Case Study -
Healthcare BI Platform Change Management at LifeBridge Health - ICD-10 and Beyond

LifeBridge Health

Baltimore, MD

SOLUTIONS USED: **APOS INSIGHT**
APOS ADMINISTRATOR

BACKGROUND:

LifeBridge Health is a regional health care organization based in northwest Baltimore and its surrounding counties. LifeBridge Health consists of Sinai Hospital of Baltimore, Northwest Hospital, Carroll Hospital, Levindale Hebrew Geriatric Center and Hospital, LifeBridge Health & Fitness, hundreds of primary care and specialty physicians throughout the region, and many affiliated health-related partners.

As one of the largest, most comprehensive and most highly respected providers of health-related services to the people of the northwest Baltimore region, LifeBridge Health advocates preventive services, wellness and fitness services, and programs to educate and support the communities it serves.

Back in 2008, LifeBridge was one of the first healthcare providers to adopt **Cerner's PowerInsight** data warehouse solution, which is based on **SAP BusinessObjects**.

CHALLENGES:

With the introduction of more and more legislated reporting requirements, the demands on LifeBridge's reporting system were growing rapidly, and they began to spend an increasing amount of time on managing the changes to the system, and less time on expanding their analytics and reporting capabilities. They needed to manage platform change more effectively and efficiently, and to liberate their resources to

perform higher-ROI activities. These needs led them to search for administrative solutions. Volume, complexity, impact on workflows, user expectations - all were factors making platform management critical.

Change Management - ICD-10 and Beyond

The regulatory landscape in general is changing so rapidly that change management in healthcare BI has become vitally important. Efficient change management requires the ability to perform rapid impact analysis in order to anticipate the impact of changes to BI infrastructure, workflows and administrative responsibilities. ICD-10 is a specific example of the need for BI administrators to manage change efficiently, and was one of the main issues that spurred LifeBridge to investigate APOS well managed BI solutions.

Lamont Parraway manages the SAP BusinessObjects deployments for the Cerner EHR at LifeBridge, and played a significant role in the changeover to ICD-10. Prior to joining LifeBridge, Lamont managed BI in the financial sector, and he noted the unique challenges for healthcare BI platform managers and administrators, not least of which was that the healthcare BI landscape is changing so rapidly that BI practitioners need to be proactive and anticipate the growing and changing needs of the organization and its information consumers.

LifeBridge experienced a great increase in the demand for reports. Each week, they were experiencing 3 or 4 "broken" reports that had to be repaired, and the BI administration team would spend a good part of their week figuring out why the reports were broken and repairing them. At the same time, new requests for data were arriving along with change requests for existing reports. They were having trouble getting to new requests, because they were spending time repairing existing problems.

For all event-driven change within the BI system, as with the ICD-10 transition, it is essential to address modification requirements quickly, and to gain a full understanding of the database fields that are changing or expiring. To fulfill this requirement, the BI team must search for reports in which such fields are employed. If you don't have meaningful report metadata for impact analysis on these fields, this process is likely to be very time-consuming.

Many reports at LifeBridge are commonly exported to either PDF or Excel format, with Excel being the majority. The BI team thought they would be able to perform impact analysis by picking up all the SQL commands used to run these reports from the Audit table, but quickly realized this was not possible. If you don't run the report in its native format, you won't be able to get the SQL from the Audit table. They would need to examine each report, one by one. Since they had about 800 reports in their deployment, the human resource cost for this activity was prohibitive.

Cost & Resource Management

The drive to manage costs is changing the healthcare model from inpatient to outpatient (ambulatory), but this change also complicates information management. The traditional inpatient model required the integration of fewer organizations. Ambulatory patients create a much larger information footprint spanning numerous organizations and stakeholders, all needing data in different forms and at different times. The resulting increases in volume and complexity meant that the LifeBridge BI team would either need to grow substantially or find new, more efficient ways to manage their BI platform.

SOLUTION:

With ICD-10 approaching, LifeBridge realized that they would need to find an easier way to perform impact analysis and discover which reports across the enterprise would be impacted by the transition from ICD-9 to ICD-10. They considered using existing tools such as Query Builder or the Java SDK, but, while these would solve the problem, they would require human resources and skill sets that just weren't available, and the effort would be unlikely to reveal all the required information. They decided to look for a third-party solution with the ready-made functionality they required, rather than attempt to re-invent the wheel.

