

## Effective Business Decision Support for Health Providers

*Beginning with the passage of the 2009 Health Information Technology for Economic and Clinical Health (HITECH) Act there has been a concerted effort to drive adoption of EHRs and use health IT to promote the delivery of safe, cost-effective, high-quality care. An increase in the amount of digital data and programs under the Merit-Based Incentive Payment System (MIPS) have led to a need to automate data analysis, leading to various solutions to improve decision making.*

### Healthcare – Specific Decision Support Systems

Clinical Decision Support Systems (CDSSs) help providers improve the quality of care by ensuring proper measures are taken to optimize the treatment of patients, minimize complications, and eliminate unnecessary procedures. CDSSs encompass a variety of tools to enhance decision making in the clinical workflow, such as automated alerts and reminders for care providers, clinical guidelines, condition-specific order sets, diagnostic support, and care-specific analytics.

Business Decision Support Systems (BDSSs) enable healthcare providers to make strategic decisions across the Enterprise related to cost and delivery of care. By combining clinical, financial, and operational data, a BDSS can identify the cost of care at both the micro (patient) and macro (system-wide) level. This detail allows organizations to examine the elements of care, identify trends, and develop insights to manage, grow, and improve their operations.

An effective BDSS can help your organization to target cost reduction opportunities, pinpoint physician variability, identify growth potential, improve service line management, and evaluate the financial validity of value-based care programs. The focus of this paper will be to discuss important attributes for an effective Business Decision Support System.

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### Analytics for Decision Making

As the amount of data increases, analytics become more important to utilize that data. This is even more relevant for healthcare organizations. Providers are constantly looking to balance their costs while still providing quality care and adhering to a multitude of regulations and programs in which they prescribe.



Source: MicroStrategy 2020

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### Barriers to Adoption

The increase of data in healthcare has been logarithmic. To be successful in the current economic climate requires providers to gather and utilize their data to improve their cost and quality of care. However, there are a number of issues preventing many from efficiently performing these activities.

Leading healthcare decision support solutions remove many of the barriers by serving as the central source of truth for the organization's operational data. Furthermore, these systems utilize the latest security measures, provide significant training, and may even provide insights or consulting services to enact strategies developed from the data.



Source: MicroStrategy 2020

### Effective Business Decision Support

Decision support can take many forms. The most effective solutions, however, incorporate specific characteristics that should be considered when selecting the right solution for your organization.

#### Interoperable

Most important for any decision support system is the ability to gather and configure the organization's data for objective, strategic decision making. The resultant data should represent the source of truth for your organization. Therefore, your system needs to be able to identify, access, process, and organize all your organization's data into a single view. This includes identifying the appropriate data for your specific use cases, integrating with the various systems to extract the data, and providing the combined data in a functional format. Accuracy, completeness, and ease of access are crucial. For that reason, many leading vendors promote their solutions as a platform, which implies the use of one data set for all use cases.

#### Expandable

Decision support systems, whether home grown or purchased, represent a significant financial investment. The system you select should be able to meet the changing market and economic climate over time. Things such as expansion, new data sources, or changing use cases can all impact their usefulness. The first solutions were server based and deployed at individual hospitals. This approach may still be effective for some situations but can have limitations when expanding the network, deploying new hardware, or updating software. For that reason, leading solutions are now cloud-based using one of the leading cloud computing services.

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### Data Integrity

Effective decision making requires accurate, complete, and consistent data. Healthcare providers have historically used ratio-of-cost to charges (RCC) or relative value unit (RVU) methodology to manage their costs. Although these methods have been sufficient from the 1980s through 2010s, the ability to precisely identify the incremental cost of care is necessary as the paradigm shifts to value-based care.

Decision support systems that utilize activity-based costing (ABC) provide more accurate costing data, enabling a deeper level of analysis for more comprehensive financial strategies.

To expedite implementation, some vendors will use your current accounting methodology while others will adopt a process to move to ABC over time. Until you are using ABC exclusively, it will be impossible to accurately link costs to care, leading to incorrect assumptions and limiting your ability to measure the impact of your decisions.

### Ease of Use

The effectiveness of a product is a combination of the capability of the solution and the user. When products are simplified for ease of use, they often lack the in-depth functionality for more complex analysis. Conversely, overly complicated products can be intimidating, resulting in limited use. Some vendors inadvertently add complexity to their solutions by offering distinct modules for different tasks. Others offer financial modules for budgeting or forecasting. Not only are BDSS financial modules less effective than leading ERP systems, but the data source is siloed. In this scenario there is no additional benefit, only added cost.

Creating a system that caters to both novices and power users is difficult but achievable. Providing user preference and performance templates along with functional access instead of numerous confusing modules allows users to quickly identify and perform tasks while still having the ability to search any or all the data relating to a specific variable.

### True Cost of Care

Healthcare organizations today rely on detailed strategic plans to remain solvent and competitive. To make informed strategic decisions requires accurate data. Ratio of Cost to Charges (RCC) or Relative Value Units (RVU) are not specific enough.

Only Activity-Based Costing (ABC) represents the true cost of care and cost variations. ABC enables the most accurate view of your organization by detailing the cost of resources consumed by treatment, patient groups, or physicians.

#### RCC

- Assumes reimbursement rates reflect resources consumed
- Captures costs only for services that are charged

#### RVU

- A large portion of RVU expenses is the average practice expense
- Assumes resources are consumed in standard bundles

#### ABC

- Provides true resource consumption
- Enables benchmarking and process improvements to influence behavior and enhance outcomes

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### Presentation

Critical for any decision support system is the ability to effectively understand and use your data. Most solutions have some reporting functionality while others interface to your reporting application of choice. The best solutions offer dynamic data visualization to meet your needs. Presenting data visually makes it easier to: understand, identify trends, and see how independent variables relate to each other. Data visualization also makes it easier to communicate insights, report findings, and track improvements over time. In addition to formatting, the ability to view your data from multiple platforms makes it more accessible.

### Support

Like any software solution, service and support are critical for the effective use of the product. Things like uptime and customer service response time should always be factored into the selection criteria. Leading vendors also offer the expertise to assist beyond just the use of the tool. They have the business and data knowledge to troubleshoot questions regarding integrity and insights that can save hours or days of inactivity. A few vendors even offer value added support in the form of monthly data modeling that highlights key insights. This type of expertise can have a dramatic impact on your business while also reducing your staffing requirements.

### Process Improvement

A decision support system is only as good as the resultant improvements to your organization. The goal is to identify areas of impact and enact lasting changes that result in cost savings or service improvements. Things to consider when selecting a decision support solution includes who is going to use the tool, what departments will have access to it, and who will be responsible to enact process change. Insights can be called out on the tool or via a support agreement that includes regularly scheduled business reviews. Most BDSS vendors have in-house consultants and/or partnership arrangements with consulting firms to help implement improvements.

### Summary

The rise in EHR adoption and value-based care has led to a greater reliance on data in healthcare. As a result, health providers are turning to business decision support systems to consolidate, analyze, and leverage this data for improved financial performance. Unlike clinical decision support, these systems allow providers to identify strategic opportunities across the Enterprise to better manage their business, improve costs, and expand their services. Due to the strategic nature of these systems, healthcare providers need to ensure their solution has the technical capability, accuracy, support, and user features necessary to effectively identify and leverage their data. Depending on the capabilities and goals of the organization, vendor knowledge and services can prove to be significant for meaningful, long-term change.