



## Driving down costs and improving patient satisfaction with healthcare operations

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# Toward greater operational efficiency in healthcare

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Today's healthcare landscape is characterized by unrelenting change and constantly increasing complexity. It can be said that the reforms of the Accountable Care Act (ACA) of 2010 exacerbate this situation while at the same time attempting to ameliorate problems over the long term. Whatever the case, healthcare providers have their work cut out for them – and no other part of the organization will play a more critical role than healthcare operations.

The fact is, healthcare providers spend an enormous amount of their annual budgets on operations – which makes achieving operational efficiencies and minimizing costs one of the prime objectives for healthcare reform today. In this regard, the job of healthcare operations is to transform resource management so that supply meets demand with the greatest efficiency possible.

The job is big – one that touches on a wide array of resources that are critical to high quality healthcare delivery. These include the doctors and nurses who deliver patient care on a daily basis, facilities such as operating rooms (ORs) and the intensive care unit (ICU), and high-tech assets ranging from defibrillators to MRI scanners. They also include implantable devices such as pacemakers and a wide range of critical supplies and instruments – from blood and surgical sponges to scalpels and clamps. It is the responsibility of the operations management team to synchronize all of these resources in a way that ensures availability and maximizes utilization.

Under the reforms that are now coming online, such synchronization is more challenging than ever.

In the past, operations teams could focus on logistics within a single facility or across other facilities with their group. The new model for accountable care organizations (ACO), however, ups the ante for operations teams everywhere.

The ACO model requires multiple providers participating in a network to work together to ensure the best possible health outcomes as a patient moves through the care lifecycle. Invariably, this involves handoffs from one provider to the next – which requires scheduling, coordination, and the sharing of information. It also requires a lot more reporting to various stakeholders and regulatory authorities to demonstrate compliance and qualify for the various incentives offered.

## Visibility and collaboration for smoother, more cost-effective operations

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In such a challenging new healthcare environment, operations teams need every advantage they can get. This is why many healthcare providers are reshaping their approach to operations with an emphasis on improving information visibility and access while empowering operations teams to collaborate more effectively with parties and entities both inside and outside the organization. This is where QlikView can help.

Think of QlikView as a Business Discovery platform for healthcare operations. It delivers true self-service analysis and insight to your operations team so that you can streamline logistics and make the decisions that drive down costs while improving care delivery. It makes collaboration easier and more effective by giving you the tools you need to share information and insight with all the parties involved in end-to-end care delivery. It also streamlines reporting dramatically so that you comply with accuracy and efficiency.

Take, for example, one of the ACA reform initiatives to improve patient satisfaction rates. Operational teams know all too well that one of the major drivers of patient dissatisfaction is long wait times. Using QlikView, you analyze operational data across a wide spectrum of activities to reveal insights into why these delays occur. You might notice, for instance, that chronic delays in radiology are linked to a practice of double booking appointments to compensate for potential no-shows. Or you might trace other delays to poor transport management practices where patients show up late to radiology because transport booking is put off to the last minute. Such logistical insights put you on the road to transforming critical aspects of operational practices that can drive dramatic improvements in patient satisfaction.

# Integrated operations for the integrated healthcare organization

This, of course, is just one of the many areas in which QlikView yields the insight you need to drive better operational performance in a complex and changing healthcare setting. It empowers your operations team to fully explore your data to find the meaning locked inside – all based on a single version of truth accessible to all. It also makes it possible to work more effectively with all the players and stakeholders involved with care delivery. And it does all of this without hampering IT with burdensome data management requirements.

The diagram below, gives you a more detailed overview on how you can apply QlikView to various operational areas within your healthcare organization.

**Figure 1. Using QlikView to achieve operational excellence in healthcare**



## What is Business Discovery for healthcare operations?

Business Discovery for healthcare operations is based on the belief that quality operational information can transform healthcare organizations for the better – and that the operations team with access to this information can play an instrumental role in that transformation. With the QlikView Business Discovery platform, everyone can easily analyze data and experience that “a-ha” moment of discovery.

Business Discovery is a whole new way of doing things that puts your operations experts in control. Unlike traditional analytical solutions, where just a few people are involved in insight creation, Business Discovery enables everyone to create insight. It's about your people having access to the data they need to make better decisions that create efficiencies and drive down costs while still ensuring the best possible patient outcomes. With QlikView, you can take insight to the edges of your organization, enabling every user to do their jobs smarter and faster than ever by accessing tailored insights that meet their unique needs.



