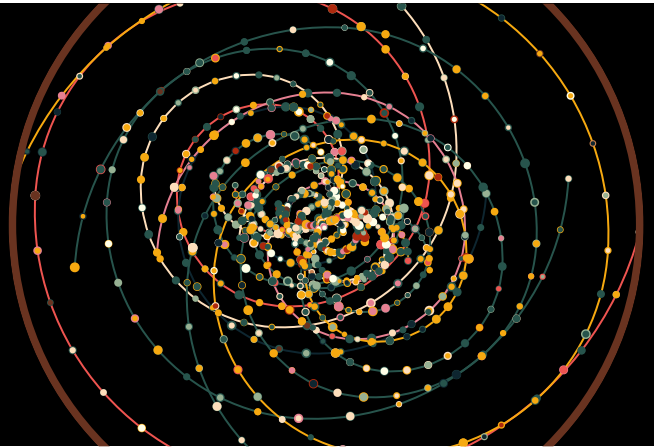


Analytics to improve outcomes and reduce cost: Health systems and health plans can work together to jointly win the shift from volume to value

Findings from the Deloitte Center for Health Solutions 2017 US Health Plan Analytics Survey



Executive summary

Many health systems and health plans are making value-based care a priority, and are investing in population health analytics to enable their strategies. However, our research suggests that most health systems and health plans are not yet sufficiently focusing on effective analytic collaboration approaches that could unlock the synergistic benefits of combining the best of what each stakeholder has to offer.

The analytics approach of each stakeholder typically concentrates on their native proprietary data sets, which can constrain their ability to effectively collaborate, and make it difficult to deliver a joint value proposition to the market generally—and to consumers specifically—of high-quality, affordable health care with a differentiated experience. This analytics issue is central to the health care industry's ability to fix some of its fundamental challenges.

Health plans typically use claims and enrollment data to identify high-cost populations and inefficient care patterns at a macro level, while health systems tend to rely on clinical data to deliver patient-centered care. If these two stakeholders partner on analytics and shared data, they could be better equipped to understand resource use and practice patterns. They also could be more likely to develop innovative opportunities to improve outcomes and reduce total cost of care for patients as well as the overall population. Furthermore, as health plans and health systems share financial risk through value-based payment and governance models, their efforts could become better aligned to enable more mutually beneficial business models.

In today's silo-based approach, patients sometimes receive follow-up calls from both the health system and the health plan, which demonstrates the costly duplicative nature of our system. Neither group is best positioned to maximize the patient experience on its own. While claims data can give health plans a more comprehensive view of the patient, they often lack patient trust. Conversely, patients generally do trust their physicians, but health systems might not have access to the patient's complete health history, let alone the economic and social conditions (e.g., income, housing, transportation, education, etc.) that impact their health.

As a result of our research and real-world client experiences, we believe that improvements in shared analytics strategies between health plans and health systems can significantly advance the performance of the US health care system.

Deloitte's recent survey of 45 health plans found that:

- 76 percent of respondents stated that they are working with providers on population health. However, interviews with health plans and health systems determined that often such collaborations remain limited in maturity and effectiveness.
- Just 16 percent of health plan survey respondents said collaboration with providers is a priority for their analytics investments—commonly a vital part of value-based care—demonstrating a disconnect between health plans' goals and their ability to influence the critical patient/provider experience.

To work together on analytics, health plans and health systems may need to overcome competitive dynamics, human capital skill gaps, and technology constraints. Transforming long-time adversaries (purchasers of care vs. providers of care) into collaborators can take time, effort, and trust. Moreover, the requirements for teamwork will likely become increasingly important if both sides are to win in a value-based care environment.

Based on our research, the most effective collaborations are those where executive alignment, governance, and shared economic incentives are mutually agreed on by both the health plan and the health system.

Two key steps forward include:

- **Executive alignment:** Successful collaborations between health plans and providers cannot occur without first achieving strategic alignment between executive leadership teams. This requires trust. Trust that each side is going to help the other win. Potential critical enablers to this alignment and trust model include innovative corporate structures, governance, and financial commitment. Identifying a common set of mutually beneficial business goals, aiming for early wins, and providing support and education are a few of the lessons learned in our research.

- **Operational integration with an emphasis on technology and analytics:** The synergistic potential between health plans and health systems requires effective integration of data and analytic assets and capabilities. Analytics will likely be integral to driving innovative care-management programs, digitally enabling clinical interventions, and activating physicians and patients in new ways. Both stakeholders have compelling assets that—once combined to drive new actionable insights—can enable clinical interventions to address unnecessary utilization in high-cost sites of care.

“We are not sharing enough data. Payers are not sharing enough with us; we do not share enough with them. We need to work better together and share data... If you share the costs, the solutions can be elegant and better.”

—Chief Innovation and Technology Strategist at a large health system

Health care Moneyball

In the late 1990s and early 2000s, Billy Beane, general manager of the Oakland A's, turned “one of the poorest teams in baseball” into “one of the most successful franchises in Major League Baseball” through the use of analytics.¹ Oakland’s payroll was less than a third of the team that had the highest payroll, yet they “won more regular season games than any other team,” except one, bucking the trend that the highest-paying teams were the highest-scoring ones.² By rewriting the traditional tenets of baseball—and leveraging analytics—Beane was able to find undervalued players, capitalize on inefficiencies, and gain new insights that fundamentally changed the way baseball is played.

