capabilities to be competitive. They are leveraging them to become disrupters, and the result is a sophisticated, risk-bearing organization that can pinpoint trouble spots and target interventions. Therefore, it's becoming increasingly common for systems to bypass traditional third-party payers altogether, going directly to employers to manage their employee populations.

Employers can customize plans and standards to high-value providers that deliver predictable outcomes. Employees see lower costs and providers get a reputational boost and an expanded community footprint. All this without the complexities of an intermediary standing between patients, care decisions, and payment.

Of course, moving into this space will require significant IT and data assets, including claims analytics to measure network utilization, standardized ways to evaluate health and wellness, performance measures, predictive analytics, and care management tools to help manage employees with high-cost, chronic diseases. But done well, it makes tremendous sense.

## Leveraging the Robust Infrastructure with Innovative Apps

Apps are key to unlocking additional return on investment (ROI) from the electronic health records (EHRs) in which we have invested so much. Given the complex interplay between patients, health care systems, and other factors that influence every clinical action taken (or not), we need better ways to access this data at the moment decisions are made. Apps that achieve this are on the market today but haven't been widely adopted. In health care, we lack the marketplace for discovering the right apps for our specific needs. We don't have nearly enough independent app developers creating products, nor have we figured out how to create a robust marketplace—with the appropriate incentives—for their adoption.

## Having Interoperable, Liquid Information to Foster Healthy Populations

Today, data is disparate, not trusted, fragmented, or walled off, hobbling even the most powerful innovations—or causing more harm than good.

This is the most urgent challenge to address in the world of health IT.

The current system—in which claims data lives with insurers, clinical data in the EHR, supply data within enterprise resource planning (ERP), and so on—is the equivalent of an email system that only allows you to send messages to people within your company, or a cell phone that only allows calls to your nuclear family.

This creates real problems. Just look at the prior authorization system. Because information is not flowing seamlessly and often involves manual review, the process is a nightmare, taking anywhere from one to three days to complete and potentially delaying treatments.

We need standard contracting language for health information technology (HIT) products so that vendors can no longer hold data hostage for an access fee. We also need a fair and transparent system to track which vendors are doing the best to enable innovation on their platforms and providing us with the information and tools to make our own future.

As data becomes unlocked and moves from behind proprietary walls, providers need to be ready to receive it. This means developing integrated analytics strategies, including coordinated, structured investment plans for new technologies. It means putting a data governance model in place to alter workflows, resolve conflicts, oversee security, and develop a data acquisition strategy.

It also means a cultural shift must take place, holding individual clinicians accountable for the outcomes we all desire. And all of this adds up to a restructuring of people, assets, budgets, and processes on a scale for which few health systems or clinical practices have started to prepare.

Under no circumstance will the amount of information available decrease. Therefore, it is incumbent upon those of us in the HIT world to make that information smart and easy for clinicians to follow.

There is a balance between turning data into insight and turning insight into action. Ultimately, we don't want good doctors to think like computers, but rather computers to think like good doctors. This will represent the equilibrium between artificial and human intelligence in health care. NCM

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