# The benefits of Business Discovery for operations

**QlikView can help healthcare organizations break existing communication and information barriers and cut through healthcare operations complexity to achieve significant improvements in productivity, utilization, and cost effectiveness.**

Whether you operate a small physician's practice or a large health network spanning 100 hospitals, QlikView gives you tools you need to improve operations. It puts all of your information to work, bringing together all your systems - those supporting your clinical operations as well as your back office operations. You can also connect with your partners' systems, other healthcare providers, or even your suppliers to share information and insight that streamlines execution and improves quality.

QlikView makes it easy for everyone in your healthcare organization to access the latest information and analysis, gleaned in seconds from the terabytes of information in your systems. Operations managers, clinical team leaders, physicians, and nurses can all interact with clear, highly visual clinical information using a huge variety of charts, dashboards, and other reports that clinicians themselves create using QlikView Apps.

Healthcare workers can securely share and exchange data and analysis on the device of their choice – from tablet and PC computers to smart phones. Users can explore all of the information contained in the app, including summary data visualized in a performance metric – and then drill into underlying details behind the metric. A simple click or tap can transform huge volumes of data into fresh and clear analysis. This can help your people discover new ways to visualize operations and improve service delivery.

## Collaborate across your entire healthcare network

The coordination of care across a wide range of providers is critical for success in today's healthcare environment. QlikView and its powerful collaboration capabilities can play a critical role in ensuring the success of your ongoing investments in patient care innovation and operational sustainability.

### Improve coordinated care in your patient population

With nearly one in five Medicare patients returning to the hospital within 30 days, the need to better coordinate care and improve transitions is obvious. What's required is better communication and improved on-the-ground policies between all stakeholders involved in a patient's ongoing care. QlikView can help you get there.

With QlikView, you and your healthcare partners can come together to share electronic health records (EHR), charts, notes, and other medical information in real time through live collaborative sessions. Your healthcare partners don't have to be in the same room or even the same state. All of them can log into QlikView apps over the Web using their iPads or other computing devices, without the need for installing additional software or paying a license fee.

For example, you and your healthcare network can have a live collaborative session to improve coordination of care policies for patients in a particular treatment area where readmission risk is very high. Everyone can securely connect to a QlikView app to view EHR summary data on patient outcomes, and drill into those metrics to view detailed data to determine the root causes and discover the reasons behind the negative trend. Participants can append their own annotations to the charts and other documents live – inviting input and reaction from other participants.

In addition, collaboration doesn't necessarily have to occur in a live setting. For example, an operations manager could analyze trends relevant to coordination of care objectives and make this analysis available to other stakeholders to view at their convenience. Then, using the annotations capabilities in QlikView, these stakeholders could comment on the analysis where relevant. In this fashion, the original analysis can go back and forth in iterative review rounds until all involved parties are satisfied.

### How does QlikView help you improve operational performance in healthcare?

- **Collaborate across your entire healthcare network** – Coordinate care delivery with your partner healthcare organizations, supply vendors, and others to improve patient satisfaction and reduce cost.
- **Uncover new insights for improved performance and utilization** – Use your growing data volumes to improve workforce productivity and optimize efficiency in the OR, emergency department, ICU, and more.
- **Keep clinical operations teams mobile and connected from anywhere** – Take advantage of interactive analysis and timely data availability on mobile devices, even when those devices are offline.
- **Deploy quickly for cost-effective operations and insight** – Provide IT with a secure, self-service analysis platform that empowers users to create their own dashboard, report, and analytic apps.

## Drive down procurement costs and enhance supplier performance

The ACA is putting new focus on healthcare procurement – and for good reason. Procurement costs can account for up to 50% of operating costs. Procurement can no longer be a back office function; it has to be closely linked to clinical care to ensure maximum value and ROI. Unfortunately, the challenges are scattered throughout supply networks – and most organizations have little visibility into vendor performance and cost effectiveness. Organizations also need a better understanding of how supplier-purchaser relationships impact performance and patient outcomes alike.

With QlikView, you can aggregate procurement information not just from your own systems but from supplier systems as well. You can analyze and visualize volumes of data to understand planned spend versus actual spend – or share and view inventory across facilities to better control stock levels and minimize excessive ordering. You can also continuously monitor supplier and purchaser performance in real time using critical metrics like delivery accuracy or returns.

QlikView also enables you to share your performance information with your suppliers – either through real-time, online collaborative sessions, or by having them securely log into your custom-built QlikView supplier app at their own convenience. Vendors can view their performance against SLAs or even compare themselves to your other suppliers based on ACA-driven metrics focused on cost performance and patient outcomes. It's just one way QlikView gives your procurement specialists the fact-based analysis they need to negotiate even better deals with your suppliers.