Health systems and health plans are still in the first inning of their collaboration journey, albeit at different stages of maturity, but the impact analytics could have on health care could be as dramatic as what we saw in Major League Baseball. Analytics has the potential to upend today’s health care knowledge about how to determine the most cost-effective treatments, how to change physician and patient behavior, and how to help patients avoid unnecessary emergency room visits and acute care. When health systems and health plans collaborate, these insights can be even more valuable and can help the industry achieve its triple aim of improving the patient experience, improving population health, and reducing the cost of care.

Introduction

What is population health?

We define population health as health care efforts that aim to use resources effectively and efficiently to improve the lifetime health and wellbeing of specific populations.³ Population health activities include the promotion of health and wellbeing, as well as preventing, managing, and reversing disease progression.

Why focus on value-based care and population health?

Market and policy forces place significant pressure on health care organizations to improve the efficiency and quality of health care services, shifting the overall system toward value. Consider these trends:

- Employers demand effective benefit designs and innovative care delivery models from health plans and health systems.⁴
- Consumers are responsible for an increasing share of health care costs. As a result, they seek health systems and health insurance plans that can deliver better clinical quality, access, and convenience at more affordable prices.
- The federal government champions new payment models through the enactment of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), a game-changing law that solidifies many elements of this payment reform. The law is poised to drive increased participation in risk-bearing coordinated care models across all health plans, not just Medicare.

Traditional fee-for-service (FFS) payment systems offer little incentive to health systems to invest in analytics. The implementation of MACRA, which will provide payment updates to physicians based upon their past year's performance—and offer alternative compensation models to providers that take on greater risk—might be the catalyst that drives the development of analytical tools that help providers improve their overall performance.

Key definitions

“Analytics” refers to the systematic use of technologies, methods, and data to derive insights and to enable fact-based decision-making for planning, management, operations, measurement, and learning.

What is MACRA?

The Medicare Access and CHIP Reauthorization Act of 2015 is a transformative law from the US Centers for Medicare and Medicaid Services that is intended to drive payment and delivery reforms for clinicians and health systems across Medicare and other government programs, and commercial payers. The law establishes a path toward a new payment system that is intended to help align reimbursement with quality and outcomes. MACRA offers significant financial incentives for health care professionals to participate in risk-bearing, coordinated care models, and to move away from the traditional FFS system.⁵ In addition to new performance measures and new reporting and compliance requirements, MACRA will require considerable investments in data and analytics to enable clinicians to thrive under the new rules. For health plans, supporting performance metrics in their value-based contracts that line up with those in MACRA will help ensure alignment of incentives, and will build off the investments that providers are already making.

Provider reimbursement methodologies are important to drive the adoption of analytics and innovation in patient care delivery models. Reimbursement models that align payment with desired outcomes should not only help fund the investments required in analytics, but also align the measures, metrics, and insights needed to achieve improved outcomes. Many of the payment methods used today have yet to achieve that alignment, in part because health plans and health systems have not yet fully utilized the analytics required to provide real insights.

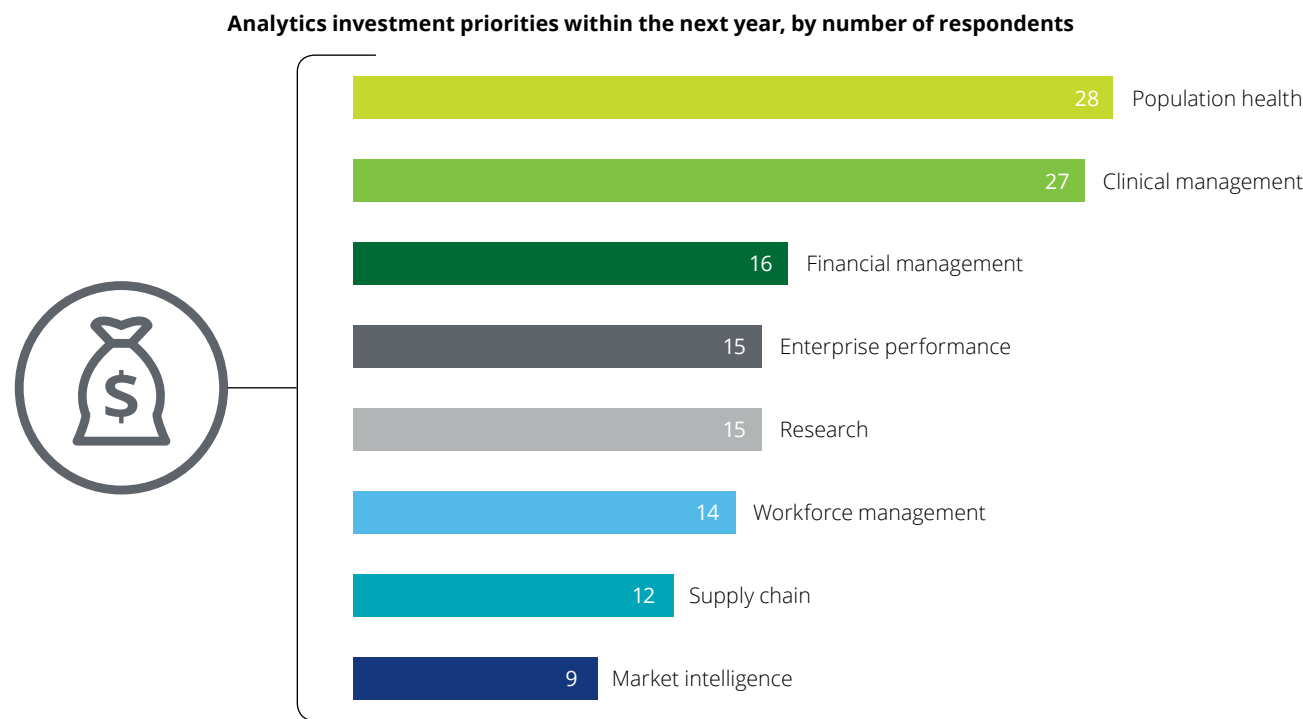
Innovation will occur when the constraints of the existing model are broken. Analytics can be the smart first step to finding opportunities to reduce variances in practice patterns, improve patient compliance issues, identify gaps in care, and find leading practices. Through our research, we have identified elements for improving the impact of analytical tools and key strategies for facilitating broader adoption.

