WHITE PAPER

Enabling Value-Based Care Through IT

An Encore Point of View

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AN ENCORE POINT OF VIEW

Healthcare – like most businesses these days – relies on support from information technology (IT) capabilities to conduct operations effectively. No longer an "off to the side" department, IT is a strategic enabler of healthcare organizations' goals. With near-ubiquitous adoption of electronic health records (EHRs) and related applications, staff interacting with patients and families – from providers to registrars – use various IT tools to perform their responsibilities. As a result, organizations are creating massive amounts of data describing the course of care delivery.[1] To derive value from this data and to be well-positioned to succeed in the relentless market shift to value-based care, organizations need to become adept at reporting, measurement, and analytics. Such competency does not happen automatically, nor does it happen organically. Healthcare organizations need a deliberate plan and focused execution to give staff access to accurate information when needed to make decisions, guide clinical care and operations and report to external entities.

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CMS's Quality Strategy, MACRA, and population health commercial payer contracts all require healthcare systems to re-use data more effectively.

Several drivers underscore the need for healthcare organizations to be more effective in their re-use of data[2], all them are related to the shift to value-based care. First, the Centers for Medicare and Medicaid Services (CMS) has defined a Quality Strategy that lays out a timeline to increasingly tie reimbursement to quality – which will be publicly reported via electronic clinical quality measures (eCQMs) and the physician compare report. Second, the recently enacted Medicare Access and CHIP Reauthorization Act (MACRA) explicitly ties physician reimbursement (i.e., Medicare Part B billing) to quality and seeks to encourage physicians to gravitate to risk-based reimbursement models (i.e., Advanced Alternative Payment Models or APMs). Third, the commercial payer market – as it has always done – is quickly following these regulatory reimbursement models with their own population health oriented risk-based contracts.

As the percentage of total reimbursement is tied to quality, safety, patient satisfaction, efficiency, and other metrics, healthcare organizations must develop advanced capabilities to use their data to understand their performance – clinical and financial – to stay on track to maximize their reimbursement and avoid reductions. Organizations must develop a plan that defines the needed technology, supported by appropriate processes and skill sets, to make effective information available to whomever needs it, when they need it. Technology alone isn't the answer – all too many organizations license viable applications yet never achieve value. Also, simply increasing the number of people that pull data and generate reports is neither efficient nor scalable. Rather, organizations need a roadmap aligned with their strategic plan that defines the specific steps needed to make accurate, reliable information available. While this plan in general should be focused on effective reuse of data, the overarching reason for the plan is to support the various "flavors" of population health management organizations are facing (e.g., Advanced APMs, employer-led ACOs, etc.). In short, the plan describes how an organization will IT-enable success in value-based care.

ELEMENTS OF THE PLAN

In defining an effective roadmap to IT-enable the organization for value-based care, three separate but interrelated components should be considered:

- Technology
- Process
- People (skill sets)

Of course, these are far from new concepts, but often organizations can place too much emphasis on technology and fail to balance the dependencies between it and process and people. Having a clear plan focuses the objectives, work streams and responsibilities necessary to IT-enable value-based care appropriately.

