CASE STUDY

The UK’s National Health Service Uses Blended Learning to Implement a New Enterprise System

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Overview

The National Health Service (NHS) is a government-chartered organization tasked with providing high-quality healthcare to residents of the United Kingdom. Although regarded as one of the world’s leading healthcare providers, the NHS has several primary challenges: improving care and outcomes, including cancer survival rates; managing finite resources against rising costs; and continuing to increase the consistency of care across regions served by its healthcare providers.

To help address these challenges, NHS Digital—a division within NHS providing data and information services—implemented a new data collection and analytics platform called the Calculating Quality Report Service (CQRS). The platform tracks achievement and payments to service providers for their delivery of national or local quality outcomes. To achieve the full potential of the CQRS platform, the NHS needed to train up to 80,000 individuals on how to use it.

In This Case Study

☑️ The key challenges facing the NHS
☑️ Why the NHS decided to create and implement a new data analytics and payments solution
☑️ How an NHS partner built the system and devised and implemented a training strategy for 80,000 users
Company Overview

The United Kingdom’s National Health Service (NHS) was launched in 1948 to provide high-quality healthcare, free of charge, to residents. With more than 1.5 million employees, the NHS has one of the world’s largest workforces1, including nearly 200,000 physicians, 315,000 nurses, and 19,000 ambulance staff2 (see Figure 1).

Figure 1: The NHS at a Glance

- **Year Founded:** 1948
- **UK residents served:** 64.6 million
- **Employees:** 1.5 million
- **Headquarters:** London, United Kingdom

NHS healthcare providers see 1 million people every 36 hours for everything from routine screenings to life-saving surgeries and emergency procedures. In 2014, the Commonwealth Fund, a private foundation that promotes and measures high-quality healthcare around the world,

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put the NHS at the top of its respected global rankings across a range of quality-care metrics, above Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States. The NHS also delivered healthcare services at one of the lowest costs among the 11 countries ranked in the report (see Figure 2).³

### Figure 2: International Rankings for Overall Quality of Healthcare

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<thead>
<tr>
<th>COUNTRY RANKINGS</th>
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Notes: * includes ties; ** Expenditures shown in SUS PPP (purchasing power parity); Australian $ data are from 2010. Source: Calculated by the Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Health Policy Survey; Commonwealth Fund National Scorecard 2011; World Health Organization; and Organization for Economic Cooperation and Development, OECD Health Data, 2013 (Paris: OECD, Nov. 2013).

Source: Commonwealth Fund, 2014.

### Business Environment and Challenges

While the NHS is a global leader in providing quality healthcare, the UK’s healthcare system faces increasing stress. The United Kingdom’s aging population means more citizens with chronic conditions, while the overall cost of providing healthcare is increasing. For example, the UK government estimates that the cost of medicine—just one element of treatment—is growing by more than British pounds 600 million (approximately $780

million) a year.\(^4\) Furthermore, the NHS seeks to improve health outcomes; for example, an estimated 5,000 additional lives a year could be saved in the UK if cancer survival rates equaled the average in Europe.\(^5\)

The NHS seeks to address other challenges:\(^6\):

- Making quality of care consistent across the system
- Improving responsiveness to citizen needs
- Better measuring the quality of care
- Holding providers accountable for high-quality care delivery

Addressing these areas is critical to the long-term health of UK citizens as well as the country’s ability to finance the NHS. To address these issues and help align the organization for future success, the UK Parliament passed the Health and Social Care Act 2012,\(^7\) with the goal of making the NHS “more responsive, efficient, and accountable.”\(^8\)

### Organizational Environment

Although part of the national government, the NHS functions as an independent body, with its own board of directors and chief executive officer.\(^9\)

NHS Digital is an organization within the NHS that provides national information, data, and IT systems for health and care services. The group’s role is to use data and technology to improve the patient experience and help clinicians, commissioners, analysts, and researchers provide high-quality care.

