CASE STUDY

EVERGREENHEALTH: IMPROVING BUSINESS EFFICIENCY WITH DIMENSIONAL INSIGHT®

A public district hospital situated in Seattle's northeast suburbs, EvergreenHealth is committed to advancing the health of its community. With a strategic plan in place to support these goals, the health system began looking for enterprise business intelligence (BI) and analytics platform that would aid the organization in effectively managing vast amounts of clinical, financial and operation information to improve business efficiency. After an extensive RFP process, EvergreenHealth chose Dimensional Insight®'s Diver Platform (Diver) based on Dimensional Insight's domain experience, proven track record and scalable technology.

THE CHALLENGE

Effectively managing vast amounts of clinical, financial and operational information in order to improve business efficiency.

THE SOLUTION

Enterprise Business Intelligence and Analytics for Executive, Ambulatory Quality Improvements, PQRS Measures, and Nursing Counts Metrics dashboards.

QUICK FACTS

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ORGANIZATION:
EVERGREENHEALTH HOSPITAL

INDUSTRY: HEALTHCARE

HEADQUARTERS: KIRKLAND, WA

LOCATIONS 5

EMPLOYEES: 3,000

FACILITIES: 1 ACUTE CARE HOSPITAL; 274 BEDS; 7 PRIMARY CARE CENTERS

CUSTOMER SINCE: 2011

WEBSITE: EVERGREENHEALTH.COM

SOLUTION: DIVER PLATFORM®

THE RESULTS

☐ Faster dissemination of organizational performance information to executive management.

☐ Standardized PQRS measurements across the organization and to regulatory authorities.

☐ Improved patient safety and care coordination with automated nursing counts and monitoring streamline the process.

EXECUTIVE DASHBOARD

Hospital leadership decided to roll out BI first at the strategic level with the Executive Dashboard. A top level focus would allow the organization to get an overall sense of the state of the organization, as well as gain a better understanding of the data sources and data processes across departments and facilities. The Executive Dashboard has 32 key performance indicators (KPIs) that are derived from 16 different data sources. Previously, this was a manual process consisting of data owners submitting their data to quality analysts. The analysts then entered the data into static Excel spreadsheets that were formatted for distribution.

Now the process has been automated. Data is electronically collected and aggregated to produce a dynamic dashboard displaying current, quarterly and year-to-date performance, as well as charts highlighting trends over time.

The Executive Dashboard has accelerated getting timely and actionable information into the hands of management and saved staff time. end-users. "We had gone through several different systems in the accounting and finance area that we bought and never used at all, or bought and only used a piece of. We also had two separate benchmarking tools running," said Heezen. "I kind of felt we were system-happy. I wanted to make sure that we bought something that we actually utilized, and got all of our money back on."

As for the final vendor selection, Heezen notes, "There was one thing that put Dimensional Insight over the top and that was the proof-of-concept demo. The fact that Dimensional Insight actually took an extract of our data and showed us what it looked like in Diver a few days later was really the selling point for us. In addition, Dimensional Insight's familiarity with MEDITECH and NonProcedural Representation (NPR) reports was also important to us. Dimensional Insight was able to get us going immediately. Some of the vendors we evaluated were huge, and we knew we weren't going to get that personal attention."

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AMBULATORY QUALITY IMPROVEMENT INITIATIVES

A Diver application has been developed to support ambulatory quality reporting initiatives in the health system's 7 primary care centers and specialty clinics. Initial efforts center on diabetes, cancer screening, and immunizations care measures. For diabetes, a set of dashboards were created that display EvergreenHealth Primary Care's (EHPC) aggregate performance for measures such as HgbA1C, blood pressure, labs, and eye and foot exams. The HgbA1C Measures dashboard provides at a glance results for the percentage of EHPC patients whose HgbA1C levels were measured in the past year, the percentage of patient results that met the standard (less than 8), and the percentage of patient results that met EvergreenHealth's goal of less than 7. The dashboard displays each primary care center's performance and allows for comparisons by facility and physician. The dashboards are dynamic and increase access to detailed, actionable information. By clicking on a facility, care managers can dive into the underlying patient level to identify patients(along with their contact information) with care gaps so they can focus on getting those patients in for care.

STANDARDIZING ON PHYSICIAN QUALITY REPORTING SYSTEM (PQRS) MEASURES

Diver is also supporting Physician Quality Reporting System (PQRS) measurement and reporting. With EvergreenHealth's EMR transition complete and both inpatient and ambulatory facilities running on a Cerner EMR, EvergreenHealth is moving forward to standardize measurement rules and definitions based on PQRS. These measures will be used throughout the organization for quality improvement, enabling apple-to-apple comparisons within the health system and will also be leveraged for external reporting to CMS and other regulatory bodies. "Our goal is to have one data source and one way to measure so that we can measure once, but report out many times," said

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Jessica Foy, Clinical Informatics Analyst at EvergreenHealth. PQRS measures will also play a major role in EvergreenHealth's Clinical Integration Network Program. Work is underway to expand the scope of PQRS measurement to integrate and report on data from unaffiliated partner clinics and care centers that are part of Evergreen's Clinically Integrated Network.

AUTOMATING NURSING COUNTS METRICS

Nursing measures is another area where EvergreenHealth has deployed Diver. EvergreenHealth participates in the National Database for Nursing Quality Indicators (NDNQI), as well as the CDC's National Healthcare Safety Network (NHSN), and is in the process of being MAGNET certified. All of these require patient counts from inpatient nursing units. Typically, charge nurses will do a "2 am count" and manually enter patient counts into various spreadsheets, which are forwarded to an Infection Control coordinator to consolidate. Nursing leadership wanted to streamline the process. Since the information already existed in the nursing documentation, the organization thought it would be better to extract the information from the Cerner EMR and use Diver to automate the aggregation of data and presentation of the information, freeing up charge nurse time and reducing the potential for errors. The initial rollout was done for the day shift, based on 11 am census counts. Dashboards were created displaying roll-ups of all units and counts (census/patient days, Central Line days, Foley Catheter days, Ventilator days, Fall Risk and Restraints). Clicking on an individual unit takes the user down to the patient level, providing patient-specific details on those patients included in the counts. The dashboards also provide count trends over time.

Nursing is seeing the benefits of the nursing counts dashboards, from being able to get a picture of how a unit is performing to seeing improvements in safety, care coordination and communications. Nursing counts metrics will soon be expanded to both the evening and night shifts.

NEXT STEPS

The next phase in EvergreenHealth's enterprise business intelligence implementation is the roll out of service line clinical and administrative dashboards. These dashboards will help improve operational and business efficiency. "We continue to expand our use of Diver Platform to help us improve our clinical and financial performance," said Tom Martin, CIO at EvergreenHealth. "The ultimate aim is to make everyone accountable for the results and that's what's best for patient care."

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ABOUT DIMENSIONAL INSIGHT

Dimensional Insight® is a leading provider of analytics, data management, and performance management solutions, offering a complete portfolio of capabilities ranging from data integration and modeling to sophisticated reporting, analytics, and dashboards. The company is an eight-time Best in KLAS winner in healthcare business intelligence and analytics between 2010 and 2023.

Founded in 1989, Dimensional Insight has thousands of customer organizations worldwide. Dimensional Insight consistently ranks as a top-performing analytics organization by customers and industry analysts in its core market segments including healthcare, manufacturing, and beverage alcohol. For more information, please visit https://www.dimins.com.

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