

TOP SECRET

CONFIDENTIAL

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How DIMENSIONAL INSIGHT

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HAS HELPED ACCOMPLISH

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IMPOSSIBLE HEALTHCARE MISSIONS

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**MISSION  
IMPOSSIBLE**

**TOP SECRET**

Hello, agent.

Enclosed you will find a dossier of the past missions Dimensional Insight® has helped healthcare organizations such as yours to accomplish. They range in scale and difficulty but the main point is this: even your most impossible healthcare mission can be solved with the help of Diver Platform™.

It is no surprise that Diver®, and the other applications from Dimensional Insight, are referred to as “solutions,” as they are rarely called upon when things are perfect and there is no room for improvement. Tasks can range from improving employee scheduling to decreasing readmission rates, to improving patient care and outcomes. Each mission is critical to the financial and clinical well-being of the hospital systems we work with.

This dossier communicates just how varied our solution is. Like Ethan Hunt fighting for America’s safety in Dubai one day and Mumbai the next, our services are capable of handling data from the busy streets of New York City to the devastated areas of Puerto Rico. This collection of stories demonstrates the ubiquity of our success in varying locations and the variety of our solutions in any health system. We make the impossible, possible. Read on to learn how.

## WESTERN MARYLAND HEALTH SYSTEM



**THIS CASE ORIGINATED AT:** CUMBERLAND, MD

**ORGANIZATION:** WESTERN MARYLAND HEALTH SYSTEM

**NUMBER OF BEDS:** 205

**EMPLOYEES:** 2,300

**EHR:** MEDITECH

Western Maryland Health System approached Dimensional Insight with a clear goal in mind: to improve its performance in a world of value-based care. Maryland was the first state in the country to implement a 100% value-based model. Following the first year of implementation, WMHS ranked 46th out of 46 hospitals in the state of Maryland on quality-based measures. Something had to change.

**MISSION:** HELP TRANSITION WMHS INTO A VALUE-BASED ENVIRONMENT

With Diver Platform, WMHS was able to rattle off a couple of wins, starting with the ability to track quality indicators like mortality and preventable conditions. These flagging areas for WMHS were decreasing reimbursements and hurting the bottom line. With Diver, the system was able to target factors that dragged on the budget and eliminate them.

Another way that Dimensional Insight helped to right the Western Maryland ship was by providing an accurate reading of readmission rates. This enabled the health system to see readmissions in real-time and root out problems sooner than ever before.

Business intelligence analyst Colby Lutz, perfectly encapsulates how the Dimensional Insight analytics platform improved performance, "Diver really helped us define what we were looking at, who needed to look at what, and how to best provide that information to specific users." The speed at which information was able to spread using Diver prevented readmission issues from snowballing into a major negative for the value-based reimbursement models.

**STATUS:** MISSION ACCOMPLISHED



A year after implementing Diver Platform, WMHS was ranked as the #1 hospital system in Maryland on quality measures. That's right, worst to first. Through increased data accessibility and operability, the staff at WMHS was able to dramatically turn around its value-based services and adapt to the rapidly changing environment of healthcare reimbursement.

**EVERGREEN HEALTH**


**THIS CASE ORIGINATED AT:** KIRKLAND, WA  
**ORGANIZATION:** EVERGREEN HEALTH  
**FACILITIES:** 1 ACUTE CARE HOSPITAL; 7 PRIMARY CARE CENTERS  
**EMPLOYEES:** 3,000  
**EHR:** CERNER

Evergreen Health teamed up with Dimensional Insight to improve the business efficiency of the hospital. Data was trapped in various areas of the organization and ad-hoc reporting was slow and time-consuming. The inability to access valuable data was hurting the organization's bottom line and inhibiting them from transitioning to a value-based reimbursement insurance model. In choosing Dimensional Insight, Evergreen Health sought to improve business efficiency along with clinical decision-making while decreasing average length of stay. This was the perfect mission for Dimensional Insight.