Findings

Health systems and health plans prioritize analytics

Analytics is viewed as a major component in an effective population health-management system.⁶ Analytics can help health care organizations measure their performance across cost and quality measures; understand which clinical processes, physicians, health conditions, and consumers to focus their efforts on; and improve health outcomes. According to our survey results, investment in population health analytics is the highest-rated priority for health systems (Figure 1). Clinical analytics—which includes population health—is the top priority for increased investment among health plans (Figure 2).

Figure 1. The top two priority investments for health systems are population health and clinical management analytics



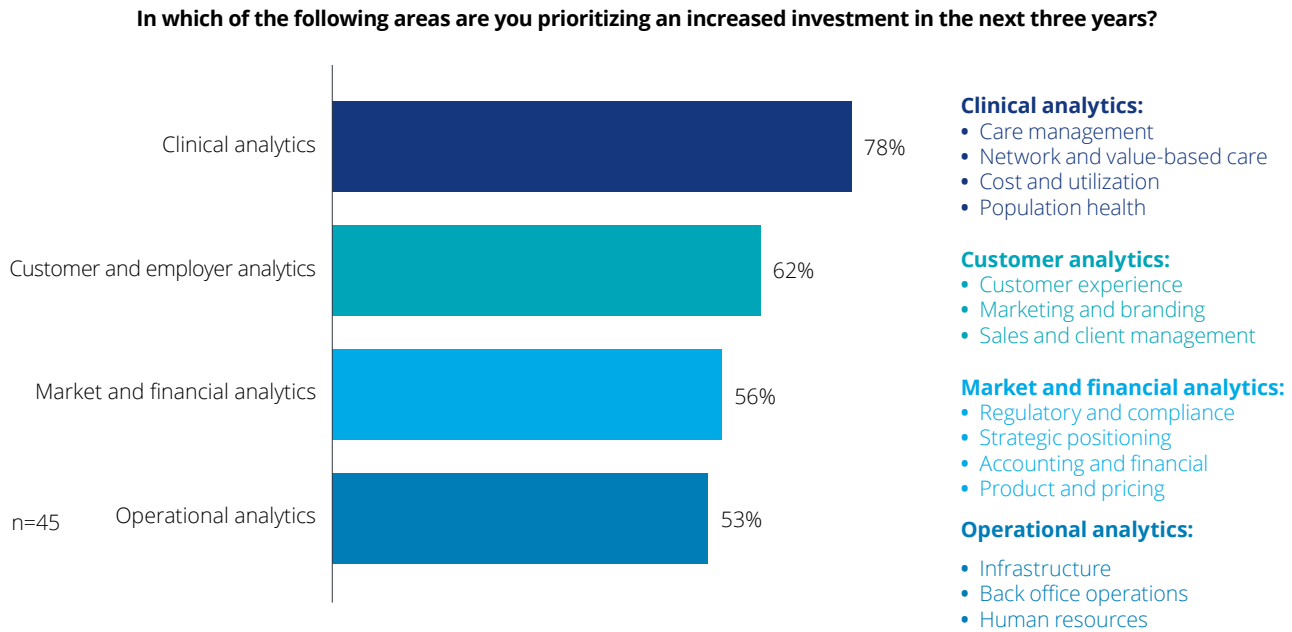
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Source: Deloitte Center for Health Solutions 2015 US Health System Analytics Survey

“Over the past several years, our CEO has laid out a more focused vision on population health as a strategy for our health system.”

