Navigating the Population Health Management Software Vendor Landscape

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"Just when you thought it was safe to go back in the water" was the tagline for the 1978 film **Jaws 2**, the sequel to Steven Spielberg's original classic. As we enter 2014, many healthcare executives are experiencing similar emotions. Nearly five years following the financial crisis and the resulting Health Information Technology for Economic and Clinical Health (HITECH) Act, no one can be blamed for feeling exhausted and a little bit deserving of a break.

Unfortunately, the healthcare industry waits for no man, and we find ourselves again in an environment of increasing costs (although at a much lower rate), demographic headwinds (78 million baby boomers beginning to retire effective 2011), and the resulting imminent changes in reimbursement methodologies. Ready or not, change is again afoot, even if you thought it was safe to go back in the water!

This white paper is focused on the rapidly evolving field of Population Health Management (PHM), and the substantial information technology (IT) solutions that it will require. Termed "hot and evolving" by KLAS, this category of software solutions embodies many of the buzzwords we've been hearing for the past year (i.e., Business Intelligence, Analytics, Big Data, etc.), and represents the **Jaws 2** to EHR's **Jaws** as providers continue to attempt to keep pace with emerging regulatory and reimbursement changes. Indeed a number of parallels can be drawn between the EHR marketplace of 5-7 years ago and today's emerging PHM vendor landscape, and as in the past, the seas are rough and full of danger.

A Problem of Demography

Much has been written about the challenges facing our nation as a result of the perfect storm of an aging population and the difficult problem of healthcare cost inflation. Healthcare spending in 2013 was 18% of gross domestic product (GDP). As the 78 million baby boomers (i.e., those born between 1946 and 1964) continue to enter retirement, projections of federal healthcare spending are staggering. The Congressional Budget Office projects federal healthcare spending to double in the next decade from $771 billion in 2013 to $1.6 trillion in 2023. While nobody knows for sure what fraction of the U.S. economy is too much to spend on healthcare, most believe that 20% or more is the line we cannot afford to cross.

As if the demographic volume numbers weren't challenging enough, the nature of elderly populations provides a devastating "kicker" in the remarkable correlation of chronic disease and healthcare costs. A great example of the Pareto Principal (the 80/20 rule), the older a person gets, the more chronic conditions he/she typically ends up with, and naturally a polychronic patient correlates to higher healthcare costs. To wit, CMS studies show per capita healthcare spending for those 65+ to be $14,797 vs. $4,511 for those 19-64 years of age.

Transitioning from Volume to Value

A number of initiatives have begun in both the private and public sectors to address the ever increasing costs of healthcare, and two central themes are emerging: greater focus on improving quality and transitioning from volume- to value-based payment models. Similar to reforms of the past (but presumably much improved given better information through EHRs and learnings from prior mistakes), the primary goal is to reduce the cost of providing care. While many theories exist on how to do this, most experts agree that a transition away from fee-for-service payment models is a necessary and inevitable component. Different from previous movements towards capitation, these new programs are tying payments and incentives to patient health benchmarks, in addition to measures related to quality of care and patient satisfaction.

One such model currently experiencing growth is the Accountable Care Organization (ACO) concept. ACOs are groups of doctors, hospitals, and healthcare providers that are accountable for the cost and quality of the care they provide to a defined group of beneficiaries. The Affordable Care Act (ACA) initiated the Medicare ACOs programs, but an increasing number of private initiatives are emerging as well (i.e. Patient Centered Medical Homes, Bundled Payments, Accountable Care Models, etc.).

As we move towards capitated payment models, the provider assumes a greater percentage of the cost risk; a move that will require an equal level of evolution in care delivery. "An ounce of prevention is worth a pound of cure" will hold even more truth in this new era as proactive approaches to care delivery become the norm. While the EHR initiatives of recent years have laid the framework for the collection and organization of the data required to meet this new bar, moving away from fee-for-service will require organizations to continue to increase their levels of clinical integration to keep up with the demands for clinical coordination and optimization. Figure 1 below depicts the phases of movement from fee-for-service toward capitation and the associated characteristics of risk and levels of clinical integration necessary for success.