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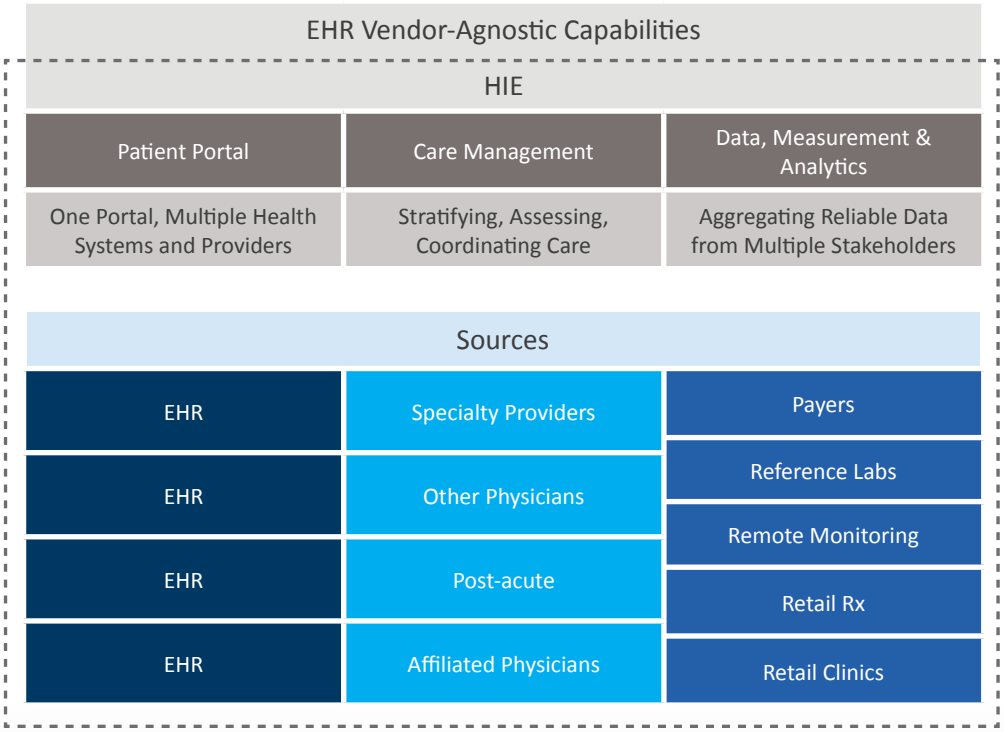
TECHNOLOGY

When responding to a new need for information, organizations frequently begin a process to identify and license information technology they believe will address this need. While, ultimately, technology will likely be required (unless the organization already licenses for capabilities that will meet their needs), looking solely to technology to meet a need is generally not the answer. And absent a clear set of goals and objectives coupled with illustrative use cases (i.e., scenarios) that describe pragmatic clinical and business challenges, technology decisions frequently miss the mark. Rather, the technology elements of the overall plan should be tailored to address specific targets and scale over time to meet changing demand.

IT Framework

An effective plan begins with an overall framework that defines the boundaries and objectives of the plan. The diagram below identifies the technology capabilities an organization needs to develop to successfully IT-enable their efforts for analytics in general, population health management specifically, and with a particular focus on the journey to Advanced APMs. In addition, certain processes and skill sets will be needed to enable the organization to realize the value it should obtain from the technology, and these will be discussed as well.



Data liquidity is essential to the IT framework, even for health systems with a homogenous EHR environment.

Many health systems have implemented a single EHR in their acute care and ambulatory settings. However, due to the dynamic nature of health system composition (i.e., acquiring new hospitals, physician practices), the ideal of a homogeneous EHR environment, even among owned facilities and providers, is an elusive target. Further, there will always be affiliated providers with which the health system will need to collaborate to provide longitudinal care for patients. In addition, data from other participants, such as retail pharmacies, payers, reference labs and even remote monitoring devices, need to be included to represent the full picture of a patient. The bottom line is that health systems will need to operate in a heterogeneous environment of data sources. Consequently, organizations must invest in and implement health information exchange (HIE) technology (and related processes) that support data liquidity[3] among the various stakeholders (e.g., providers, pharmacies, labs) and functions (e.g., measurement, analytics).