—Executive Director for Population Health at a large health system

Figure 2. Health plans are prioritizing investments in clinical analytics



Source: Deloitte Center for Health Solutions 2017 US Health Plan Analytics Survey

“Our organization is making significant investments to achieve the triple aim.”
—VP Chief Analytics Officer at a regional health plan

Current approaches to population health are grounded in a FFS model

Traditionally, health plans and health systems have approached population health differently primarily due to the data they have access to:

- **Health plans** typically analyze claims and enrollment data to identify high-cost populations and inefficient care patterns at the macro level, looking for specific opportunities to improve quality and/or reduce cost. Common analytical approaches look at variations in acute and chronic care practice and referral patterns, and occasionally offer insight to physicians about ways to improve. However, claims data are not real-time, which limits health plans to retrospective analysis. Health plans usually have limited access to clinical information (which is closer to real-time information). As a result, when making coverage decisions, they often require additional detail, such as medical-necessity documentation. Health plans also perform member risk stratification based on utilization, disease burden, and risk factors. Analytical insights can drive a focus on gaps in care, adverse trends in emergency department usage, drug-to-drug interactions, and wellness (e.g., preventive screenings and vaccinations). Typically, health plans try to address these gaps through direct communications with patients and their physicians.
- **Health systems** commonly rely on clinical data to deliver patient-centered care, tending to individuals one at a time, and developing a detailed understanding of their health problems, medical history, and gaps in care. Clinical data, now captured in electronic health records (EHRs), helps support these activities. As health systems take on population health, many of them are building more advanced care-management capabilities that borrow from the playbook developed by health plans. For instance, many health systems and hospitals use population-level metrics (such as average length of stay; readmissions or ER visits within 30 days of discharge; discharges to community, home health, or skilled nursing facility) to assess their clinical and operational performance. However, information about the care their patients receive outside of the health system is often not readily available or timely. Many health systems have little or no data for healthy consumers who might access the delivery system for wellness and preventive care visits.

Sometimes health system's and health plan's care-management efforts target the same patient. In such instances, patients and caregivers might receive phone calls and home visits from multiple stakeholders. This can overwhelm and confuse patients and their caregivers.⁷ While this scenario can be described as growing pains, it is just one example of an opportunity for health systems and health plans to work together to maximize efficiencies and provide a better overall experience to the patient.

Opportunities for collaboration in analytics

If health systems are able to identify patients who are at risk for unnecessary utilization, they can develop interventions to improve care. Clinical and claims data are needed to unlock these insights. Our research suggests that health plans and health systems are able to achieve better results when they approach these arrangements as partnerships—where they collaboratively build expertise, data and technology capabilities, and share resources—rather than as pure contractual activities.

In building partnerships with health systems, the chief medical officer from a health plan said, “We spent a lot of time on developing trust in data and giving providers a lot of resources, such as monthly dashboards on utilization patterns and cost drivers for their patient population. We significantly ramped up attribution reporting to address their questions. It’s a journey, not yet over. There is still much to learn on both sides: What is actionable? What is too much? At which point do you enter into paralysis mode from information overload? We work together on data, on developing programs. We see some results of cost curve bending—in preventable admissions, ER visits.”

There is a significant opportunity for health systems and health plans to work together to maximize efficiencies and provide a better overall experience to the patient.

Collaborating on analytics can include sharing data inputs, leveraging analytics, and incorporating actionable reporting that enables real-time outputs. Based on our research and real-world client experiences, we believe that shared analytics strategies between health plans and health systems hold the key to improving quality, reducing cost, and succeeding in the new value-based care environment.

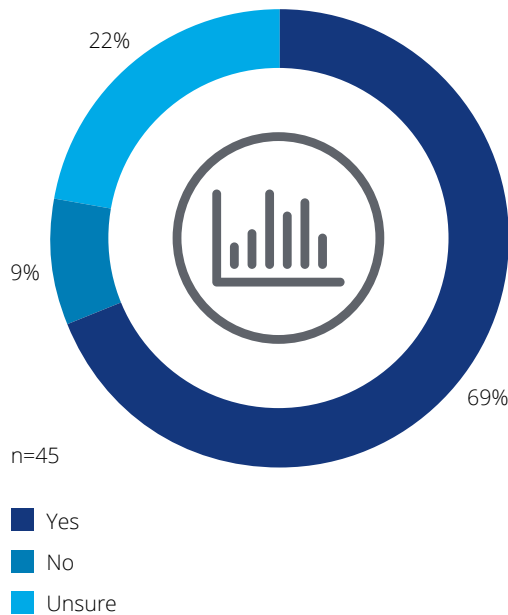
Establishing data sharing and aggregation best practices

Effective data sharing can be challenging. But as the need for data becomes more pressing, many health systems and health plans are finding ways to connect. While a few health plans and health systems leverage their state's public health information exchange (HIE), our interviews suggest that more of them are building their own private HIEs, establishing direct connections, or (as a stop gap) using a portal where clinicians can enter information and health plans can provide reports and insights. Regardless of the method, almost 70 percent of our health plan survey respondents say they already share claims data with providers. However, many interviewees suggest that data sharing between health plans and health systems is limited. A similar number of respondents intend to share claims data with providers within the next three years (Figure 3). This can be a positive and meaningful step forward in the collaborative maturity between health plans and providers. The execution path, however, will likely be critical to determine ultimate success.

Collaboration in action

One of the largest health plans in an East coast state is collaborating with some of the state's top health care providers. Through the partnership, organizations share data and decision-support systems in a private and secure environment. Increased information sharing and analysis is starting to have a positive impact on care.