## **Uncover new insights for improved performance and utilization**

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QlikView takes a very different technical approach from other analytical tools. Traditional tools rely on data that's stored and primarily processed on hard disk. This not only limits the speed of analysis, but often requires analysis of a subset of the total available data in order to return results faster. With QlikView, however, all of the data is maintained and analyzed in active memory. By not relying on hard disk processing, QlikView can analyze the entire data set and complete the analysis exponentially faster than traditional tools.

So what does this mean for improved clinical operations? It means that even as data volumes grow under new ACA-driven reporting and service models, QlikView can help you put all the information to work quickly – without requiring IT to spend excessive time fine-tuning and maintaining the data.

### **Turn hidden connections in data into opportunities for improvement**

In addition to enabling fast analysis of your relevant healthcare data across your network, QlikView also goes further than traditional analytical tools in its ability to analyze that data. This is because when users search for matching data on a query, QlikView not only returns records that match the search terms but also results that are not strictly related to the particular search or query criteria. This is called the “power of the gray” – and it can help your clinical operations team discover unexpected connections that may also yield unexpected opportunities.

For example, you can use QlikView to better understand how and where your physicians, nurses, lab technicians, and other critical staff are deployed on a shift-by-shift basis to better align staffing levels to patient volumes. In the past, it took clinical team leaders and executives weeks to pour over spreadsheets and review the latest staffing and patient volume data. With QlikView, this can be done in minutes. You can analyze workforce deployment across your entire network by region, hospital, and department – all against specific patient diagnostic and treatment activities to uncover trends, determine staffing gaps, or identify excess capacity. You can also find ways to fine tune regular staffing levels to avoid reliance on overtime and outside staffing.

## **Gain better insight into demand to improve utilization and drive down costs**

ORs, emergency departments (EDs), and ICUs aren't just critical points of patient care, they are also critical drivers of rising healthcare costs. The challenge in the new ACA reality is to increase patient satisfaction by reducing wait times and improving perceptions of care – and to reduce healthcare costs by better managing utilization. To meet the challenges, you need better insight into demand to ensure the right levels of staffing, medications, and supplies and eliminate wasted use of resources.

With QlikView, you can better understand historical demand patterns and monitor current demand in real time. You can also more effectively schedule department staff, specialists, equipment, and lab testing to ensure maximum usage of OR, ED, ICU, and lab facilities. And to better understand the reasons for low utilization, you can analyze incidents of patient no-shows, cancellations, and staff absences.

QlikView also makes it easier to build visually rich and fully interactive dashboards that monitor key facilities like the OR – tracking on-time starts, turn-around times, surgical throughput, and more. You can use the dashboards to eliminate schedule delays and increase turn-around times as well as reimbursements. And by analyzing initial visit acuity, patient demographics, discharge records, and much more, you can find more ways to reduce return visits to the ED. QlikView helps you better plan and monitor all your critical facilities to make sure that every patient receives the best possible care and that every healthcare dollar is well spent.



## **Keep clinical operations teams mobile and connected from anywhere**

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A big driver of improved efficiency and quality in healthcare is mobility. This is why QlikView gives everyone in your healthcare organization – physicians, nurses, specialists, technicians as well as managers and executives – the ability to stay connected and engaged using the mobile device of their choice. All of them have access to the information they need when it's needed, including all relevant performance metrics and reports as well as the analytical capabilities to get fast evidence-based answers to critical questions.

### **Coordinate with your healthcare partners to drive down costs**

QlikView's Business Discovery capabilities make it possible for you to work closely with your healthcare partners – not only to coordinate patient care, but to drive down costs as well. Your COO and clinical operations team leaders can visit with their counterparts at partner locations carrying all of your organization's clinical operations insight and data on their mobile device. They can share procurement data like medical supply and equipment purchases to see if opportunities exist for getting volume discounts from vendors or sharing more resources to drive down costs for everyone in the healthcare network.

### **Stay connected to operations even when your mobile device is offline**

QlikView is designed to meet the particular needs of healthcare work environments. It not only provides mobile access to your clinical data and analysis – but you can still access the information even when your mobile device is offline, which is often the case in a hospital setting where wireless services are often prohibited.

The new QlikView iOS app for iPhone and iPad supports a powerful new disconnected mode that lets your clinical operations team members – or anyone else using the new app - work with QlikView even when they are offline. The app pre-downloads all of the key figures and supporting data, so even when the iPad is disconnected from service, it can still provide access to the latest information and analysis.