**MISSION:** IMPROVE  
 BUSINESS EFFICIENCY  
**PLAN:** ENTERPRISE  
 BUSINESS SOLUTION

To accomplish this mission, Dimensional Insight created dashboards for a number of different areas within the Evergreen Health system. Diver Platform culled data from disparate data silos into one single location to create easy-to-use dashboards for varying number of sectors of the Evergreen Health system. These sectors including Executive, Ambulatory Quality Improvements, PQRS Measures, and Nursing Counts Metrics.

EvergreenHealth currently has 600-700 Diver users across the health system and an analytics steering committee. This group is made up of leaders throughout the organization and is chaired by the chief medical officer for the hospital and the chief medical doctor for the ambulatory group. The integration of Diver Platform at EvergreenHealth has reaped a number of rewards for the hospital, making this another successful mission for Dimensional Insight.

**RESULT:** IMPROVED  
 REFERRAL PROCESS



Diver Platform's dashboard provides information on the nature, internal or external, of the referrals that patients are receiving. This allows leaders to better understand providers' referral patterns. Once a pattern is spotted, the executive can divert resources towards the outlier or seek behavior change on part of the referring provider. As a result, the health system overall has improved its internal referral rates and has recently added key services and specialties into the network to better serve the community.

## EVERGREEN HEALTH

**RESULT: MORE ACCURATE  
QUALITY REPORTING**

EvergreenHealth provides physicians with a dashboard to track performance on various quality measures. Physicians are able to view measures like colorectal and mammograms or drill down to the patient level to proactively make appointments. With the colorectal cancer screenings in particular, the medical group has seen a 46% increase in performance over the past 2 years.

**RESULT:  
ANTIMICROBIAL STEWARDSHIP**

In strictly value-based improvements, Diver Platform has been instrumental in reporting antimicrobial number to the Centers for Disease Control (CDC) and the Washington State Hospital Association (WSHA). Along with government compliance, Diver Platform provides key data to the health system's Antimicrobial Stewardship Committee. This committee works to optimize certain treatments to save the health system money and provide better care for patients. One specific success can be seen in the number of treatment days for antimicrobials, which has decreased from 92 days to 39 days, a 58% decrease.

Diver Platform was able to provide a complete picture of Evergreen's financial and clinical data. This alleviated pressure on ad-hoc reporting and allowed the system to more accurately analyze their own performance. These changes have provided Evergreen Health with greater business efficiency and aided in their implementation of value-based care.



## DOCTORS' CENTER HOSPITAL



**THIS CASE ORIGINATED AT:** 4 LOCATIONS IN PUERTO RICO  
**ORGANIZATION:** EVERGREEN HEALTH  
**NUMBER OF BEDS:** 650  
**EMPLOYEES:** 2,500  
**EHR:** MEDITECH

Doctors' Center Hospital in Puerto Rico has a MEDITECH EHR in place and it is the only hospital in Puerto Rico to reach Stage 6 on the HIMSS EMR Adoption Model. The hospital's IT Director, Pedro Ríos-Mercado, approached Dimensional Insight at HIMSS17 in search of an analytics solution that could provide data governance and value-based insights. These two hurdles look like pebbles compared to what lay ahead.

**FIRST MISSION:** IMPROVED DATA GOVERNANCE

To overcome the data governance issues facing Doctors' Center Hospital, Dimensional Insight employed Diver Platform with Measure Factory® working on top of it. By combining all of the data into a single location, Dimensional Insight was able to simplify the disparate sources of information into one trustworthy dashboard. This eliminated instances of key decision-makers at the hospital meeting with different statistics in hand. Following the implementation of Diver and Measure Factory, the IT Director said that the dashboard had become "the basis of our decision-making."

**SECOND MISSION:** ANALYZE QUALITY METRICS

Doctors' Center Hospital adapted to value-based quality improvements by getting the analytics tools into the hands of nurses and ER workers. Nurses using Diver, in conjunction with the MEDITECH EHR, could track order sets and make sure providers follow the recommended courses of treatment. In addition, transitioning the analytics capabilities from the executive suite to the emergency department helped this high-pressure department better understand its key metrics and plan for spikes in demand. Both of these changes reduced the hospital's readmission rates and average lengths of stay.

