



PORTSMOUTH HOSPITALS NHS TRUST

DELIVERING PATIENT-CENTRIC PERFORMANCE MANAGEMENT WITH SAP® BusinessObjects™ DASHBOARDS

QUICK FACTS

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Juliane Kause, Acute Medicine and Critical Care Consultant, Portsmouth Hospitals NHS Trust

Company

- Name: Portsmouth Hospitals NHS Trust
- Location: Portsmouth, United Kingdom
- Industry: Healthcare
- Products and services: Complete healthcare services delivery focused on successful patient outcomes
- Employees: 7,000
- Web site: www.porthosp.nhs.uk
- Implementation partner: Trusted Business Intelligence Limited

Challenges and Opportunities

- Optimize patient care and reduce clinical errors
- Enable proactive performance monitoring and enhanced operational visibility across clinical departments
- Improve clinical team productivity and decision making
- Eliminate information silos across hospital systems

Objectives

- Improve insight and patient care through real-time monitoring of meaningful, clinically focused performance metrics
- Leverage powerful data warehousing and reporting functionality through deployment of an integrated dashboard reporting solution

SAP® Solutions and Services

SAP® BusinessObjects™ Dashboards software

Implementation Highlights

- Clinician-led implementation
- Rapid prototyping of metrics and key performance indicators
- Train-the-trainer approach for clinical users

Why SAP

- Highly visual metrics with drill-down functionality in SAP BusinessObjects Web Intelligence® software reports
- Strong security architecture to preserve patient confidentiality
- Rapid configurability with minimal technical and user training required
- Integration with deployed SAP BusinessObjects software

Benefits

- Monitoring by 100 clinical users of 6 dashboards in emergency and surgical departments
- Establishment of correlation between staffing levels and patient care
- Proactive monitoring to identify and mitigate issues that affect patient care
- Data collection from multiple systems reduced
- Improvement in clinician productivity
- Insight into patient length of stay, infection rates, surgical theater utilization, and staff deployment

Existing Environment

- SAP BusinessObjects Data Integrator software
- SAP BusinessObjects Web Intelligence software

Portsmouth Hospitals 
NHS Trust

When the United Kingdom's National Health Service (NHS) selected Portsmouth Hospitals NHS Trust (Portsmouth Hospitals) to develop clinical dashboards to improve patient care, Portsmouth Hospitals deployed SAP® BusinessObjects™ Dashboards software.

"SAP BusinessObjects Dashboards has saved time and increased productivity in our department," says Juliane Kause, acute medicine and critical care consultant at Portsmouth Hospitals. "And that is absolutely crucial in a time- and resource-critical environment like acute care."

A Tradition of Putting IT to Work to Improve Patient Care

Portsmouth Hospitals provides world-class care to communities across South East Hampshire in the United Kingdom. It has established a strong track record of using information technology to improve patient care. Much of that work has been led by Mike Sugden, head of information management and governance at Portsmouth Hospitals, and his small team of business intelligence (BI) professionals within the Island and Portsmouth Health ICT Service. The team had already established a cutting-edge data warehouse and reporting solution called Chimera Management Information System (Chimera MIS).

Chimera MIS serves six separate hospital organizations and consists of a fully managed data warehouse using SAP BusinessObjects Data Integrator software, which consolidates informa-

tion from multiple information systems. The solution includes integrated reporting using SAP BusinessObjects Web Intelligence® software. To date, over 300 clinical and corporate users of Chimera MIS are using 3,000 pre-configured reports and over 6,000 user-configured reports – pulling information directly from the data warehouse.

But plans for Chimera MIS did not end there. "We want to establish Chimera MIS as a single strategic platform centered around a comprehensive data warehouse and integrate additional tools that would leverage the information in a very cost-effective manner," says Sugden. "Among those tools are clinical dashboards focused on performance management." So when the NHS launched a pilot program to evaluate clinical dashboards to improve care delivery, Portsmouth Hospitals was one of the hospitals selected to participate out of a field of 400.

The Need for Accessible and Actionable Performance Metrics

Both the NHS and Portsmouth Hospitals recognized the need to provide clinicians with insightful, actionable information. Like most hospitals around the world, hospitals across the UK are traditionally information-rich environments.

However, that information is scattered across different systems, making it difficult for clinicians to get the insight they need to improve job performance. For clinical areas like trauma, elective surgery, and critical care, hospitals often lack the ability to harness day-to-day operational information to drive overall strategy. This lack of visibility prevents hospitals from developing standardized performance objectives and key performance indicators (KPIs) that improve patient care.