Figure 3. Nearly 70 percent of health plan respondents say they intend to share claims data with providers in the next three years



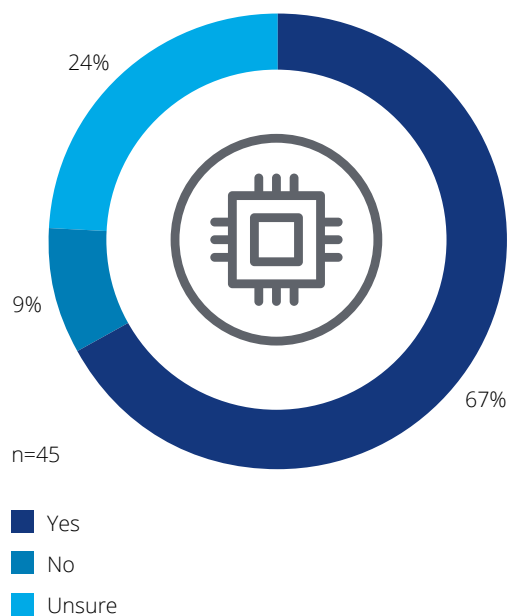
Source: Deloitte Center for Health Solutions 2017 US Health Plan Analytics Survey

“How do you utilize incomplete information, such as data from exercise trackers that patients have stopped wearing?”

—VP at a population health analytics company

Even though shared data are somewhat limited, many health systems and health plans are increasingly leveraging not just EHR and claims data, but also other data from sources such as the government, community-based social services organizations, pharmacies, labs, devices, social media, and even patients themselves (Figure 4). Data related to social determinants of health, post-acute care, behavioral health, and retail activities are also becoming more important to population health analysis. The more real-time the data, the more relevant for care teams. Data from any source, however, must be accurate and standardized so that data users can trust the insights that are derived from the information.

Figure 4. Nearly 70 percent of health plan survey respondents want to use data from ancillary providers within the next three years



Source: Deloitte Center for Health Solutions 2017 US Health Plan Analytics Survey

Integrating data management and analytics activities

Sharing data is the first step. Once health systems and health plans have access to data, they should consider partnering on data management and warehousing, and different analytics activities including reporting, patient attribution, practice pattern variation, segmentation, and predictive analytics.

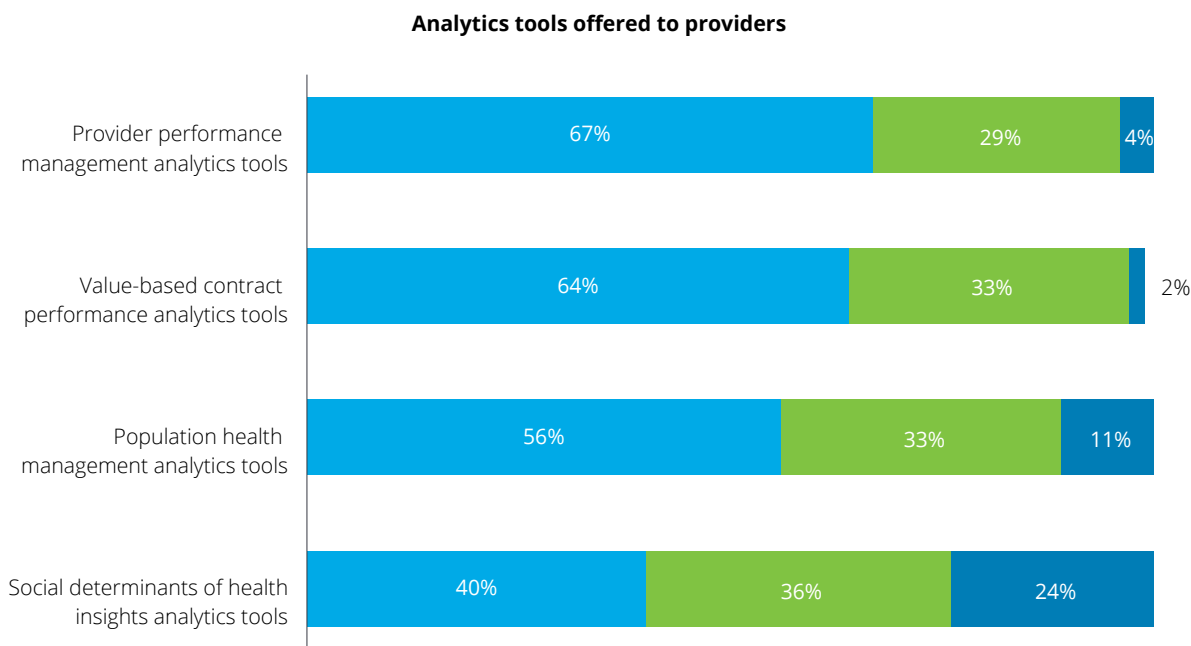
Enterprise data management and warehousing:

Health systems and health plans will likely continue to manage their own data and warehouses separately for their own business operations. However, health systems and health plans can work together to establish a universal data dictionary, and to coordinate data-management procedures to help ensure that when the data are co-mingled, the results are meaningful. They could also pool their data into separate, larger data sets that are co-managed and warehoused.