## DOCTORS' CENTER HOSPITAL

**THIRD MISSION:**  
HURRICANE RELIEF

**THREAT LEVEL:** DEFCON 2



In September 2017, Doctors Center Hospital was hit by Hurricane Irma and Hurricane Maria. The two storms were part of the fourth worst hurricane season in recorded history and left the hospital in a DEFCON 2 level crisis. Doctors Center had to scramble during the end of 2017 and early 2018, but the analytics provided by Dimensional Insight became an instrument of providing insight. The hospital was able to gauge census data to see how many patients were in the hospital and where resources should be diverted.

This may seem basic, but during this crisis the information pipeline slowed to a halt. With the Dimensional Insight platform in place at the emergency room level, Doctors Center Hospital was able to handle the large influx of patients caused by the emergency and is in a great position to deal with crises in the future. The work of Dimensional Insight at Doctors Center Hospital proved the long-term benefits of analytics along with the short-term necessity of the product.

## ALLIED PHYSICIANS GROUP



**THIS CASE ORIGINATED AT:** MELVILLE, NY

**ORGANIZATION:** ALLIED PHYSICIANS GROUP

**DESCRIPTION:** OVER 150 PEDIATRIC PROVIDERS JOINED TOGETHER AS ALLIED PHYSICIANS GROUP

Allied Physicians Group prides itself on the independence of its 130 pediatricians, a trait which is great for patient care but can be a nightmare for data continuity. Each physician has different practices and modes of operation and this made it hard to gain meaningful insights from data. On top of this, the nature of Allied's company structure limited its financial resources, which became an issue in the increasingly value-based landscape of reimbursement. The group came to Dimensional Insight for data analytics aimed at uniting all of these disparate caregivers in one seamless platform and transitioning the physician group into a value-based world.

**FIRST MISSION:**  
DATA UNIFICATION

Through Diver Platform, Allied was able to combine its important metrics on one platform. This made analysis of peak scheduling hours and manpower allocation possible. Executive vice president of operations at Allied Physicians Group, Robert Creaven, says, "Diver's reporting capabilities have really helped us by showing our partners information such as which patients are due for well visits and which patients are past due for well visits. In a dispersed company, this improvement can save large amounts of labor hours, as we'll see later.

Furthermore, Diver Platform enabled Allied to compare its quality metrics to insurance company requirements to make sure the organization avoided penalties that had been hurting its bottom line. This goal was even more pressing given the added pressure on value-based care following legislation such as MACRA and the ACA.

**SECOND MISSION:**  
FINANCIAL CLARITY

On top of Diver Platform, Allied Physicians Group utilized Dimensional Insight's General Ledger Advisor. This application allowed the financial team at Allied to view data in real time, without having to wait for a monthly report to be produced. Clearly, this saves money because the issues that drag on the budget are corrected quickly and do not snowball into a larger issue.

General Ledger Advisor also provides analytical capabilities that allow the user to view a company's financial situation from all angles. Valerie Mayer, Allied's vice president of finance, says the most clear improvement provided by the General Ledger Advisor is that she can, "see how we're doing financially across all segments of the business and then dive in and see the details."

## ALLIED PHYSICIANS GROUP

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**STATUS:**  
MISSION ACCOMPLISHED

By providing strong, diverse data and financial clarity, Dimensional Insight allowed Allied Physicians Group to make rapid decisions and lower the time spent analyzing data. In concrete terms, the time savings by General Ledger Advisor alone have translated to 10 hours per week in labor, which amounts to a savings of \$40,000 per year.

The more intangible gains, achieved through faster decision-making, could be even larger than these. Again, Robert Creaven puts the benefits of Dimensional Insight into stark relief: “No one—not one of the departments here has come to me and said, ‘Dimensional Insight has not been worth it.’ We have been getting our money’s worth with Dimensional Insight. It’s never been a question.”