LifeBridge experimented with other products before investigating APOS solutions for ways to manage change within their BI system. This requirement was compounded by preparations for the move to ICD-10. They initially looked at **APOS Insight** to meet their impact analysis needs around reports from their Cerner EHR system, especially with regard to upcoming changes for ICD-10. They found that APOS Insight allowed them to run a single, easily constructed query to find out which reports would be impacted by the conversion to ICD-10. Weeks worth of labor were reduced to a couple of minutes.

Cerner provides Universes as a service in their PowerInsight solution. The client is required to neither build nor maintain the universe for their deployment. The universe they supply is complex with hundreds of tables. While the LifeBridge team had the ability to make changes, Cerner's preferred method is to have the client submit a change request, and they would make the change for all clients. As a part of this process, Cerner releases a new universe each month. Replacing the existing universe with the new universe may have an impact on a large number of reports in the system. LifeBridge found that they could query the universe joins using APOS Insight. With this information, they could compare and analyze the old and new universes to identify reports adversely impacted by the new universe.

LifeBridge found that **APOS Insight** not only met their ICD-10 requirements, but that its monitoring capabilities fit well with their plans for ongoing BI platform management. Lamont said:

> It really is a very useful product on a number of fronts. With IDC-10, the most important component is knowing what is impacted. Once you know that, the rest is merely procedural. Impact analysis gives us the scope of effort, and the ability to target our efforts efficiently.

In the long term, Insight provides the tools the LifeBridge team needs to analyze system metrics and discover which elements of the system are and are not performing as expected, and to understand quickly why those performance issues are arising.

Previously, they would have to run a set of test reports to ensure the reports continued to produce the appropriate information. Using this method, there is always the possibility that there were scenarios not covered by the test case, which exceptions would only be discovered when the full set of production reports had been run. With Insight, they could compare the joins in the two universes, which was both more efficient and more effective, in that it saved a significant amount of time, and captured all potential problems. "Being able to get down to the object level is a huge benefit," said Lamont.

LifeBridge also purchased **APOS Administrator**, which gave them the ability to make bulk changes on access rights and preferences to groups. This capability has become more important with the new emphasis on outpatient services, because there has to be stricter security due to the number of different parties linked to each patient's record.

After proof-of-concept trials of APOS Insight and APOS Administrator, LifeBridge implemented both. While one of the overriding concerns was the implementation of ICD-10, LifeBridge also saw the continuing benefits of these APOS solutions in their day-to-day SAP BusinessObjects administration and platform management.

WHY APOS?

Lamont told us that there were a number of reasons LifeBridge chose APOS solutions, including the fact that all of their requirements could be met by a single vendor:

> I know that you can do everything you need to do as an SAP BusinessObjects administrator and platform manager in the CMC, with Query Builder, and with the Java SDK, provided you have the skill set and the time. Those are the key questions: Do we have the resources? Do the resources have the necessary skills? With the growing demand for clinical data, and frequent changes and upgrades, we knew we needed to give our resources the tools to stay on top of our BI workflows. The question then became build or buy? When we did our cost/benefit analysis, including the effort to maintain the required tools, the clear answer for us was to purchase the tools for our resources to

use. The reason we selected solutions from APOS was that they had all the tools we needed to tackle all of our platform management needs, including the impact analysis necessary to move to ICD-10. It was important to us to deal with a single vendor for all of these tools.

The APOS solutions are a very important part of BI platform management at LifeBridge in that they significantly reduce the time required to perform many administrative tasks critical to maintaining the BI platform and service levels for information consumers, and because they liberate their limited BI resources to perform higher ROI tasks.

Formed in 1992, APOS Systems is a global provider of solutions which enable well managed business intelligence. APOS solutions improve the return on your BI investment through enhanced BI platform management, providing automated and simplified administration, detailed platform auditing and monitoring, robust archive, backup and restore capabilities, enhanced content publishing and distribution, detailed BI query awareness and controls; and targeted solutions to speed and streamline your platform migrations.

APOS solutions simplify, automate, complement and extend your BI platform management practices.

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