### Using Big Data to Transform Health

In 2012, the NHS began a large-scale transformation of the way it measures patient success and how physicians and other healthcare providers are compensated. As is the case in nearly every other industry and sector, data collection and analysis have become key to understanding problems and identifying solutions. By recording patient experiences, treatments, diseases, and health outcomes, NHS executives sought to create an invaluable database to improve treatments and manage costs. For example, by collecting this data, NHS teams can assess which treatments are working best, determine which methods of care are superior to others, and identify trouble spots in the system. Leveraging data allows NHS administrators to effectively measure general practitioners’ treatments and compensate them efficiently for meeting quality standards.

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5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid.
To support the National Health Service's transformation initiative, NHS Digital developed a new tool called the Calculating Quality Report Service (CQRS) to measure more than 300 healthcare metrics. The CQRS put the NHS in the vanguard of this type of data capture and analysis.

The new solution was designed to meet three goals:

- Improve quality of care through accurate collection and analysis of data
- Reduce time spent recording data by automating data capture
- Efficiently measure physicians' achievements and manage payments

In addition, the program would need to serve approximately 80,000 users and be the principal vehicle for distributing more than $1.5 billion annually in compensation to healthcare providers.

NHS Digital determined it would need a sophisticated IT and training partner to rapidly develop and deploy the CQRS and train its projected 80,000 users. This partner would need to exhibit advanced technical sophistication, be capable of working at a large scale, and have experience collaborating with government organizations. The NHS selected General Dynamics Information Technology, headquartered in Fairfax, Virginia, and with offices around the world, as its IT partner.

**Understanding the CQRS Audience**

While the NHS's IT teams began working on the new solution, the NHS and the solution provider simultaneously began planning for the enormous training program that would be needed to support the nationwide CQRS launch. Executives within both organizations recognized that a deep understanding of the CQRS's core audience and stakeholders was necessary for a successful launch. In March 2012, executives from the two organizations met in the United Kingdom for a series of meetings with stakeholders (including NHS administrators) and an end-user working group. Beyond learning about the CQRS audience, the executives' goal was to identify challenges and needs, and map out the most effective way for training such a large population of users. The meetings and follow-up research led to a detailed assessment that included analyzing the audience, needs, jobs, tasks, and content.

The audience analysis divided the CQRS learner population into three core groups:

- **NHS commissioning boards.** This group includes commissioners throughout approximately 50 local offices who are responsible for improving quality and healthcare outcomes of NHS patients. They are also tasked with ensuring that healthcare is delivered to the highest standards throughout the United Kingdom.

- **Clinical commissioning groups.** This cohort, organized by regional entities, is made up of physicians—also called commissioners—and healthcare-practice groups. Critical uses of the CQRS for this group would include submitting and analyzing data, creating benchmarks for physicians, managing payments, and creating customized reports from data.

**KEY POINT:** Executives within the NHS and the solution provider recognized that a deep understanding of the CQRS's core audience and stakeholders was necessary for a successful launch.
• **General practices.** This audience comprises physicians and a range of other healthcare providers and office-based support executives, including nurses and practice managers who perform in an administrative leadership role. This group would use the CQRS to submit and review data, forecast cash flow, submit requests for payment and ensure payment, benchmark the performance of their practice against others, and create a range of customized reports.

The NHS and the solution provider’s team also developed a set of characteristics for members of each audience group, assessing how they felt about the CQRS and uncovering their learning approaches. For example:

• **Commissioner characteristics.** The role of commissioner did not exist 20 years ago, and since then the role has undergone a number of reorganizations. These individuals are systems- and process-driven, and some deal with high turnover in their patient populations. This, in turn, can lead to increased workloads. These commissioners had little insight into the goals and role of the CQRS.

• **Practice manager characteristics.** Practice managers have a wide range of responsibilities (e.g., HR, finance, facilities, payroll, strategy, team management, business planning, information management and technology) and can be characterized as either “old school” or “new school.” Old-school managers have worked their way up to their current position. Approximately 10 to 30 percent of this group are expected to be reluctant adopters of any new health model. New-school managers obtained their job skills through formal education and training, and many have business credentials. The majority of this group were aware of high-level changes coming to the NHS but were unsure of the impact these changes would have on them. They were equally unsure of what impact the CQRS would have on their workload or performance.