## TANDEM HOSPITAL PARTNERS



**THIS CASE ORIGINATED AT:** HOUSTON, TX

**ORGANIZATION:** TANDEM HOSPITAL PARTNERS

**EHR:** MULTIPLE EHR SYSTEMS

**DESCRIPTION:** ACUTE CARE NEIGHBORHOOD HOSPITALS

With Tandem Hospital Partners, Dimensional Insight found a healthcare provider that posed many interesting questions. This system is made up of 24/7 “microhospitals” complete with 6 to 10 inpatient beds and in-house laboratory, pharmacy, and radiology capabilities. These microhospitals were challenging for data analytics because Tandem’s locations are often affiliated with different hospitals that use different EHRs. Patients also expect to be seen quickly in such a small location. Dimensional Insight was able to help Tandem with its missions thanks to Diver Platform.

**FIRST MISSION:**  
SCALABLE AND  
INTEROPERABLE ANALYTICS

**STATUS:** MISSION  
ACCOMPLISHED

Diver Platform was able to facilitate the growth of Tandem Hospital Partners by integrating disparate EHRs into one operable dashboard. This allowed executives like AJ Roy, director of business intelligence and interoperability at Tandem, to view data integrated from the clinical care, finance, operations, and quality silos of the organization.

Roy explains the Diver dashboard as, “a three-dimensional view of our industry looking at these four domains across different markets, with the primary deliverable being the quality of service.” Looking towards the future, Tandem has successfully integrated 20 different data feeds from more than a dozen new hospitals.

**SECOND MISSION:** SHORT  
DOOR-TO-DOC TIMES

**STATUS:** MISSION  
ACCOMPLISHED

When Dimensional Insight started to work with Tandem, the goal was to ensure that patients are seen by physicians within 5 minutes 90% of the time. Diver was able to help Tandem accomplish this goal by giving executives a window to view the necessary factors that contribute to long patient waits. Through the integration of the four domains listed above, any executive can first diagnose the problem by seeing how long it took for a patient to see a physician after signing in. Once located, they could dive deeper into the data to see what was causing a large amount of backups or what times had the longest door-to-doc times. All of these factors could be used in the decision-making process for future changes so opinions are based on facts and resist intuition.

Tandem Hospital Partners is a unique organization but Dimensional Insight’s solutions were up to the task. Through a combination of scalability and interoperability, we were able to service this growing company’s analytics needs and drive down their biggest stumbling block in patient wait time.



## BAPTIST HEALTH SOUTH FLORIDA



**THIS CASE ORIGINATED AT:** MIAMI, FL

**ORGANIZATION:** BAPTIST HEALTH SOUTH FLORIDA

**EMPLOYEES:** 15,000

**BEDS:** 1,761

Baptist Health South Florida is made up of six acute care hospitals, 19 urgent care centers, and six ambulatory surgery centers. Several years ago it was planning on building the Miami Cancer Institute, which would be the first cancer center in South Florida, and one of the few in the nation to offer proton therapy to patients, which targets cancer cells with pinpoint precision.

The challenge for Baptist Health in this plan was the path to accreditation and certification, a process that demanded results on 11 measures for the National Accreditation Program for Breast Centers (NAPBC) and 36 metrics from the National Quality Measures for Breast Centers (NQMBC). Diver Platform was called in to calculate these measures and ensure the green light for the new cancer facility.

**MISSION:  
ACCREDITATION AND  
CERTIFICATION**

With Diver already in place, Baptist Health was in a good position to succeed, but the process of accumulating the measures would be complex. This process is best described by IT director at Baptist Health, Beth Willmitch: "For the Breast Center project, we were able to link data from different sources, apply business rules to that data, and present it to users to help with the accreditation process." The most daunting task in this process was the number of sources that had to be tapped for information. Baptist Health had to extract information from 10 different data sources, including its radiology system, EMR, pathology system, and more.