There are three functional areas an organization will need to address as part of their overall roadmap; all require the reuse of data generated in other places:

- ***Data and Analytics***[4] – the ability to aggregate reliable data from across the health system to support measurement and analysis of at-risk populations. EHRs provide robust operational reports to manage day-to-day activities and even external metric reporting. However, understanding overall organizational performance, risk profiles of specific populations, and trending results over time requires analytic capabilities over and above static reports.
- ***Care Management*** – IT-enablement of care coordination work queues and follow-up activities as well as automation of patient outreach campaigns. This is a more transaction-oriented example of data reuse, as it relies on data collected in EHRs in multiple settings as well as data from retail pharmacies and potentially payers to "paint" the full picture of a patient's condition and then support a care coordinator in trying to manage or improve that patient's condition to prevent it from deteriorating to the point that direct clinical intervention is needed.
- ***Patient Portal*** – a single point of contact for patients to engage with all their providers to perform activities such as asking questions, receiving educational material, scheduling appointments, requesting prescription refills, accessing test results, and paying bills. Technically, this is by far the most challenging. Absent this capability, patients will need to access multiple patient portals due to the heterogeneous EHR environment.

The capabilities represented by the inventory of existing data and analytics tools should be compared to the goals and objectives of the organization.

These capabilities must be EHR-vendor agnostic – meaning they need to be able to operate in a heterogeneous EHR environment as well as be able to work with data from other sources. This does not mean that an EHR vendor can't supply the technology; certainly this is the direction many are moving toward. But before assuming an EHR vendor can meet all these needs, Encore recommends testing that assumption against a set of likely scenarios that involve aggregating data from disparate sources to provide analytics, care management support and a single patient portal experience:

> ***For example**, a 72-year old patient diagnosed with congestive heart failure has a local primary care physician, but his cardiologist is affiliated with a teaching hospital 25 miles away. In addition to his daily medications, his care plan involves monthly lab draws, daily weights, an exercise goal of 3500 steps per day, and chest x-rays as needed. The patient should be able to log into a single patient portal to communicate and make appointments across his different providers. In addition, his healthcare information including physician notes, lab results and radiology results – whether done at the physician's office or at local facilities – should be available to all providers. Lastly, there should be integration with his home smart scale to track daily weights and his wearable to track his steps. This information should be integrated so that his care team is alerted not only if there is any abnormal test result, but also if his weight fluctuates by more than 5 pounds or his activity increases or decreases.*

Data and Analytics

Reporting is not analytics. Most organizations are awash in thousands of reports – many of which are run once and never looked at again. Organizations need a coordinated approach to producing, distributing, and retiring needed information. But as will be discussed below, the technology used to produce information is insufficient absent the appropriate processes to promote timeliness, accuracy, and appropriate access.

Often organizations currently license and/or subscribe to various technology applications that overlap and conflict. To meet the information needs of the organization with respect to value-based care, an inventory of all existing technology should be conducted. The capabilities represented by this inventory should then be compared to the goals and objectives of the organization. Redundancies and gaps should be identified. Part of the overall plan should be how to rationalize the redundancies and remediate the gaps.

Further, the data needed to support these various applications should be evaluated for accuracy and completeness. Often organizations discover that data which is "supposed" to be the same is sourced from different places and conflicts. These data issues need to be surfaced and resolved via the data governance process described later in this document.

Organizations must identify the "right" data the care management application needs to describe and monitor the patient condition.

Care Management

Critical to success in at-risk contracts, whether in government programs or commercial contracts, is the ability to coordinate care for high-risk patients (i.e., those with multiple chronic conditions and/or with a challenging psycho-social situation) and promote all patients' receiving the screenings and immunizations known to promote wellness. Care coordinators (also referred to as care managers) need access to appropriate IT support to do their job effectively – they need a dedicated care management application. Many, if not all EHR vendors, provide some level of support but it is important that all data about patients being managed can be incorporated into the application. The overall value-based IT plan should include definitions of the various care management use cases that can then be tested against existing capabilities or used as part of an application selection process.

Once selected, an essential part of the care management application implementation is sourcing the data required to identify patients requiring follow up and management or who should be included in a particular campaign. This data is sourced from data collected during the care delivery process and from claims. While the interactions with patients around care management activities are documented in the application, action is initiated as a result of the patient condition as described by the care delivery (i.e., EHR) data. Therefore, it is critically important that the "right" data needed by the care management application is identified and monitored as it moves from the various sources to the care management application.