The NHS / solution provider’s end-user working group also identified a series of lessons learned from previous training events, perceived benefits of the CQRS, challenges to its implementation, and current areas of confusion around system payments and quality measurements. For example, based on previous training events, end users told the NHS / solution provider’s team that they liked recaps and a validation of knowledge at the end of learning modules—the option to take screenshots, practice using the system in a way that reflects the real-world system, the ability to access course modules in any order, and more.

Further challenges were identified during the NHS / solution provider’s analysis, in particular around information technology. The training would have to be delivered through a secure network, with servers located in the United Kingdom. In some NHS offices, computers were old, and that meant different operating systems. A training solution would have to be not only highly effective but also delivered on a technology platform that could handle the NHS’s varied IT framework.

**KEY POINT:** A training solution would have to be not only highly effective but also delivered on a technology platform that could handle the NHS’s varied IT framework.
Rolling out the CQRS

Based on the analyses of the audience, needs, jobs / tasks, and content, the solution provider created a detailed design document that proposed two training approaches—a self-paced online training that would be offered to all users, and a facilitated web conference that would be offered to a select group of heavy users. This design was chosen in part to accommodate the schedules and technology preferences of the various users. The NHS approved the design plan, and in March 2013, General Dynamics IT delivered the first training class.

Online Training

Online training was made available to all end users and covered up to 11 modules based on an employee’s role. Each module was self-contained and completed without a facilitator. The online modules relied heavily on active engagement strategies designed to put users in real-world scenarios. To this end, 25 individual simulation tutorials with role-based scenarios were used to involve users in the learning process and speed knowledge transfer. The online modules were also designed to include a series of knowledge checks throughout the learning process to ensure that participants retained critical information.

To ensure ease of use, all 11 online modules were available 24 hours a day, seven days a week, from any location via the CQRS learning management system (LMS). The learning system did not require individuals to download new software, circumventing any issues around different operating systems or slightly outdated technology.

Web Conference Training

The NHS wanted to create a live, facilitator-led version of the training for high-level and heavy users of the CQRS. The web conference course used the same online platform as the online training to deliver different modules and simulations. A core difference from the online modules, however, was that the web conference provided for real-time interaction between the facilitator and the users and for dialogue among users. The web conference also employed several virtual classroom functions, such as chatting and polling.

Another key difference with the web conference course was that it was divided into two sessions. The first session covered the business concepts behind the CQRS and provided high-level information on functionality. The following session, which was launched closer to the official implementation of the CQRS, focused on practice managers and provided detailed training on using the system.

Executives at the solution provider and the NHS also understood that critical to the web conference success was the need to train United Kingdom facilitators. The solution provider developed a train-the-trainer program that ensured that facilitators were well versed in the CQRS and in using the learning technology. The solution provider and the NHS partnered with another firm to provide local facilitators to make certain that the facilitators were familiar with the community in which they were
conducting the training. This was done to ensure a training “face” that would be culturally and linguistically relevant—enhancing credibility and bolstering knowledge transfer.

Performance support tools were available to end users via the LMS, including simulation tutorials, job aids, and system simulations. Additionally, a change management effort addressed how the trainers needed to mitigate fears about the future, clearly define and describe the CQRS, identify and reinforce the benefits of the CQRS, identify and explain any areas of confusion, and focus on providing essential information in using the CQRS.

**Business Impact**

Rolling out the CQRS system that General Dynamics IT developed in partnership with NHS Digital, as well as the accompanying training solution, allowed the NHS to achieve the goal described in the Health and Social Care Act 2012: making the NHS “more responsive, efficient, and accountable.”