To improve its own clinical operational visibility and decision making, Portsmouth Hospitals selected SAP BusinessObjects Dashboards for its dashboard reporting pilot project. The software's integration with SAP BusinessObjects Data Integrator enables rapid access to trusted operations data. SAP BusinessObjects Dashboards transforms complex information into clear, visually rich KPI and metric reporting – with drill-down functionality into thousands of reports generated through SAP BusinessObjects Web Intelligence. And because patient medical confidentiality must be preserved at all costs, the software's integration with the deployed SAP BusinessObjects software security architecture made it the clear choice for Portsmouth Hospitals. "Putting up a dashboard is relatively easy," says Sugden. "Making it useful for our clinicians is something else entirely. With SAP BusinessObjects Dashboards, we have the configurability and data access to tailor the dashboards in exactly the way our clinicians need."



“We have gained and continue to gain tremendous value in our investment in SAP BusinessObjects software technology, not just in terms of ownership costs but also in terms of improving patient care.”

Mike Sugden, Head of Information Management and Governance,
Portsmouth Hospitals NHS Trust

Clinician-Led Dashboard Implementation

The initial phase of the dashboard implementation involved deploying six performance dashboards for three clinical departments: the medical assessment unit, which provides emergency room services; the orthopedic trauma surgery unit; and the orthopedic elective surgery unit. Participation by the actual clinicians who would be using the dashboards was absolutely essential to the success of the implementation. Julie Sprack, a senior nurse at Portsmouth Hospitals, teamed up with

den. “But SAP BusinessObjects Dashboards made it easy for us to generate user interfaces to show clinicians how each new metric and KPI would display and work, and this had a big impact on clinician acceptance.”

The on-time, within-budget project was also assisted by implementation partner Trusted Business Intelligence Limited (TrustedBI), which has extensive experience in building performance management dashboards. In addition to project management expertise, TrustedBI also provided technical training to the BI team, “We have confi-

surgical theater utilization, treatment complications, patient feedback, staffing levels, and much more. Dashboard metrics are constantly updated with information from six separate transactional systems consolidated through the data warehouse functionality in SAP BusinessObjects Data Integrator. “By bringing together information already collected at the hospital such as MRSA [infection] data, drug chart errors, and staff shortages,” says Kause, “SAP BusinessObjects Dashboards gives us a more accurate picture of patient flow within the department and the quality of care being administered. We can use that information to identify priorities and delegate staff accordingly.”

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Kause to provide clinical expertise and lead training sessions with clinical users. “Sometimes as clinicians we have to work with IT systems designed by IT specialists who do not have patient care at the forefront of the agenda,” says Sprack. “Working collaboratively with IT meant that we would have a system that fits our exact requirements.”

Development of performance metrics and KPIs proceeded smoothly, due in large part to the ability to rapidly configure the dashboard reporting software as metrics were developed by the clinical team. “It’s often difficult to get clinicians to visualize the data,” says Sug-

dence in TrustedBI’s delivery model,” says Sugden. “And its facilitating role in project management and training gave us the resources we needed to complete the initial deployment.”

Dashboard Reporting Powered by an Integrated Data Warehouse

The first clinical dashboards were completed in three months, with most of that time devoted to defining the metrics and KPIs required for the dashboards and training clinical staff. Today, 100 clinicians are using the dashboards in emergency and surgical wards at Portsmouth Hospitals to monitor infection rates, postoperative complications,

Visibility That Improves Patient Care

By clicking through performance metrics to view detailed reports generated by SAP BusinessObjects Web Intelligence, clinicians at Portsmouth Hospitals are using SAP BusinessObjects Dashboards to help identify specific problems that affect patient care. In fact, the clinical dashboards have allowed Portsmouth Hospitals to identify a correlation between staffing levels and clinical errors. “For the first time we have been able to show that low staff levels increase errors, and by using the clinical dashboards, we can present this information in a comprehensive and objective way,” says Kause. In addition, the software is saving time for critical care providers by reducing the need to gather information from multiple sources and by identifying potential issues before they become

major problems that can impact patient care. "In emergency care, we constantly face the challenge of working in a fast-paced environment," says Kause. "By having the information readily available, the team can quickly spot any potential risks and deal with them before the quality of patient care declines."

Tremendous Value That's Gained National Recognition

With the successful deployment of clinical dashboards, Portsmouth Hospitals has made a compelling case to the NHS about the integration value and low ownership costs of SAP BusinessObjects software. "We have gained and continue to gain tremendous value in our investment in SAP BusinessObjects software technology, not just in terms of ownership costs but also in terms of improving patient care," says Sugden.

Currently, the BI team is deploying corporate dashboards for the HR and finance departments, as well as additional clinical dashboards across 40 specialty areas – using many of the metrics and KPIs codeveloped with clinicians. Thanks to the knowledge and training they have gained through TrustedBI, Sugden and his team are developing the additional dashboards internally. Reflecting on the implementation experience as a whole, Sugden says, "As technology professionals, we have learned a great deal working with our clinical experts to deploy SAP BusinessObjects Dashboards. As a result, we have definitely narrowed the gap between IT and the highly dedicated professionals who care for our patients every day."



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