To accomplish this goal, a process was put in place to successfully pull this data, using Diver Platform, from the various sources. It began by creating functional requirements that identified each measure and then linked these definitions to the data warehouse. Once the framework was put in place, the information team extracted the data elements. This sounds easier than it was; multiple algorithms were put in place to match patients from external sources to the internal sources because patient ID numbers had been lost. The final step in the process was to develop metrics for the extracted data and then validate and release these metrics to the accreditation groups through the DivePort® web portal.

## BAPTIST HEALTH SOUTH FLORIDA

**STATUS:** MISSION  
ACCOMPLISHED

By automating the metric development process, Dimensional Insight was able to help Baptist Health South Florida achieve accreditation and certification with special recognition. The Diver-led process was so exalted because, "no other NAPBC accredited center had automated metrics to this point, which made it incredibly easy for her (the surveyor from the NAPBC) to do her chart review."

Beyond being a nice bonus for the surveyor, the automation of metrics made the accreditation possible because the Breast Center at Baptist Health South Florida had given up on accreditation prior to Diver Solution®. This is because the time and resources needed for a manual chart review were too high. The combination of the smart team at Baptist Health South Florida and the power of the Diver Platform has allowed the Miami Cancer Institute to be fully certified and operational today.



## RANDOLPH HEALTH



**THIS CASE ORIGINATED AT:** ASHEBORO, NC  
**ORGANIZATION:** RANDOLPH HEALTH  
**EMR:** MEDITECH  
**BEDS:** 145

The integration of Diver Platform in Randolph Health has been one of more fluid and intuitive processes. This is because of a data-focused approach of administration and a naturally curious workforce who adopted our solutions with great enthusiasm. The mission was aimed at shaping an organization whose decision-making process was timely and based on as much data as possible. This goal was met, and because of their technologically savvy workforce, Diver Platform looks to be the beginning of a fruitful friendship.

**MISSION:** ORGANIZE DATA,  
 PUT IT TO USE  
**STATUS:** MISSION  
 ACCOMPLISHED

Chief information officer at Randolph Health, Angela Burgess, paints a simple portrait of what the goals are for any data-driven change at the hospital: "If it's not a strategic initiative, if it's not supporting our lean initiative, if it's not related to quality or value-based purchasing, then it's not necessarily something we should focus our time on."

Randolph Health set up a multi-disciplinary core team with representation from the technology, finance, and quality departments to work with our team to define key metrics. Once the goals and metrics were established, Dimensional Insight culled data from Randolph's MEDITECH system to create executive dashboards. One key factor of these dashboards was the strong data governance provided by Diver.

As Burgess states, the importance of data governance lies in the need to, "understand your data, that you all agree what the source of truth is with your data, and that you focus on what's going to make the most difference to you to achieve your goals."

Beyond creating one definition of truth, Dimensional Insight's solution increased the analytical strength of Randolph Health through the operability of its interface and the timeliness of its data. Executives at the organization were raving about the ability to dive deep into data to get to the root of any issue or variation.

In the future, Randolph Health looks to integrate more of its MEDITECH data into the Diver Platform along with a number of other applications they use throughout their organization. The experience with Randolph Health was rewarding for both parties and demonstrated the power of Dimensional Insight's solutions for improving the operability and timeliness of data across the medical spectrum.



## MOUNT SINAI HEALTH SYSTEM



**THIS CASE ORIGINATED AT:** New York City  
**ORGANIZATION:** MOUNT SINAI HEALTH SYSTEM  
**EMPLOYEES:** > 15,000  
**BEDS:** > 2,100

Mount Sinai Health System is located in the New York City metro area and is made up of seven hospitals and 6,600 physicians, serving a total of 136,528 inpatients and 500,901 Emergency Department visits per year. Because of the sheer size of this health system, the impact of the analytics solutions provided by Dimensional Insight were large.

