

SMARTER HEALTHCARE: ANALYTICALLY FIT, OPERATIONALLY EFFICIENT

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Report Highlights

p2

44% of healthcare organizations see prohibitive cost as the top barrier to analytics.

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40% of healthcare professionals are challenged by a lack of data to support critical decisions.

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Top healthcare organizations are 3-times more likely to use data governance policies.

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Leading healthcare organizations drove a 13% year-over-year reduction in operating cost.

If the ultimate goal of our healthcare ecosystem is to improve patient care and deliver better patient outcomes, the secondary objective would be to drive operational efficiency. Care providers who use data effectively to support their most critical operational and strategic decisions find themselves at an advantage when it comes to growth and cost reduction. This report explores the use of analytical technologies and activities within healthcare organizations.

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From traditional reporting and data visualization to predictive analytics, the potential impact of analytics is undeniably strong in a healthcare setting.

Definitions

This report draws on two separate data sets to extract insights about the healthcare industry.

Aberdeen's 2012 Smarter Healthcare survey examined 82 organizations and their experiences using technology (analytics, mobility, IT security) specific to the healthcare space.

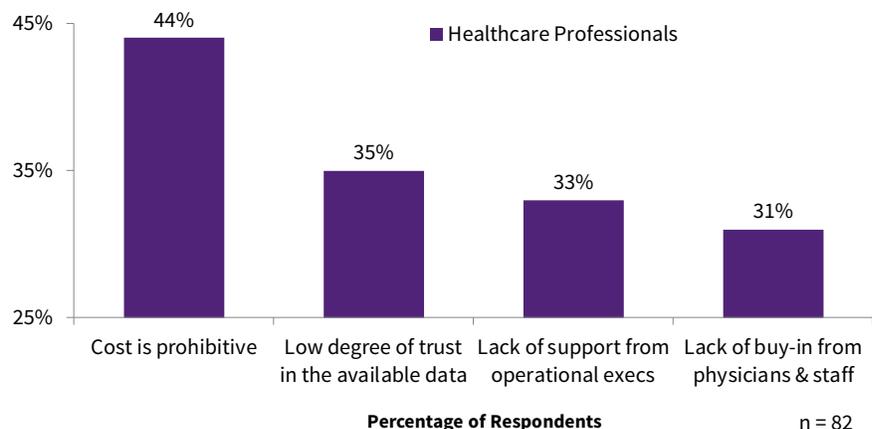
Aberdeen's 2014 Business Analytics survey (44 healthcare respondents) explored the activities and performance impact related to the use of business analytics technology

Evidence to Insight – The Analytical Imperative

The healthcare ecosystem of payers, providers, devices, and pharmaceuticals is a wholly different animal than the rest of the business world. When the ultimate goal is maintaining and improving the health of our citizens, the ability to enhance decision speed and quality takes on a heightened importance. Perhaps no profession in our modern economy demands a more effective blend of experience and evidence as inputs into critical decisions. Particularly, when it comes to care delivery and its supporting industries, leaning on a strong foundation of hands-on experience and time-tested wisdom is an important part of the decision process.

Increasingly, though, healthcare organizations are looking for effective ways of augmenting that experience with data-driven insights. From traditional reporting and data visualization to predictive analytics, the potential impact of analytics is undeniably strong in a healthcare setting. However, Aberdeen's last look at this topic revealed some trepidation on the part of these organizations, particularly with respect to cost (Figure 1).

