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How to Select a BI Solution for Your Healthcare Practice: A Five-Step Guide

A huge amount of data is generated in healthcare. How can healthcare organisations process and benefit from this data? This article explores the use of business intelligence tools for data-driven decisions and insight.



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key points

- With business intelligence tools, medical professionals can extract actionable insights and make data-driven decisions affecting patient health and lives.
- Healthcare BI solutions help medical providers improve clinical and administrative workflows.
- Five steps can help you select the right BI solution – quality data, an implementation plan, a review of different BI solutions, strong security and the total cost of ownership.

With the expansion of diagnostics methods in healthcare, the amount of data generated, captured, and copied by devices has increased. According to Statista, [181 terabytes of data](#) will be generated, captured, and copied globally by 2025. Meanwhile, RBC Capital Markets adds that [30% of this data](#) will be pertinent to healthcare.

How can healthcare organisations process and benefit from this data? With [business intelligence tools for healthcare](#), medical professionals can extract actionable insights and make data-driven decisions affecting patient health and lives. But how to choose a suitable Business Intelligence (BI) solution for your clinic?

A Five-Step Guide for Choosing a BI Solution

Healthcare BI solutions help medical providers improve clinical and administrative workflows. They are widely used for enhancing population health management

and individual care outcomes. In addition, BI tools can have a decisive say in non-clinical aspects of typical hospital activities, including staff management, optimising the supply chain and revenue cycle, or quality reporting. Consider the following steps to ensure you're ready to implement a BI solution.

Step 1 - Preparing Data

Quality data is the basis for effective BI analysis. However, it is difficult to maintain the growing volume of data from your hospital's systems (CRM, EHR, HIM, etc.) in order. You should continuously monitor data quality in your hospital solutions to prevent duplicates, erroneous information, lack of critical data, and missing information. You should erase inaccurate data and faulty entries and fill in information gaps. However, it is time-consuming and will require the efforts of QA specialists.

In case you haven't reviewed your data regularly before launching a healthcare BI project, you should perform data cleaning.

For this matter, you can employ in-house IT specialists or go for data QA outsourcing.

Step 2 - Creating an Implementation Plan

You should clearly set your goals for implementing a business analytics solution and ensure seamless top-down cooperation between your team members. If you cooperate this way, you'll manage to address the needs of all user groups, including clinicians, nurses, administrative, and IT teams. Make sure that your execution plan corresponds with the desired outcomes.

Step 3 - Comparing BI Tools

First, consider your budget when reviewing BI solutions for your healthcare practice. After you have shortlisted budget-friendly solutions, you can try them and assess whether their functionality meets your business requirements. If a particular solution fits well, you can move on to the third vital criterion – the existing IT infrastructure.

In some cases, ready-made business intelligence solutions can't marry your requirements. It can happen with highly specific clinics that operate complex multi-source data. In such cases, going for custom development is advisable. To select a suitable vendor, you should review their portfolio and assess the security procedures they follow. You can also request feedback on cooperation from their clients ordering similar projects. Pay specific attention to negative feedback.

Step 4 - Ensuring Strong Security

Healthcare BI tools help providers improve diverse aspects of a clinic's daily work, from care personalisation to fraud detection and revenue flow

improvement. It means such solutions operate three ample types of data:

- Patient health data (diagnoses and allergies, case notes, and lab test results)
- Demographic data (patients' names, addresses, and contact details)
- Administrative data (billing records, insurance claims, staffing or inventory optimisation, etc.)

BI tools help improve diverse aspects of a clinic's daily work, from care personalisation to fraud detection and revenue flow improvement

This data is highly sensitive and appealing to cybercriminals. According to [the Annual Data Breach Report 2022](#) by Identity Theft Resource Center (ITRC), for the third consecutive year, U.S. healthcare organisations suffered from the highest number of data breaches (344). This is an alarming trend that should be addressed immediately. Ensuring compliance with the globally established data protection standards (e.g., HIPAA, GDPR) and

following specific security practices can help mitigate the threat. Adherence to such standards ensures that sensitive information is safely sealed and transmitted with minimal risk. When implementing BI solutions, healthcare providers should undertake security measures, such as data encryption, access control, and staff training.

Step 5 - Calculating the TCO

The total cost of ownership (TCO) goes beyond the price of a BI solution. It also includes expenses for the tool operation and maintenance over time. Interestingly, the TCO for cheaper business intelligence software can be greater than that for more expensive healthcare BI tools. Therefore, when choosing a suitable offer, you should compare the TCO of different solutions to determine which offers the most value for your organisation. In addition, assess the return on investment (ROI) prospects of an appropriate solution and its influence on your medical practice performance.

Final Note

Though the medical BI software market caters to many tastes, choosing a solution that fits your clinic is still challenging. If you still have doubts after a thorough market analysis, you can refer to healthcare BI consulting experts for help. They will answer your questions or provide a detailed consultation on any healthcare BI-related issue.

Conflict of Interest

None. ■