Figure 1. Network Maturity Model
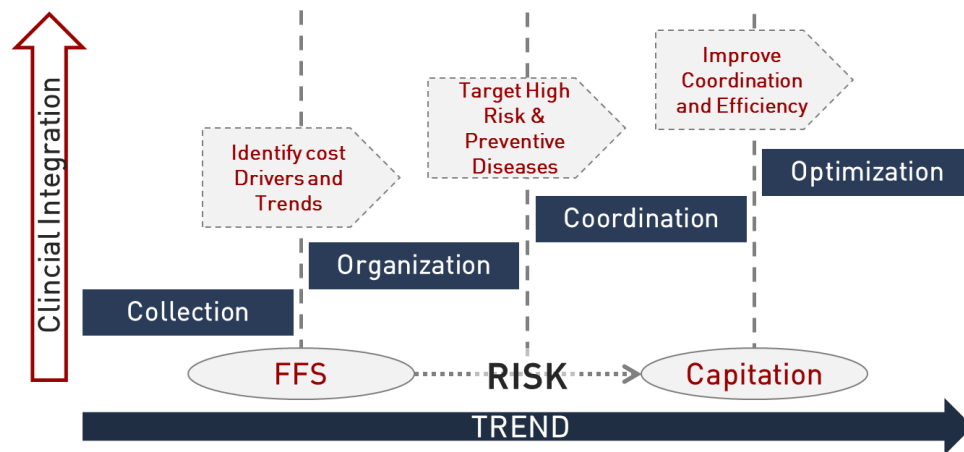
Having to reduce cost and improve quality while simultaneously managing the health of larger, older, and (presumably) sicker populations creates a challenging paradox. As organizations begin to address this challenge, it's no surprise that population health analytics ranks as a top priority for 2014; "not if but when" has been the resounding message heard from leaders across the industry.

Population Health Management: What It Is and Why It Matters

PHM can be broadly defined as "operational processes designed to foster health and quality improvements while managing costs (McAlearney, 2003)." The idea is not new; in fact, payers have been using population analytics as a means to track and control costs for years. However, as external forces thrust providers into the driver's seat, they will need a more focused definition of what PHM means to their organization and how it affects costs and outcomes. Some key drivers in this definition include the following:

- Access
- Cost
- Quality
- Lifestyle Management
- Demand Management
- Disease Management
- Care Coordination

The American Hospital Association (AHA) describes this as a "must-do strategy," and organizations will be required to explore "solutions in the aggregate," as focusing solely on those seeking care will no longer be acceptable. As we begin to focus on the cost of care for an entire population, identifying trends, focusing on the highest

utilizers and proactively addressing preventive conditions will all be components of a successful healthcare organization.
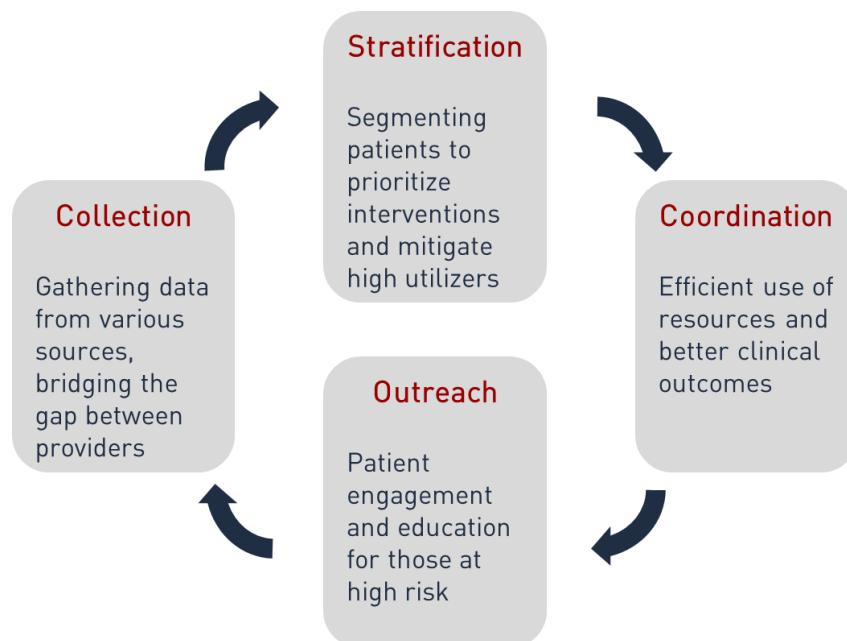
While EHR and HIE initiatives of the past five years have gone a long way to automate and integrate the U.S. healthcare system, we still operate under a mostly fragmented delivery model. Tools that coordinate care across the entire continuum and apply economies of scale and scope will be required to maximize efficiency gains. The larger the population, the more necessary it will be for organizations to apply more powerful and effective analytics as a strategy for success.