Figure 1: Yesterday's Barriers, Today's Opportunities



Source: Aberdeen Group, September 2012

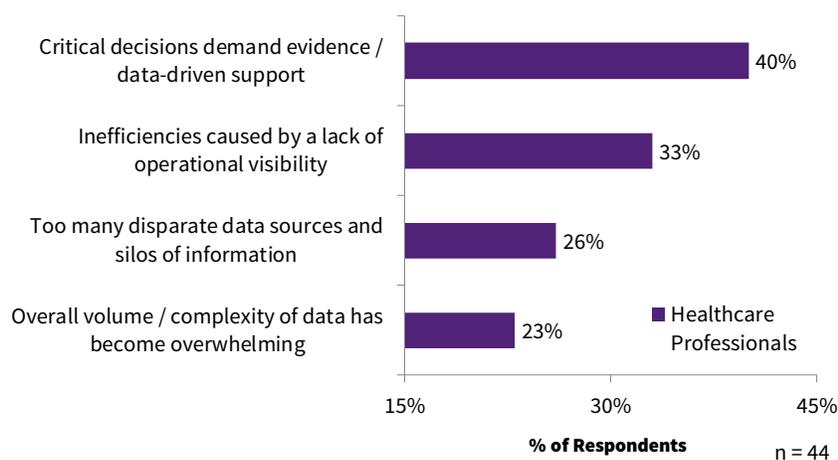
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Given the size and complexity of healthcare data environments today, it's not surprising to see cost as a major factor deterring implementation of analytical solutions. However, few technologies in the IT space today boast more potential to deliver a tangible ROI than business analytics. An effective process of transforming raw data into actionable insight can uncover opportunities to reduce waste and improve patient flow, ultimately supporting lower costs and higher revenues.

Moreover, the other cited barriers to adoption of yesteryear have now morphed from problem to opportunity. Recent advancements in the analytical space now allow companies to apply an unobtrusive layer of governance on top of the data exploration and discovery capabilities in place. Other developments in visual appeal and data accessibility have made the solutions much more approachable and relevant to a broad array of users. As a result, many of the fears around data trust and lack of executive buy-in have been allayed. As we move to the present day, we see how many of these challenges are now cited as top drivers of analytics adoption (Figure 2).

- ➔ [Related Research, "Healthcare Analytics: Has the Need Ever Been Greater?"](#)
- ➔ [Related Research "Fighting Fraud in Healthcare"](#)

Figure 2: Analytics to the Rescue: Unmet Needs in Healthcare



Source: Aberdeen Group, April 2015

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Fast Facts

Analytical capabilities in use by healthcare organizations (*% of all respondents*)

- Operational dashboards – 70%
- Real-time reporting and analysis tools – 58%
- Data management / data quality technology – 55%
- Interactive data discovery tools – 49%

Healthcare professionals today are most concerned with their ability to make evidence-based decisions to supplement their experience. With these enhanced analytical capabilities, they hope to gain better visibility into operational processes, break down functional barriers to data access, and improve their general ability to handle expanding data volumes.

Analytical Darwinism: Only the Data-Driven Survive

Most organizations these days would say that they have some form of analytics in place, but many have not yet created a strategy that empowers a variety of user types. Within healthcare providers for example, there are at least three different factions: IT / data management professionals, operational / administrative staff, and clinical staff. Each carries their own demands and specific needs for analytics, but only in rare cases are those needs met in a meaningful way. The fact is, many of these organizations still harbor a significant amount of consternation about projects like this.

In order to examine how healthcare organizations have grown (or not) over the past few years, the research looked at aspects of the analytical strategy that could potentially rebut the barriers to adoption shown in Figure 1. Therefore, in response to those barriers, respondents were measured against:

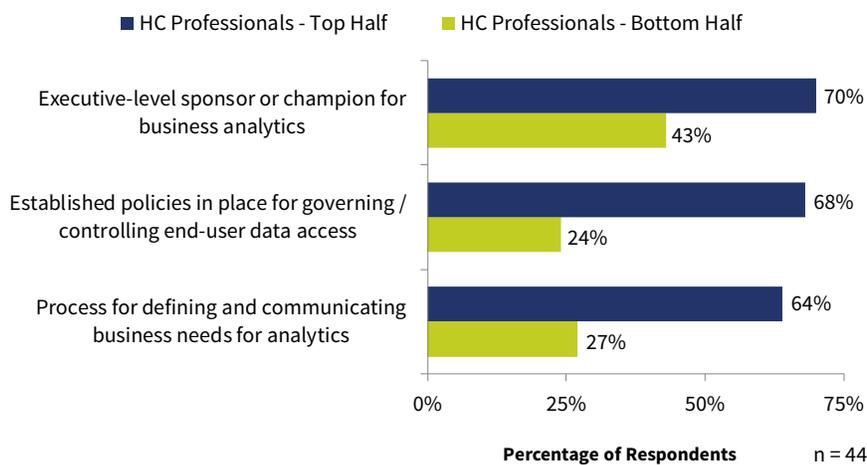
- ➔ **Breadth of data access:** This speaks to the ability of different user types to access cross-functional data to enrich and extend their analyses. It helps improve clinical engagement and fosters executive level support.
- ➔ **Relevance of analytical capabilities:** This provides a more tailored view of data, in the language and taxonomy of the user in question. It also improves adoption and engagement on the part of multiple user types.

