SARASOTA MEMORIAL
HEALTH CARE SYSTEM

**Sarasota
Memorial
Case Study**

The Diver Solution

Achieving Operational Initiatives Through Business Intelligence

Sarasota Memorial Health Care System (SMHCS) had always been IT-forward, allocating funds to implement applications and systems that contributed toward a better patient experience and enhanced quality of care. However, the organization's best-of-breed approach had left them with nearly 100 different IT applications — each system with its own unique way of handling reporting and analysis. While each department was happy with their existing system, SMHCS' Decision Support Team was left with the arduous task of creating a common view of the organization for hospital leadership.

In 2004, hospital leaders realized they needed better insight into their day-to-day business operations. Despite the system's many accolades — one of America's 50 Best Hospitals and a Solucient 100 Top Cardiac Hospital for several years running— managers needed better information for strategic planning, benchmarking, and operational decision making in orderto continue to provide a high level of care to the community. To do this, senior leaders at SMHCS identified the need for a facility-wide solution capable of providing management and department heads with a dashboard view of their operational initiatives.

By implementing Dimensional Insight's fully integrated business intelligence platform, The Diver Solution™ (Diver), SMHCS has been able to:

- Gain transparency into their clinical and financial data allowing for improved operational decision-making on a real-time basis.

- Automate the productivity reporting process for SMHCS leadership and provide management with a portal-based view into key performance indicators.

- Empower department supervisors with the ability to reduce their staffing costs by developing an Approaching Overtime report.

- Effectively forecast staffing needs through the development of a web-based patient census application.

- Integrate disparate data into one reporting and analytical interface that enables the entire organization to have a consistent view of performance against goals.

Why SMHCS Implemented Diver

SMHCS was in need of a solution that not only had the ability to integrate data from all of their best-of-breed systems, but also shared the ability to do this on a real-time basis. With millions of data records — both current and historical, the solution needed to be robust enough to handle copious amounts of data, but flexible enough to do this in a way that would allow the organization to create customized reports and views that displayed the information in a way that was meaningful to each of the different types of users within the facility. While many of the existing systems

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had a reporting package in place, users were held hostage by canned reporting views and an inability to quickly and easily access underlying detail data without IS/IT intervention.

SMHCS began researching several third party analytical and reporting solutions. They selected Diver due to its proven ability to merge multiple disparate sources into information that enables the decision making process.

Some of the existing applications integrated into Diver include:

- Eclipsys/TSI (Cost Accounting)
- EPSi (Cost Accounting, Financial Decision Support)
- Eclipsys AMPFM (Admitting and Patient Financial Management)
- Eclipsys Sunrise Clinical Manager (Clinical/Workflow for ED)
- API (Time and Attendance)
- Per-Se Technologies ANSOS One-Staff (Staffing)
- SIS (OR System)
- PeopleSoft (Materials Management)

Application Areas At SMHCS For Diver

Initiated as a project with Dimensional Insight to support the Decision Support team as they gleaned data to produce productivity reports for SMHCS leadership, Diver has become a system-wide portal-based reporting and analytics solution that is accessed by nearly every department in the organization. Numerous applications have been deployed at SMHCS; some of the most significant application advancements are described below.

Reduction Of Staffing Costs

Staffing costs are the single largest cost in most hospitals systems nationwide. SMHCS leaders began working on an initiative that would allow them to reduce staffing costs across the organization in both clinical and non-clinical departments, therefore improving their bottom line. SMHCS has two systems that are used for staffing/time and attendance, however they did not have the ability to integrate the data from these two systems or to report off this information on a real-time basis.

Data is sourced from ANSOS One-Staff and API's time and attendance system so that true payroll and overtime hours could be easily viewed for each department within the organization and measured against predefined goals. Staffing data is also compared to patient census data that is pulled into Diver. This allows SMHCS staff schedulers to see actual volume levels and adjust staffing needs accordingly before overtime is needlessly accrued. Employees are then flexed on and off in order to meet existing demand. All of this can now happen in an on-demand fashion because the information needed to make these decisions is refreshed and available to supervisors on a shift-by-shift basis.

In addition, SMHCS develop an "Approaching Overtime" report with Diver in order to further curb excess staffing costs. This report allows supervisors to see which of their employees is trending towards overtime accrual. This report empowers departmental supervisors with the information needed to effectively and consistently meet their unit of service. Since installation, Diver has helped SMHCS recover more than 600 staff hours and saved the organization more than $192,000 in overtime costs over the course of a five-month period.

Prior to the implementation of Diver, SMHCS could not see if there was an issue with payroll or overtime hours for an employee until a week or so after payroll was completed. By integrating the staffing and time and attendance data into Diver and presenting it back to the staff in a portal-based environment — the information is now readily available on SMHCS' intranet.

Diver also provides SMHCS with the ability to forecast their staffing needs. Historical census data is analyzed and brought into Diver to provide a rolling forecast of staffing requirements for the following week.

Productivity Reporting Initiative

In order to create a culture of accountability that would help support SMHCS' productivity and strategic initiatives, SMHCS reorganized the entire organization from departments into business units that run as separate entities. Each business unit is responsible for meeting budgetary and quality (unit of service) goals set by management. Prior to using Diver, SMHCS' Decision Support team spent weeks manually gathering data on volumes, labor hours, and quality measures in order to compile the data needed for a given productivity report. However, because of the manual and labor intensive process, the information presented back to management often lagged behind the present state of affairs within the organization.