Reporting: While health systems and health plans could each continue to run their own reports with their own data, reports based on shared information could offer greater insight. Two-thirds of surveyed health plans already share analytics tools with providers, such as provider performance reports, which helps physicians understand how to improve relative to their peers (Figure 5).

As analytic engines derive insight from the data, health systems and health plans can divide the action items that need to be completed, rather than duplicate efforts.

Figure 5. Two thirds of health plan survey respondents are already offering provider performance management analytics tools to providers



n=45

■ Today
 ■ In the next three years
 ■ Do not offer/No plans

Source: Deloitte Center for Health Solutions 2017 US Health Plan Analytics Survey

Patient attribution: Whether in Medicare FFS or managed care plans, most patients can self-refer to any provider. This makes patient attribution critical for value-based payment methodologies to determine which clinicians or care teams are accountable for patients’ quality and cost outcomes. Clarity, mutual agreement, and education on attribution criteria can be important because this is still a fairly new concept for many physicians. Although prospective attribution is typically easier for clinicians to understand and work with, not all health plans use this approach.

Practice pattern variation: While many health plans and health systems analyze variation to identify areas for improvement, our interviewees noted that physicians respond best to their peers. Competition among physicians can spur positive behavior change. Some physicians might be motivated to change their

Reducing bias in data and analytics

A large academic medical center in the Midwest is interested in leveraging artificial intelligence (AI) to reduce bias in its approach to data. Physicians place more weight on certain symptoms or results, as they were taught to do. However, their preconceptions are not always accurate, and the organization is looking to AI to shed light on which factors are most important for different areas of care.

Rather than focusing on what questions to ask, a machine intelligence software company provides solutions that discover insights in an unsupervised and unbiased fashion. This reduces bias in its analyses.

practice patterns after seeing how they compare to benchmarks and to their peers. If one doctor is found to have better outcomes in her diabetic patients than her peers, she can share leading practices to help them improve. That said, until physicians have complete trust in the data, they likely will not be convinced that they need to change. According to Deloitte's 2016 Survey of US Physicians, two out of three physicians receive care-pattern reports. The top two desired improvements to those reports are adjustments for patient severity (60 percent) and trustworthiness of care pattern data (57 percent).⁸

Segmentation: Traditionally, health plans and providers have stratified populations based on their existing disease burden or risk factors. Some leading organizations use sophisticated analytics and multiple data sources to help understand consumer behaviors and motivations, and to develop proactive engagement strategies for soon-to-be-at-risk populations. This helps them predict likely responses to incentives and messages, and helps inform their channel strategy. For example, a tech savvy and engaged diabetic might only need text message reminders and a mobile app to stay on track. By contrast, a patient with low health literacy and limited family support might

need daily phone calls and occasional home visits to ensure they follow the prescribed treatment plan.

We also know that patients' relationships with providers are the most important aspect of patients' health care experiences, and health care professionals remain the most trusted source of health care information for consumers.⁹ Ideally, physicians could have real-time access to insights from health plan analytics around member behavior, which could have the potential to significantly enhance the impact of physician-patient communications. Leveraging advanced analytics to understand how best to engage patients before, during, and after high-risk, high-cost clinical events can be an important component of value-based care success for both health plans and providers.

Predictive analytics: Predictive analytics (the use of analytics on current and historical data to make predictions about the future) provides the most benefit when it leverages data from both health systems and health plans. In terms of population health, it can predict who is at risk, prioritize these patients, anticipate what interventions are most likely to change behavior, and provide action steps.

Collaboration in action

A regional health plan, located in the South, is working with its 2,300 value-based contracting physicians to close gaps in care and improve quality. Providers have access to a portal where they are able to see gaps in care and act upon them. They are integrating with EHRs and will be including those data in their analyses. The collaboration has already resulted in quality-score improvements.

Analytics can predict populations and patients who are at risk, prioritize these patients, anticipate what interventions are most likely to change behavior, and provide action steps.

Analytic insights guide population health activities

Care management team: Once a population is defined, a care-management team can determine an action, such as helping a patient stay on prescribed treatment and manage side effects. This type of outreach can be coordinated jointly by health systems and health plans. The health system can be the face of the communication, while the health plan remains behind the scenes managing a nurse call center and patient communications, for example.

One patient, one list: Rather than each clinician working on his or her own and entering patient notes that others may or may not read, under a “one patient, one list” approach, one provider is in charge of the team of clinicians. This lead provider closely coordinates care among the others, helping ensure that the entire team—from the primary care physician to the specialists, to the pharmacist and social worker—is working off the same problem list, same medication list, and same clinical-decision support alerts pulled from analytic insights. To better improve the likelihood of clinicians acting on analytics information, follow-up items should be incorporated directly into their workflow through EHR clinical decision-support tools. Depending on the patient’s most pressing condition, sometimes the lead physician is a primary care provider, while other times it is a specialist.

Patient outreach: Through analytics, some health systems have found that texting can be more effective than calling—some patients confirm or cancel appointments by text. A cancellation could signal challenges and prompt the care manager to investigate and help arrange transportation and/or childcare if needed.