For example, it is imperative that the care management application have the most up-to-date height, weight, vital signs and medication information as well as a comprehensive list of patient visits and providers who participated in their care. A data integration plan must be defined, implemented and continuously monitored – since changes in the source systems can affect the data flowing to the care management application. The data requirements and the effort needed to interface the required data to the care management application are typically time-consuming critical path items in a successful care management application implementation.

Single Patient Portal

All EHR vendors offer a patient portal; it is a requirement for patient engagement and is used to attain certification[5]. And some aspects of MACRA are measure levels of patient engagement. The various capabilities that patient portals provide – scheduling appointments, prescription renewal, test results, paying bills, accessing educational information about their diagnosis or procedure – are popular with many patients and their families. But currently patient portals are tethered to EHRs – often to specific instances of an EHR. This means that a patient may have several patient portals to access to engage with all their providers.

Key processes to enable value-based care for IT are data governance, centralized information request intake and triage, self-service, and change management.

While on the extreme end of technical challenges, ultimately a single patient portal that overlays the multiple underlying patient portals will be needed to promote high levels of patient satisfaction and engagement. Achieving this may not be feasible in the near term, but any plan for IT-enabled value-based care should include periodic market scans to ascertain what progress is being made to meet this requirement.

PROCESS

If technology is the area most organizations focus on first, process is often the most overlooked, yet it is the key to achieving desired results. Every plan to IT-enable value-based care should have a particular focus on at least these three areas:

- ***Data Governance*** – an enterprise-wide approach to managing data as a valuable organizational asset
- ***Centralized Information Request Intake/Triage*** – a mechanism to streamline and coordinate new requests for information
- ***Self-Service*** – an approach to allow stakeholders to have frictionless access to routine information

In addition, organizations should always include a formal change management process to support staff in shifting how they do work. These processes can begin in advance of any technology changes and represent best practices for organizations that are data-driven.

Data Governance

If data governance is not already implemented, a sound plan should include the initiation of a cross-functional data governance structure and process. Effective data governance is critical for an organization to harness the value from its data assets. This governance is not an IT function nor is it a department in the organizational hierarchy. Rather, data governance brings together the key stakeholders from quality, finance, administration, IT, and other areas to make decisions on how data should be captured, standardized, used, and secured. Through data governance, the organization documents by data element the systems which capture the required data. It guides decisions on how to rationalize inconsistencies in data that are allegedly the same and governs how the data can be used with appropriate access, security, and patient privacy. And if needed data is not captured in the way that is usable (or not captured at all), data governance identifies the need for potential changes in workflow and system implementation and engages the right stakeholders to effect the required modifications. These tasks are essential to successful use of data and require the considered support of key stakeholders with top-down commitment across the organization.

Data governance is a continual process, which must be monitored to promote quality data.

Data governance supports the ongoing tactical process of ensuring data quality. The false narrative that has been repeated over and over is, once we establish a position on our data, our work is completed. However, the reality is, data does not "stay put" once EHR configuration changes and workflow modifications are implemented to capture required data; it needs to be continuously monitored to identify variations as early as possible. For example, one way to effectively monitor data quality for electronic clinical quality measures (eCQMs) is to track the calculated rates on at least a weekly basis. Typically, a sudden change in an eCQM rate indicates "broken data" rather than an aberration in clinical care. Sometimes changes are made to data – outside of the data governance process – that result in inaccurate data. Early detection enables early intervention to get things back on track.

Centralized Request Intake

Frequently organizations decentralize the process to request information (e.g., reports, dashboards). The rationale is that those responsible for providing the information should be the ones closest to it. In this scenario, Finance is responsible for financial reports, Quality for quality metric reporting and so on. While it is true that those who generate information for various stakeholders should be familiar with the data and associated processes, having a decentralized request approach often puts the end users at a disadvantage, creates duplication, and can result in conflicting information.