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➔ **Improved trust in data:** This enhances the decision confidence of senior management, operational staff, and clinical staff, and reduces time spent searching for information.

Top performing healthcare organizations (see sidebar) not only share a common focus on improving the quality and accessibility of their data, but also leverage a variety of internal capabilities that support their analytical strategy (Figure 3).

Figure 3: Defining Characteristics of Top Performers



Source: Aberdeen Group, April 2015

Communicating the business value and potential ROI of analytics is not a problem for top performers. These organizations are more likely to find a supporting champion or sponsor at the executive level to help make analytical projects successful. Data oversight is an important differentiator for top performers as well. While traditional operational and clinical data have always been plentiful in the healthcare world, the recent flood of nonconventional information, such as unstructured text-based or machine/sensor generated data have intensified the need for data governance and monitoring of appropriate usage. Lastly, as an added layer of effort to ensure

Healthcare Performance Defined

For the purposes of this report, survey respondents were measured against three performance metrics critical to the healthcare space. Those metrics, along with the average performance for each group, are listed below.

Average increase in data that is **searchable / discoverable:**

- Top Half: 56% y/y increase
- Bottom Half: 5% y/y increase

Percentage of respondents “satisfied” or “very satisfied” with the **job role relevance** of analytical capabilities

- Top Half: 91%
- Bottom Half: 9% ”

Percentage of respondents that saw “improvement” or “substantial improvement” in **trust in underlying data**

- Top Half: 77%
- Bottom Half: 41%

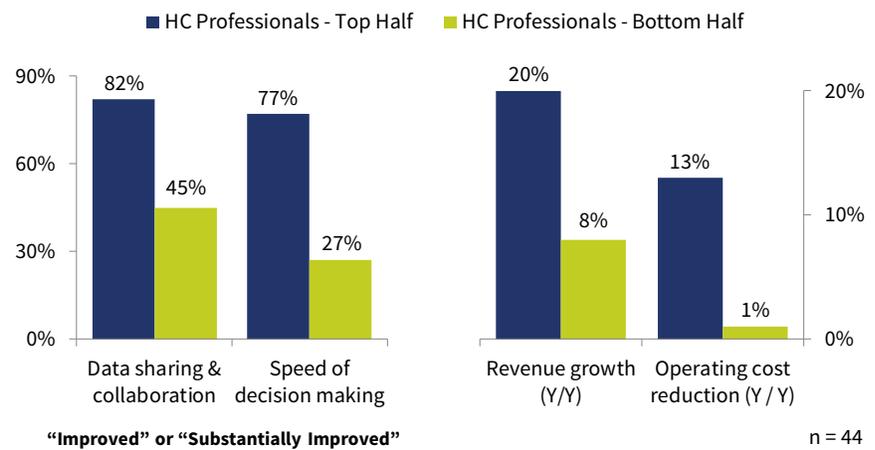
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Clinicians require access to different data sources than administrators and carry different rights and privileges around data access. Developing a sound understanding of these differing needs is a crucial underpinning of analytical success.

the relevance of their solutions, top performers take the time to gather and clearly communicate end-user needs for analytics. Operational and strategic decision makers have very different time requirements for information delivery. Clinicians require access to different data sources than administrators and carry different rights and privileges around data access. Developing a sound understanding of these differing needs is a crucial underpinning of analytical success.

