



## CASE STUDY

**INDUSTRY**  
Healthcare

**CLIENT**



**OBJECTIVE**

Help managing physicians monitor and improve patient experience at over 200 locations nationwide

**SOLUTION**

A custom reporting dashboard that aggregates and measures patient care and satisfaction

**SERVICES**

Custom Software Development  
Business Intelligence

# US HEALTHWORKS CREATES PHYSICIAN DASHBOARD TO IMPROVE PATIENT EXPERIENCE

US Healthworks Medical Group wanted better insight into the waiting rooms and patient experience of its nearly 200 locations across 17 states. They also wanted to monitor the quality of care provided by their 1,100 physicians.

They hired Base2 Solutions to create a dashboard that would allow them to view metrics such as patient visit duration times and other performance indicators across their clinics. With this information, they can quickly detect trends and work with physicians to improve customer experience.

# The goal of the healthcare industry is to help people feel and behave in more healthy ways, but the business side of the industry is far less “feel-good” and more like a competitive race.

People have more healthcare choices than ever today, and healthcare providers are using sophisticated business intelligence (BI) techniques to analyze care and satisfaction data so that they can improve services while reducing costs.

US Healthworks operates more than 200 locations and has over 1,100 medical providers across multiple US states. They had begun to use BI to operate in a smarter fashion, but they wanted to go further. Management knew that any inefficiencies or poor operational practices would only multiply as the company grew unless they were detected and corrected.

The company hired Base2 Solutions to help them create a BI roadmap and improve their BI capabilities.

Base2 created a technical architecture and helped US Healthworks address the needs of varied user populations in the organization. The most critical constituents were determined to be the managing physicians. These individuals are in charge of both the healthcare and operational sides of their clinics and are key to the company's success.

To monitor the performance of the individual clinics, managing physicians previously relied on a spreadsheet that pulled data from the company's patient management system once a day. However, someone had to create reports from this data, which took days or weeks. So managing physicians were never viewing current data and could not act quickly when problems arose.

The company's leadership wanted to give managing physicians better, up-to-date insight into what was going on in their clinics— patient visit duration times, number of repeat visits, overall patient satisfaction—so that they could make improvements.

## MANAGING PHYSICIAN DASHBOARD

Base2 worked with US Healthworks to design and build a managing physician dashboard that would let these individuals quickly monitor 17 key performance indicators (KPIs) across their clinics. Base2 used Microsoft SQL Server 2012 database software, Microsoft SQL Server 2012 Reporting Services, and Microsoft SharePoint Server 2013 to create a prototype of the dashboard in just three weeks. The customer loved it, and Base2 moved on to complete the production-ready data warehouse and dashboard system in just five months.

Base2 designed and built a data warehouse that pulls data from three internal operational systems: a financial system, a marketing database, and the patient management system. The results are presented in an easy-to-read dashboard that is displayed on the company's SharePoint Server-based intranet. Once a managing physician signs into the SharePoint site, their security credentials authorize them to see only the dashboard metrics for their clinic.

## REAL-TIME INSIGHTS INTO OPERATIONAL EFFICIENCY

It's more critical than ever for healthcare providers to drive down operating costs. Managing physicians for this provider can now monitor patient visit length times and many other metrics in near real time.

For example, patient visit duration is key to patient satisfaction; ensuring that patients aren't sitting in the waiting room too long. If the average patient visit time in the clinic changes, the dashboard changes color and sends an email notification to the managing physician. Clinic leadership can quickly address the situation and divisional managers can see aggregated results for all managing physicians below them.

The dashboard also lets managers know how many visits it takes to make a patient well. The dashboard analyzes data about the number of patient visits, diagnoses made, drugs and treatments prescribed, and so forth. It presents the information as easy-to-read summary charts and graphs. The goal is to give optimal care and a high-quality patient experience, thereby improving patient satisfaction and operational efficiency.

For some KPIs, managing physicians can see not only current performance but by how much an individual physician, or the entire clinic, is over or under goal. Of course, the managing physician can drill down into the underlying data to see the numbers behind the dashboard summary.

## BETTER PATIENT EXPERIENCE, EXTENDABLE SOLUTION

By strengthening its BI capabilities, US Healthworks is able to improve the patient experience, which ultimately translates into quality care and the ability to attract new customers. Having the ability to analyze key performance and operational data in great detail also helps the provider detect and respond quickly to changing patient and market trends.

Rather than coming up with an ambitious solution that would take years to build, Base2 created a phased approach that gave the provider an operational system in a matter of months and made the architecture easy to extend over time. In fact, the provider continues to finetune the KPIs displayed in the dashboard and add new KPIs.

With a prototype delivered in three weeks and a production-ready data warehouse and dashboard in five months, Base2 disproved the common saying, "nothing good happens fast in healthcare".