Defining the IT-enabling value-based care plan is an opportunity for organizations to re-visit their approach to the information request process. While information creation can remain de-centralized, it should be coordinated through a centralized request and triage process. This assures several benefits:

1. Triage can determine if the same or similar request has been made previously and then leverage the prior work to meet the new request. This helps eliminate redundant reports, promotes a higher level of accuracy (i.e., a new report doesn't use a different way to calculate a value), and saves time.
2. Methods and tools can be shared across the various information-generating teams to drive a level of standardization that supports more accurate and understandable information. In other words, coordinating how the same or similar information is portrayed makes the information more consumable by end users.
3. The right team can be assigned to the task. In many organizations, end users often reach out to the last person that helped them. That person (or team) may not be best suited to meet the new request but will try anyway, resulting in wasted time and perhaps an inaccurate result.
4. Coordinating information generation supports the standardization of the technology used (another example of the interrelatedness of technology and process).

Segmenting analytics users into tiers helps determine which level of self service to provide.

Self Service

One aspect of removing obstacles to obtain information is to define a process through which stakeholders can directly access information they routinely need. Not all end users are comfortable with the same level of self-service, so as part of their overall plan organizations should consider a tiered approach such as the one described below.

- ***Casual User*** – this level provides access to pre-run information through dashboards or reporting portals that publish needed information on a scheduled basis. These users can readily access the information as needed. If new information is needed, these end users can then avail themselves of the centralized request process.
- ***Mid-Level User*** – these users should have access to templates that define the typical types and formats of information they need to access. Often, these templates are identified as a result of the triage process "noticing" frequent requests for the same type of information. Providing templates then allows these users to request their own information within the boundaries defined by the templates and the data those templates have access to.
- ***Super User*** – every organization will have a handful of end users with the need and skill to have access to data through reporting and statistical tools.

The combination of these processes, together with the appropriate technology, will help organizations have the information needed to guide successful performance under value-based care.

PEOPLE

The final element of an organization's value-based care IT plan should address people. Often, new skills are needed to both take advantage of the acquired technology, implement the new processes, and interpret the information created. Part of the planning process should be to define the skills needed by the organization to support the defined objectives. Next organizations should inventory the skills existing staff has. Finally, a gap analysis should be done between the skills that exist and the skills that are needed. One aspect of the plan should then be how to address any skills gap – whether through training, hiring or sub-contracting.

Some of these skills will be driven by technology. If part of the plan calls for the acquisition of new care management or analytic applications, staff will likely need training. Other skill needs will be driven by the defined processes. These are generally softer skills to identify, but the ability to adapt to change is important as new approaches are defined and implemented.

The shift to value-based care requires both soft skills and technology skills.

A perhaps more difficult skill to measure is the ability to interpret information and translate it into actions that result in change. Absent a concerted approach to using information as a lever to drive improvements – whether in clinical care or other operational processes – all the technology and processes will have little impact on the organization. Organizations who wish to be successful in value-based care must develop this critical competency – the ability to understand what the information is telling you and then develop and implement the necessary actions. They also must be able to then measure results over time to verify that the implemented changes do yield the desired results.

CONCLUSION

Value-based care is here and growing as a percentage of revenue. Successful organizations will be adept at using information to understand their performance and then implement any needed changes. Access to accurate, reliable information to support value-based care doesn't just happen; it is the result of a pragmatic plan that defines where the organization must change and adapt to develop the needed competencies. First plan; then act. Success will follow.

REFERENCES

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2. Throughout this document the phrase "reuse of data" is intended to mean the range of capabilities represented by reporting, measurement, and analytics.
3. Data liquidity –" to ensure the right data are provided to the right person at the right time" https://www.ncbi.nlm.nih.gov/pubmed/21799328 (captured 11/21/16)
4. "Analytics is the discovery, interpretation, and communication of meaningful patterns in data. Especially valuable in areas rich with recorded information, analytics relies on the simultaneous application of statistics, computer programming and operations research to quantify performance. Analytics often favors data visualization to communicate insight." https://en.wikipedia.org/wiki/Analytics (captured 11/21/16)
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