Eliminating the need for a patient to act can remove other obstacles to care. “Make sure that critical medications for conditions like hypertension and diabetes are available and delivered to the patient. Making these medications free doesn’t do too much for non-adherence. But delivering them so patients don’t have to go to the pharmacy can be effective.”—Chief Medical Officer, population health and analytics company.

“Workflow is a real issue. EHRs were designed as revenue-capture systems. The nature of that design is a huge inhibitor.”

—Chief Medical Officer at a population health and analytics company

Challenges

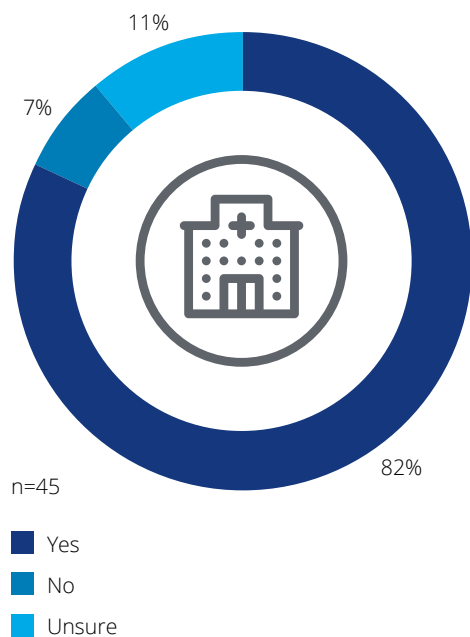
Bridging the trust gap

“Trust is key. It’s easy to think of each other as adversaries. Everybody has similar goals, but different perspectives on addressing them.”

—Vice President of Client Solutions, analytics solutions provider

More than 80 percent of health plan survey respondents say they expect to collaborate with providers on population health (Figure 6), but this expectation does not yet translate into their broader analytics priorities (Figure 7).

Figure 6. Four out of five health plan respondents expect to work with providers on population health in the next three years

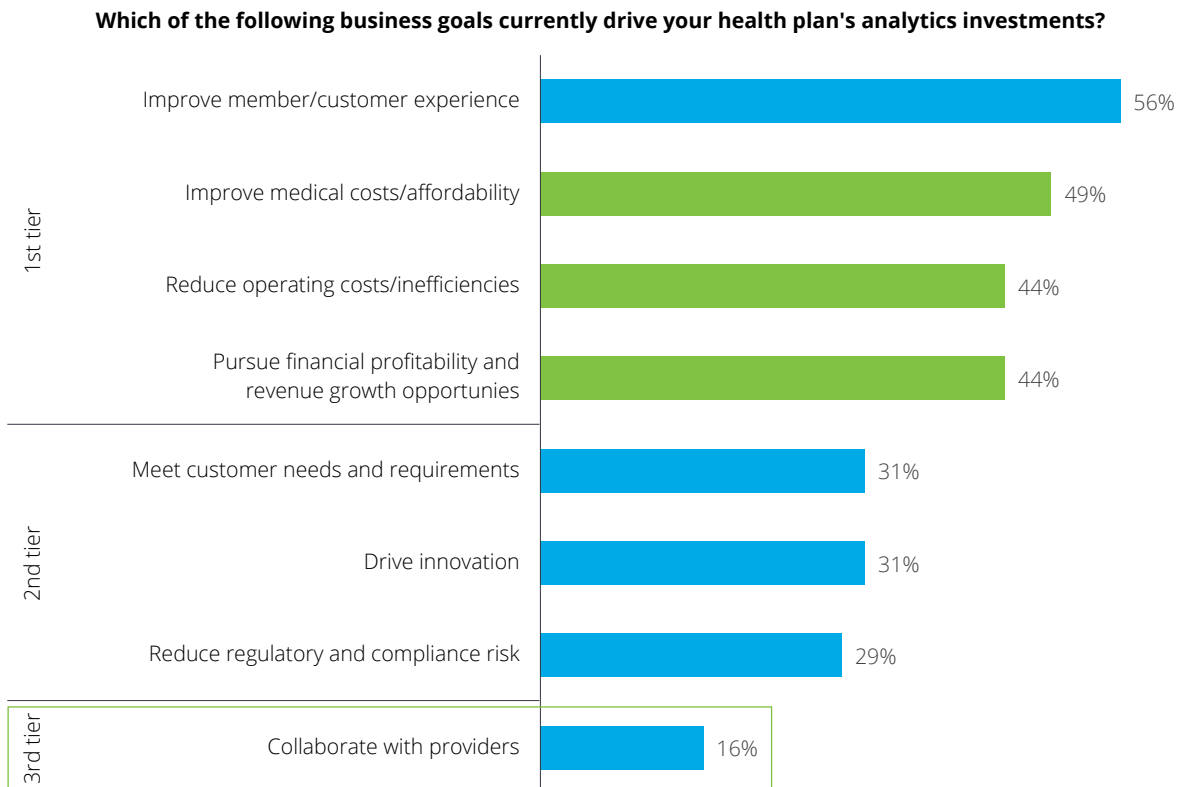


Source: Deloitte Center for Health Solutions 2017 US Health Plan Analytics Survey