In short, as we hear pundits talk about Healthcare BI, Analytics, and Big Data; what they are really talking about is tools and techniques for doing PHM. Unfortunately the majority of classic EHR systems, even those that are fully integrated across modules and care settings, are not PHM systems.

What PHM Systems Do

KLAS has recently begun to examine this emerging class of vendors, and organizes PHM solutions into four pillars or categories of workflow: (1) Data Aggregation, (2) Risk Stratification, (3) Care Coordination, and (4) Patient Outreach. Figure 2 below depicts these functions as roles.

Figure 2. KLAS Roles of PHM

Stratification

Segmenting patients to prioritize interventions and mitigate high utilizers

Collection

Gathering data from various sources, bridging the gap between providers

Coordination

Efficient use of resources and better clinical outcomes

Outreach

Patient engagement and education for those at high risk

Most PHM vendors supply tools and services that help customers manage medical costs, prevent fraud and abuse, and improve the quality and efficacy of healthcare. Customers include healthcare payers, provider organizations and government entities. Their value is typically derived from Enterprise Analytics; in other words, the vendors employ decision analytics and reporting tools for identification and stratification of populations to detect high-risk individuals or groups, risk adjustment and predictive modeling, clinical analytics, business intelligence and reporting.

The primary goal of these systems is to provide meaningful direction based on data from a variety of sources. By collecting and organizing information across the entire continuum of care, these systems reduce fragmentation and provide scalable data to identify trends in population health, bridging the gap between providers across the organization. Once data is normalized, stratification of high risk patients and isolation of high utilizers allows providers to control cost and mitigate risk.

Segmenting patients based on these risk profiles also allows for more efficient and coordinated care, making sure the right patient is receiving the right care at the right time. As organizations extend care outside of the traditional four walls of the hospital, engaging patients as active participants in their care through outreach and education programs extends the providers' reach and improves clinical outcomes.

Navigating the PHM Vendor Marketplace

Emerging technology in big data/business intelligence is not isolated to healthcare. As data sets become more complex and data centers become unprecedentedly large, projects such as the IBM Watson computer are becoming the next wave of technology advances. Similarly, the rapid adoption of HIT and quickly evolving regulatory environment in healthcare are having a significant impact on the growth of technology solutions for PHM. The demand for collecting and utilizing clinical data in meaningful ways has created entry points for a number of vendors into the PHM market and a number of new vendors have thrown their hats in the ring. As the number of PHM vendors continues to rise (currently over 150 named participants), the parallels between the EHR market of years past and the PHM market of today are becoming increasingly obvious.

Recall the pre-HITECH EHR market that included several hundred players in an arms race to capture mind and market share in a rapidly growing space. What started as a market chock-full of niche products and services, quickly evolved into a market focused on integration and enterprise solutions. The subsequent success of enterprise solutions such as Cerner and Epic speaks to the perceived value and importance of integration, and proof of a trend away from best-of-breed approaches.

The PHM vendor marketplace today is similar to the EHR market in the pre-HITECH days. There are literally hundreds of vendors claiming to offer some component of PHM, BI, Analytics, etc. This can be confusing and intimidating to provider organizations. Simply getting clarity about what a provider needs to participate in PHM is tough enough; navigating the vendor environment makes it all the more challenging. The figure below highlights the KLAS categorization of vendor competencies by role and illustrates the relative specialization of PHM solutions today.