Ultimately, top performers are able to reap the benefit of this organizational maturity and deliver results. On the indirect side, top healthcare organizations are much more likely to see improvement in key aspects of their decision process like their ability to share insight cross-functionally and decision speed as well (Figure 4).

Figure 4: A Healthy Prognosis for the Analytically Inclined



Source: Aberdeen Group, April 2015

Aberdeen's research continuously demonstrates an end-to-end linkage between analytical maturity, decision efficiency, and business performance. To translate this concept to the healthcare world, consider the common metric of bed utilization that so many providers use. Faster information and better data

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sharing would improve communication between the clinical and operational staff, allowing better anticipation of bed availability and more efficient patient transfer processes. These improvements would save time and reduce process waste while enhancing overall patient flow, ultimately leading to reduced cost and revenue growth.

Key Takeaways

If the ultimate goal of this healthcare ecosystem is to improve patient care and deliver better patient outcomes, the secondary objective would be to drive operational efficiency. Care providers who use data effectively to support their most critical operational and strategic decisions find themselves at an advantage when it comes to growth and cost reduction. However, translating the value of analytics to the healthcare industry is generally not easy. The following key takeaways provide an overview of the most salient research findings and how they apply to healthcare:

➔ **Data challenges plague the healthcare industry.**

Particularly, within healthcare provider organizations, the degree of data complexity is downright frightening. Moreover, the challenges typically aren't limited to just data volume and disparity. This is an industry that manages a tremendous amount of data in outdated legacy systems, often implemented with significant site-by-site customization. Top performers in this space are more inclined than others to devote specific resources toward mitigating this problem. With the judicious use of technology and the appropriate services, these companies look to improve the quality and accessibility of their data, while at the same time, maintaining a degree of governance and oversight to that data.

- ➔ [Related Research, "Analytics in the C-Suite: Fortifying the Executive Decision"](#)
- ➔ [Related Research "Managing Rapid Data Growth: A Trial by Fire Hose"](#)

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Across the entire analytical value chain from data preparation, to discovery and visualization, advancements in analytics have arisen to make a serious impact in the healthcare space.

- **Healthcare organizations are not early adopters.** It would be easy to look down on the healthcare industry and scoff at many of the old, stodgy systems that comprise their data environments. However, the current state of healthcare IT is a product of arcane and constantly shifting regulatory mandates around information exchange, not to mention the naturally discerning and technologically skeptical mindset that many physicians and medical staff carry. Amid this type of internal and external scrutiny, who could blame these organizations for being slow to adopt technology? These days, however, the business case for analytics and data technologies is stronger than ever, and top healthcare organizations are making the effort to deliver the right tools to their workforce.
- **Analytics carries tremendous potential in healthcare.** With the possible exception of patient data security, evidence-based medicine has been dominating the conversation in healthcare IT for quite some time. The operative word in the previous sentence being “conversation.” In other words, most healthcare organizations have been long on discussion and short on action. Across the entire analytical value chain from data preparation, to discovery and visualization, advancements in analytics have arisen to make a serious impact in the healthcare space. What’s missing now is the willingness to expend the time, money, and resources to clean up the data layer and equip decision makers with the tools they need. Healthcare organizations that take these steps and deliver a top-notch analytical environment will be rewarded with better insights and improved operational efficiency.

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For more information on this or other research topics, please visit www.aberdeen.com.

Related Research

[Introducing the Analytical Mind Map: The BI Personality Test](#); June 2014

[Analytical Detectives: Solving Data Mysteries](#);
June 2014

[Analytical Gunslingers: The Quick and the Dead](#);
June 2014

[Healthcare Analytics: Has the Need Ever Been Greater?](#); September 2012

[Fighting Fraud in Healthcare](#); March 2014

[Managing Rapid Data Growth: A Trial by Fire Hose](#);
March 2015

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