SMHCS uses Diver to aggregate this information and present it back to directors, managers, and SMHCS leadership in a timely manner. Data is sourced from the Eclipsys AMPFM (Admissions/ Financial Management) system, API (time and attendance), and multiple Excel spreadsheets. The productivity report is available to staff via Dimensional Insight's portal interface where managers can pull off a simplified report containing volume, hours and quality measures. Managers can even elect to see historical reports and compare them to present reports in order to identify trends in the data.

This initiative paired with Diver's information integration and delivery abilities has helped foster a cultural shift within the organization. Instead of working to identify the origin of discrepancies, numbers are quickly reconciled. Data is pulled directly from each unit's source system and all reporting is visible from a single source within the entire organization. Managers now are able to refocus their energies on more strategic projects that enable better workflow, enhance levels of services, or grow market share.

Census Data

The Sarasota, Florida area is home to one of the largest retiree populations in the United States and experiences a population surge during the months of December through March as many northern residents flee the cold in search of warmer weather. Providing healthcare services in an area that experiences high population fluctuations due to seasonality poses its own set of unique challenges.

It's not uncommon for SMHCS to experience a 100-patient swing in the census from one day to the next. Diver integrates data from SMHCS' Eclipsys AMPFM (Admitting/Financial Management) system along with data from the facility's electronic medical record. This is then used to develop a Daily Census that refreshes hourly and is viewable to SMHCS staff by service area within a portal environment.

Having Diver provide SMHCS staff with not only an hourly refreshed view of volumes, but also a forecast that takes into account historical trends (holiday weekends, popular events held in the community, seasonality, etc.), allows for informed decisions to be made with a higher level of confidence. By taking the guess work out of the equation, supervisors can focus on allocating existing resources more effectively; shifting resources across departments in a way that optimizes the use of full-time and per diem employees without incurring additional costs.

"With all the different data and the different kinds of data — the different systems — you just can't buy one product that does it all. As a result, we have hundreds of different systems here between our batch systems and our real-time systems. We needed a product like Diver that was flexible enough to allow us to bring everything together — no matter where it was housed."

Kathy McGarry, Information Services

"We access Diver numerous times throughout the day to look at volume fluctuations in the patient census — particularly for those departments that are extremely sensitive to the census amounts, like food service. Having this information at our fingertips in Diver really helps empower us to make decisions. We can not only see where we are trending, but we can also see the forecast of what is expected to happen based on past history."

Gerard Violette, Executive Director, Hospitality Services

"Diver is the only solution I've seen that gives us true flexibility — not a canned, restricted view in a format that isn't customized for our specific needs. With Diver, if you can think it, you can do it."

Gary Nilsen, Decision Support Services

OR Utilization And Materials Management

Due to the success of Diver in other application areas throughout the hospital, SMHCS decided to use Diver in order to create the reporting packages needed to effectively view OR utilization and other key metrics. Diver integrates utilization and materials data from SIS with patient data housed in the Eclipsys AMPFM system. This data is then merged with a third source, financial data from PeopleSoft, in order to give the Director of the OR and SMHCS' COO a complete picture of what each surgical case is costing the facility.

From a materials management perspective, Diver is enabling SMHCS to move towards becoming a just-in-time materials management department, which has the ability to save SMHCS a significant amount of money. Using Diver as a forecasting tool, SMHCS can see what cases are coming down the pipeline and what materials are needed for each particular case. This minimizes excess inventory and streamlines the entire materials management process for the OR.

ED Service Reporting

President and CEO Gwen MacKenzie spearheaded an initiative at SMHCS that challenged the organization to create a process where patients in the ER are seen by a physician or physician's assistant within 30 minutes of registration. Part of this 30-Minute Service Guarantee program is a follow-up campaign that is run by the organization's Communications department. This campaign generates a letter from the CEO to each patient that was seen by a physician outside the service guarantee time window.

SMHCS uses Diver to automate the reporting process for the 30-Minute Service Guarantee program. Data is pulled directly from two different Eclipsys modules — Sunrise Clinical Manager and AMPFM — and brought into the Diver interface. Management is able to see trending on how the ED is performing against goal with respect to the guarantee each day and the Communications group is automatically provided with a list of patients that should be included in the follow-up campaign — without the need for IS/IT intervention.

> *"We are going to see 86,000 patients this year — that's 10-15 patients walking in the door every hour. That's an extremely busy ER. Diver is helping us see our performance against goal over time so that we can see where we are trending. It is also allowing me to spend less time compiling data and more time responding to patient concerns. Diver is enabling us to be more service-oriented and responsive."*
>
> **Gwen O'Neill,**
> **Service Coordinator,**
> **Emergency Care Center**

> *"Work flow is a critical part of what needs to happen at any hospital — especially one our size. Now, in order to be effective at work flow you have to have the ability to anticipate. So we are using Diver to look at projections and trends — whether its regarding time of year, time of day or for a particular service. I don't know that we could have effectively done this without Diver."*
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> **Michael Harrington,**
> **Chief Operating Officer**

About Dimensional Insight

Dimensional Insight, Inc. is a leading provider of BI solutions with our BI platform and family of purpose-built applications. Our data integration, modeling, reporting capabilities, analytics, portals, dashboards, and applications empower users throughout the enterprise to make timely, data-driven decisions. Thousands of worldwide customers choose Dimensional Insight solutions for flexibility, ease of integration, and rapid time-to-value. Dimensional Insight consistently ranks as a top performing BI vendor in customer satisfaction.

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