## **Cost-effective, self-service operations insight that deploys fast**

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QlikView is a truly self-service model where anyone in your healthcare organization can get the information they need. By deploying it, your IT organization empowers your COO and the rest of your operations staff like never before – positioning itself as a key enabler of operational analysis and performance improvement. What's more, QlikView helps IT maximize the ROI on existing investments in healthcare technology such as EHRs and other systems – increasing their value by leveraging the data they produce to drive performance. QlikView also keeps IT in firm control of information security and has a simplified information infrastructure that requires less resources and less cost than traditional solutions. Best of all, IT can stay more focused on improving the quality and availability of information across the healthcare organization, and in helping the organization execute on its operational objectives.

# Case study: Healthsouth

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## Background:

HealthSouth is the largest in-patient rehabilitation company in the country. It serves patients through a network of inpatient rehabilitation hospitals, long-term acute care facilities, outpatient satellite clinics, and home health agencies. Its service range from physical therapy for relatively minor injuries to rehabilitative care for patients recovering from neurological disorders such as stroke; orthopedic, cardiac, and pulmonary conditions, brain and spinal cord injuries, and amputations.

## Challenge:

With such a large network of facilities to manage, HealthSouth needed a way to better manage its labor force. Using existing tools, executives would spend an inordinate amount of time gathering and aggregating data in spreadsheets to gain visibility into cost and productivity issues. Typically, this data was out of date by the time it was analyzed. HealthSouth wanted more timely analysis and the ability to generate more insight to drive higher rates of labor productivity.

## Solution:

HealthSouth deployed a labor productivity application on its QlikView platform and extended it across 100 of its hospitals. Now information is available virtually instantaneously.

## Benefits:

This application helps its c-level executives, controllers, and operational managers to control labor costs and improve productivity throughout the organization. As an organization, HealthSouth can now identify trends sooner and go much deeper in its analysis to generate useful insights. This enables the organization to address emerging cost and productivity issues before they adversely impact the care delivery and the bottom line.



# Case study: National Health Service of the United Kingdom

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## **Background:**

When it comes to managing the healthcare supply chain, few organizations have a more daunting job than the Nation Health Service (NHS) of the United Kingdom. The North West NHS Collaborative Procurement Hub (NWCPH) helps NHS manage this supply chain.

## **Challenge:**

NWCPH wanted a standardized approach to collating and consolidating data from multiple financial and purchasing systems so that it could more effectively turn that information into useful information. It also wanted to identify opportunities for reducing contract spend wherever possible. Existing business intelligence tools required weeks of time to gather data and were not able to deliver timely analysis to help the NHS understand where it stood regarding supply chain issues in the here and now.

## **Solution:**

NWCPH deployed QlikView to 70 category managers and other stakeholders in just 12 weeks. Now all relevant parties can see the same information and work from a single version of the truth while flexible drill down functionality allows complete interrogation of the data.

## **Benefits:**

With QlikView in place, NWCPH has seen dramatic improvements that have helped it drive process improvements, monitor contract compliance with visibility of supplier spend, and build relationships with an improved understanding of the whole procurement process. Over the course of two years, the organization has cut more than \$66 million in procurement costs, improved regional hub performance with better insight, and saved hours of management time in reporting and analysis.

# The benefits of operational excellence

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With so much riding on the ability of healthcare organizations to drive down costs and improve the quality of care, your operations team needs a tool that is up to the task. Fortunately, QlikView provides you with an information infrastructure that empowers your operations team to meet these challenges head on. With QlikView, you'll be able to:

- **Improve operational performance and the quality of care delivery** – with insight into operational metrics and the ability to adapt to complex new models for healthcare delivery
- **Collaborate more effectively** – with powerful data-sharing capabilities that allow you to share insights with clinical and financial teams and coordinate more effectively with other healthcare providers for better performance under the new ACO model
- **Gain insight into performance metrics and best practices** – with unimpeded access to operational information and the ability to freely associate with the data in a way that empowers you to make new discoveries
- **Comply with regulations and report to stakeholders** – with vastly improved information transparency and the flexibility to zero in on whatever data may be relevant for existing and emerging reporting requirements

## Learn more

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To find out more about how QlikView can help your organization improve operational performance, contact us at:

<http://www.qlik.com/us/company/contact-us> or visit us online at  
<http://www.qlik.com/healthcare>.



## QlikView for healthcare

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