

Business Intelligence's Role in Improving Chronic Disease Management

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It's no surprise that chronic diseases are killing the United States both physically and financially. According to the [Centers for Disease Control and Prevention \(CDC\)](#), seven of the top 10 causes of death in 2010 were from chronic diseases, where two of the conditions—heart disease and cancer—together accounted for nearly 48 percent of all deaths. To add to the problem – effectively treating these conditions comes with an exceedingly high price tag. According to U.S. News & World Report, [86 percent](#) of all healthcare spending is currently going towards the treatment of these chronic diseases, equating to more than \$3 trillion annually.

So how can the healthcare industry combat the rise of chronic conditions while keeping escalating treatment costs down?

One of the most effective tools for monitoring chronic disease management while still keeping an eye on care costs is business intelligence. Business intelligence has continued to increase in prevalence within the healthcare industry in recent years. According to a [HIMSS Analytics study](#), 41 percent of hospital respondents reported they currently use clinical and business intelligence tools for their analytics, with that number expected to continue to increase over the next two years. With business intelligence continuing to prove its value within healthcare, physicians are starting to see the true potential of this data-driven tool to positively impact the industry as whole, including with the management and overall cost of chronic diseases.

Below are three ways that business intelligence can help to improve chronic disease management and lower the rising costs of care.

1. **Care plan adherence:** Chronic conditions such as heart disease, diabetes and hypertension all require consistent adherence to care plans in order to improve a patient's health status. A major part of this also includes frequent follow up appointments scheduled by physician offices that allow providers to check in on a patient's progress. A business intelligence capability can significantly help with ensuring that these consistent follow ups occur. Through work queues and alerts, physicians can gain insight and visibility into each individual patient within a population cohort, allowing them to use the most accurate and timely information when scheduling follow up appointments. Business intelligence also provides insight into disease trends across a patient population. Through these insights, physicians can also allow for more personalized and cost effective treatment plans to be leveraged.
2. **Evidence-based best practice utilization:** Business intelligence can also allow physicians to analyze and compare the effectiveness of different chronic disease treatment options based on evidence-based best practices. Take diabetes for example. Evidence has shown using corrective therapy alone for the treatment of diabetes is less effective at stabilizing and maintaining control than using a more individualized bolus and prandial treatment protocol. By using business intelligence to compare treatment options and analyze the outcome of diabetic patients, physicians and caregivers can see the effectiveness of different treatments across a patient population. Not only does this allow for higher quality care to be delivered based on evidence-based best practices, but it also allows for a reduction in the overall cost of treatment by surpassing the less-effective treatment options.
3. **Chronic disease prevention through data-driven insights:** According to the CDC, chronic conditions—such as heart disease, stroke, cancer, Type 2 diabetes, obesity, and arthritis—are among the most common, costly, and preventable of all health problems. To help reduce the incidence, business intelligence can help with identifying the risk factors for these conditions before they begin to surface. For example, physicians can compare the data of patients at risk for developing heart disease to similar patients who were at an increased risk and who eventually developed the disease. By analyzing the different care approaches that minimized the risk of heart disease in past patients, such as controlling blood pressure and reducing cholesterol levels, physicians can use those same insights to help current patients prevent the onset of the disease.

As chronic diseases continue to plague the healthcare industry, physicians will continue to look for ways to combat these dangerous and costly conditions. Business intelligence will continue to be brought to the forefront as a leading tool for chronic disease

management, enabling physicians to manage these diseases more effectively than ever before. Through the use of these tools, physicians are able to improve patients' health status, reduce unnecessary costs and take advantage of evidence-based best practices. This will not only help with the management and cost of chronic disease states, but will drive better overall care delivery across the board.

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