Figure 3. KLAS Core Competencies

Percentage of Vendors with KLAS Core Competencies by Role
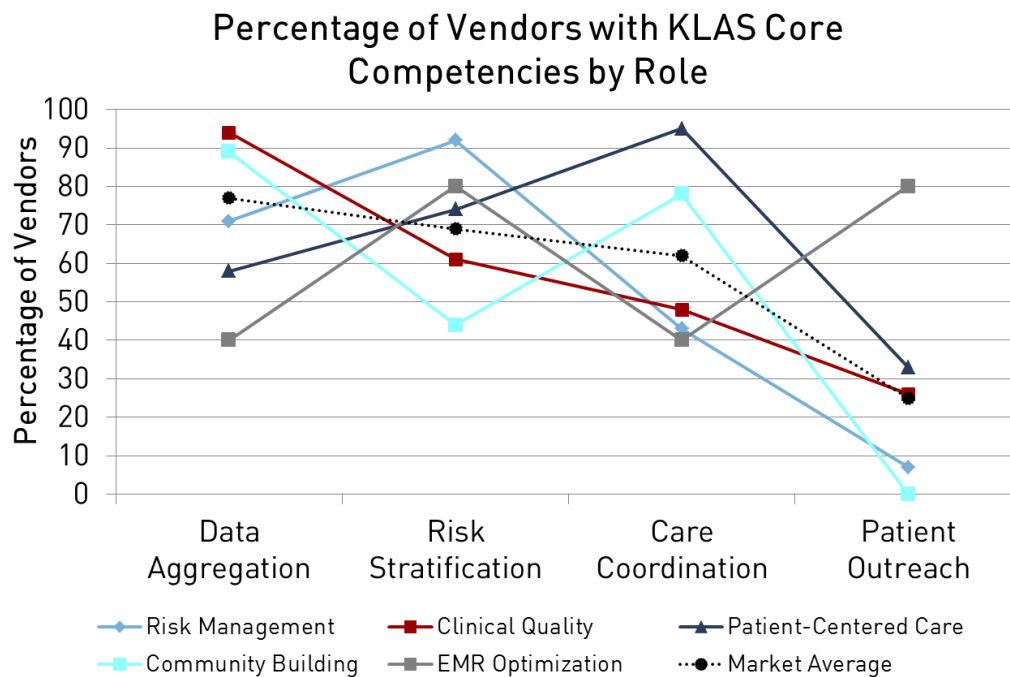
During this challenging time, providers need to be careful. Environments such as this can easily result in the expensive purchase of software solutions that are both expensive and unable to meet their true needs.

Vendor Selection: Associated Risks and Perils of Snap Decisions

As healthcare organizations prepare for the "not if, but when" of payment reform, the current vendor landscape requires careful navigation. Vendor selection during a maturing market will require careful alignment of organizational priorities and needs with vendor strengths and potential for growth. "PHM applications are an early stage market with ever-changing requirements," said Cynthia Burghard, IDC Health Insights Research Director. "As healthcare organizations continue to evolve their

PHM strategies, they will need access to rich, integrated claims and clinical data, supported by complete organizational transformation with a focus on efforts and outcomes rather than the volume of services delivered." Burghard makes a great point: strategies are evolving and given the low level of maturity within the PHM vendor marketplace, there are a few things that prudent organizations will want to consider.

First, what is the "time-to-value" ratio associated with a particular vendor? Unlike the timeframe afforded to an EHR implementation, most organizations are viewing PHM adoption with rapidity. Given this, it is important to assess whether the vendor can provide appropriate and needed functionality in the time you require it.

Second, who are the vendor's references? Did they have a good experience and are they similar to your organization? Again, given the limited maturity of the marketplace, this is an important factor as it is easy to run across fly-by-night operators.

Lastly, consider the vendor's extensibility; in other words, can they provide you with the exact capabilities that you need given the resources that are available to your organization? Are they HIT vendor neutral, in that they do not care from where the solution sources its data, or are they an EHR who will stumble when sourcing from a competitor?

The new fee-for-value models of care and reimbursement require providers to progress beyond care coordination for the individual patient and into true PHM; without this progression, providers will not be able to compete. Among other things, this progression will require access to integrated data sources that can be used for monitoring and data mining. Some of the challenges associated with this include system interoperability and data standardization. Effective data analysis is the start of developing evidence-based care protocols that can be used across a healthcare system. However, you need to have basic building blocks in place. Let's be honest; knowing what systems and interfaces you have is the first step in this process.

Conclusion: Ready or Not, You're Being Forced Back in the Water!

The triad of constantly changing regulatory requirements, increasing cost pressure, and an aging population has likely left many feeling as though "we've got another shark problem." As the industry continues to evolve and produce advancing technology solutions, healthcare organizations cannot ignore the trend: population health matters.

As the torch is passed from EHR initiatives to HIT projects of the future, such as PHM system implementation, careful navigation of this evolving and volatile vendor marketplace will be critical to survival in the landscape that follows. As with all HIT initiatives, having the resources and tools to know where you are and chart where you want to be is crucial.

ABOUT CUMBERLAND CONSULTING GROUP

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Our approach to IT planning is based on years of experience with successful implementations. We believe that proven methods combined with disciplined, rigorous, but pragmatic project management delivers successful results.

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