The CQRS system and training have also been integral to the achievement of key business outcomes. Several positive impacts have already been reported as a result of the CQRS rollout, and the training has received many accolades, most notably related to the effective customization and personalization of learning. Training was highly contextualized for different audiences, taking into consideration lessons learned from past systems training, learning style preferences, and localization considerations. Additionally, how-to materials (e.g., job-aids, system demo videos) were developed and made readily available outside of the core training so users could access the right information, in the correct amounts, at the point of need.

As a result of the new system and associated training, physical offices have reported spending less time on payment processing and tracking their work against a set of nationally defined service criteria. One estimate by the NHS approximates that these improved health practices have saved more than $45 million in data entry time and expenses.

In addition, the time for measures to be implemented for data collection went from more than six months to 18 days, which allowed general practices to submit data earlier and see results much sooner in the process, enabling them to implement improvements to increase their scores sooner than expected.

The CQRS also streamlined the introduction of quality incentives to health-care professionals, and NHS administrators have seen a faster response time when it comes to physicians adopting new standards of care.

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Other improvements the NHS has realized after rolling out the CQRS include:

- **Faster response time for customers.** Automation means the NHS can respond more quickly to customer requests.
- **Improved support for users.** The NHS is able to provide better support to users even in the absence of automated data.
- **Augmented change management.** As a result of the solution provider’s in-depth analysis, training was designed to not only teach users how to use the system but also to communicate the benefits to system users, stakeholder organizations, and healthcare consumers.
- **Delivery of useful data.** The NHS is now able to provide national management data to identify trends and service comparisons.

In addition to these improvements, a bespoke LMS developed by the solution provider helped streamline training and training processes without the NHS having to purchase and maintain an “off-the-shelf” LMS, resulting in significant cost savings. The cohesiveness of the development and training development teams allowed NHS to roll out the highly sophisticated and large system within strict and lean timeline parameters.

**Lessons Learned**

- **Know your audience.** The NHS needed to understand CQRS users to build a training program customized for their needs. To accomplish this, the NHS and the solution provider conducted multiple workshops with stakeholders and end users and built a plan around them.
- **Make the technology agnostic.** Information technology is complex at an organization as large as the NHS. Diverse operating systems, different computers, and a wide range of technological sophistication meant that the NHS had to implement a training program that all parties could operate and understand.
- **Liberate people from fixed schedules.** By utilizing an online component, the NHS ensured that its busy practice managers could use the training at any time of the day and on any day of the year, thus making it easy to work around unpredictable healthcare schedules.
- **Leverage local knowledge.** The NHS and its North American partner worked with a United Kingdom-based organization to provide facilitators with local knowledge of the NHS and the communities it serves.

**Next Steps**

Part of the initial design of the CQRS platform is an evaluation process that measures how participants feel about the training. This is done by surveying them about the training’s design, content, focus, instructional methods, materials, facilities, facilitators, and usefulness or applicability.
The NHS and solution provider are using—and will continue to use—results of the evaluations during annual reviews of the training programs to make revisions and updates as necessary.

Conclusion

As part of a massive transformation of its national healthcare system, the NHS launched an entirely new healthcare analytics platform: the Calculating Quality Report Service (CQRS). The CQRS put the NHS on the leading edge of using data analytics to improve healthcare and provide for the efficient compensation of healthcare providers. More than $1.5 billion in payments are processed annually using the system.

Before the rollout, however, more than 80,000 individuals needed to be trained on how to use the CQRS. By partnering with an outside vendor with deep IT experience and training design and development expertise, as well as experience working with large government bodies, the NHS was able to rapidly deploy the CQRS and train thousands of individuals on how to use it. While the United Kingdom’s healthcare transformation is ongoing, the successful implementation of the CQRS has laid the foundation for long-term improvements in the delivery of quality healthcare.
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Prior to rejoining Bersin in 2015, Janet was responsible for developing the eLearning Guild’s professional development offerings, with additional oversight of the research and publications function. During her more than 15 years in the learning profession, she previously served as a senior analyst for Bersin & Associates from 2010 through 2013 and also held positions at Brandon Hall Research and Utica National Insurance Group. Janet holds a BA in communications and a master’s degree in education.

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