We expect that as health plans and health systems continue to work on analytics, their views on collaboration will likely evolve. Although trust can be hard to cultivate, health systems and health plans may have to find ways to shift the nature of their relationship toward a more formal partnership. Through our interviews and experiences with clients, we found several principles that may help in this journey:

- 1. Identify a common set of population-health goals.** “If they [health systems] only focus on certain components to population health, we will focus on those areas for now and not try to solve for 20 variables in the mix. For instance, if we know they work on diabetes, we will incorporate diabetes measures and try to align our approach to regional industry and other payers.”—Vice President of clinical programs at a regional health plan
- 2. Keep it simple.** Aim for early wins, and select metrics that health systems can impact.
- 3. Understand what level of support, education, and communication is needed to help ensure success for you and your partner.** Health plans should be cognizant that health systems will likely need assistance with patient-attribution methodologies and risk adjustment, for example. Health systems will also want assurances that the data are valid and that they will receive timely reports.
- 4. Create a corporate structure that includes a governance model and financial commitments from both parties,** when building more formal partnerships.

Figure 7. Only 16 percent of health plan respondents say that collaboration with providers is a priority for their analytics investments



n=45

Source: Deloitte Center for Health Solutions 2017 US Health Plan Analytics Survey

Data-related issues

Data and technological constraints can make it difficult for health plans and health systems to share the right data and insights with the right care provider at the right time. Our interviewees noted the following data challenges:

- The sheer amount of data that will continue to be added to patient charts can exacerbate the challenges of sharing meaningful, real-time insights. The amount of data has often grown faster than the analytics capabilities to process and convert it to insights.
- Real-time data sharing may be an aspirational goal for now. Changes outside of analytics may be required to make this goal a reality.
- The lack of a universal master patient index makes it difficult to maintain continuous patient records with longitudinal views that follow patients as they switch health systems, move across the country, and change health plans.

Regulatory and privacy considerations

Federal and state laws and regulations can create collaboration challenges that need to be addressed to encourage the sharing of data and insights:

- Sharing cost-related information with providers could violate provider-contract clauses on confidentiality.
- Patient privacy considerations need to be taken into account. For instance, a patient might not want certain information to be submitted to a health plan (such as a sexually transmitted disease or mental health diagnosis). If care-management data and tools are shared between health plans and providers, business rules around user access should anticipate these types of exceptions.
- The Stark law, federal Anti-Kickback Statute, and False Claims Act, among other laws, are outdated barriers to delivering new payment models of value-based care.

A vision for the future role of health systems and health plans

No single organization has all the data required to look at the patient and targeted population in a holistic manner. This can limit the ability of both the health plan that is financing the care, and the health system that is providing the care in addition to directly impacting the patient's journey of care. To increase the potential for health care innovation, the constraint of limited data sharing will need to be broken so that all health care stakeholders can access analytical insights to help improve the cost and quality of our health care system.

A new construct between health plans and health systems might accelerate the necessary transformation to value-based care and population health. This includes new provider payment methodologies, clearly defined roles and responsibilities, evidence-based patient engagement approaches, work flow and collaboration tools, and an ability to align each organizations' investment in analytics to improve health care outcomes. Health plans and health systems should consider these two key steps as they begin to partner:

- **Executive alignment:** Successful collaborations between health plans and health systems cannot occur without first strategically aligning executive leadership teams, which often requires establishing trust. There needs to be trust that each side is going to help the other through challenges as well as successes. Enablers to this alignment can include innovative corporate structures, governance models, and financial commitments from both sides. Lessons learned include identifying a common set of mutually beneficial business goals, aiming for early wins, and providing support and education to each other.
- **Operational integration with an emphasis on technology and analytics:** The synergistic potential between health plans and health systems requires effective integration of data, analytics, and capabilities. When fully integrated, innovative care-management programs, digitally enabled clinical interventions, and physician and patient activation can drive high-quality, affordable care. Both stakeholders have compelling assets that, once combined, can result in new, actionable insights.

The existing approach for using analytics has obvious limitations. To dramatically improve cost and quality for health care consumers, health systems and health plans will need to collaborate on analytics. Each partnership may be unique. But to succeed in the new health care payment models and improve the health of their populations, health plans and health systems will need to find a way to more effectively share data and analytics.

“There are federal laws that prohibit managed care organizations from using the data. We are allowed to collect it because members give us permission. But what we are allowed to do with it is very cloudy. A conservative approach is to do nothing.”

—VP at a regional health plan

Survey methodology

To inform this study, the Deloitte Center for Health Solutions conducted online surveys and qualitative interviews.

- An online survey of 45 analytics professionals at health plans fielded between April 7 and May 1, 2017. Survey participation criteria included:
 - Minimum size of 250,000 covered lives
 - Working in an analytics role or function
 - Having involvement in organization's analytics oversight and governance.
- Interviews with 14 analytics executives at 10 health plans conducted between March 22 and June 1, 2017.
- Interviews with 11 analytics executives at seven health systems conducted between April 24 and June 13, 2017.
- Interviews with five technology and analytics companies providing services to health plans and providers conducted between May 4 and May 16, 2017.
- An online survey of 50 analytics professionals at health systems fielded in early 2015. Survey participation criteria included:
 - Annual revenues of \$500 million or more
 - C-level or senior management level.

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