**THE MISSION:** HARNESS  
 DATA TO SAVE LABOR HOURS  
**STATUS:** MISSION  
 ACCOMPLISHED

If you have made it this far in the journal, saying that Diver Platform saved time, reduced costs, and allowed employees to drill further down into their data would not be breaking news. The solution was able to free up time for employees who were, "swamped with ad hoc requests for custom reports" according to Jill Emblar, Vice President of Financial Planning at Mount Sinai Health System. Diver Platform enables every executive interested in financial data to drill into the information directly, which lifts the time-consuming burden of report creation off of Emblar's team.

In addition, Emblar says, "Diver provides us the timely information we need to continually improve the quality and reduce the cost of our patients' care." Timely, data-driven decision making is a result of having organizational information available at employee's fingertips at any given moment.

What separates Mount Sinai from the rest of the list, is that the health system employs more 39,000 people, including 6,600 physicians. The automation of data from all four major sources of information (financial, clinical, operations, and quality) translates to an absolutely monstrous amount of saved labor. In place of the time spent gathering data and creating reports by hand, the employees of Mount Sinai are now able focus on analyzing the data. This means a better, more informed decision-making process in all areas of the organization. These benefits are hard to quantify but go a long way in providing better, more affordable care for the people of New York City.



## SARASOTA MEMORIAL HEALTH CARE SYSTEM



**THIS CASE ORIGINATED AT:** SARASOTA, FL  
**ORGANIZATION:** SARASOTA MEMORIAL HEALTH CARE SYSTEM  
**EMPLOYEES:** > 4,000  
**BEDS:** 819

Sarasota Memorial Health Care System is one of the largest health systems in Florida, with special expertise in heart, vascular, cancer, and neuroscience services. Dimensional Insight began working with Sarasota in 2004. The health system has experienced all of the benefits of our improved solutions along the way. One specific success story came when the health system planned to improve quality and safety with Diver, in a clear shift towards value-based care.

**FIRST MISSION:** INCREASE QUALITY OF CARE  
**STATUS:** MISSION ACCOMPLISHED

Sarasota implemented a survey-based scorecard system that measures the quality of work done by managers and staff. The Diver Platform is, "essential to getting our quality and safety scorecards, as well as the results," says Jacquelyn Zaleski, the Decision Support Quality Analyst at Sarasota Memorial.

The results can be viewed and analyzed through DivePort to understand who is performing well and what areas of the hospital need to be improved. This is a vital function under strict value-based reimbursement standards because any uptick in readmissions or mortalities can lead to harsh penalties from insurers and damage the system's bottom line. Furthermore, the practice generates transparent, more informed personnel decisions because everyone knows their ranking and there is no confusion about how the staff member can improve.



## SARASOTA MEMORIAL HEALTH CARE SYSTEM

**SECOND MISSION:**  
INCREASED SAFETY

**STATUS:** MISSION  
ACCOMPLISHED

Sarasota Memorial improved patient safety again through a survey; however, this time the source was external as opposed to the internal, quality-based one. The health system took the questions from the Safety Culture Survey by the Agency for Health Care Research and Quality (AHRQ) and turned them into a Diver dashboard. This allowed the system to look at each metric studied individually and make sure they were excelling in all safety-related areas. Zaleski praised Diver regarding this process because the solution, “allows you to really look into the details. We can compare our score to the AHRQ average or to our performance in previous year.” By going through this process, Sarasota Memorial was able to both preemptively adjust safety habits and improve on past mistakes.

Diver was also used in a certification process for orthopedic nurses but, because the solution was so effective, the organization decided to keep using after earning certification. The orthopedic dashboard allows the nurses to drill down into metrics like length of stay and readmissions to ensure the best safety for patients and target struggling areas of treatment.

Dimensional Insight has been vital in helping Sarasota Memorial Health System transition to value-based care. This was done by giving Sarasota the tools to look deeper into metrics regarding quality and safety that truly matter for the organization. Diver Platform has given Sarasota the ability to make more informed, data-driven decisions within their health system.



### About Dimensional Insight

Dimensional Insight is the leading provider of integrated business intelligence and data management solutions. Our mission is to make organizational data accessible and usable so everyone from analysts to line of business users can get the information they need to make an informed, data-driven decision.



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