Dental Practice Business Intelligence 101

What is BI, and is it right for my practice?
Executive Summary

This paper aims to de-mystify BI technology, explaining how BI works, its benefits and its challenges, and why it may be indispensible to the dental practitioner/business owner today.

Business Intelligence (BI) is a term that describes powerful but simple-to-use business management tools that extract raw data from your business software application(s) (your office computer), distills it into vital run-the-business information, and then displays it to you in easy-to-read graphical “charts”, often displaying multiple charts together in a “dashboard” format.

In healthcare and specifically in dentistry, BI technology is now going main stream. BI delivers enticing rewards for the dental practitioner, specifically by providing effortless, real-time practice information without having to run a single report, allowing for better practice decision making and improved practice performance.

Historically, the cost of true BI technology has been prohibitive for “small and medium businesses” (SMBs), including yours. The complex process of extracting, analyzing and reporting over corporate data traditionally required a heavy investment in software, hardware and technical expertise. However, in recent years, the growth of web-based “software as a service” (SaaS) has lowered the cost barrier, making true BI a practical, if not critical business tool.

Introducing Dashboard DDS™. Dashboard DDS is the SaaS BI tool developed specially for the dental practice industry. This paper is presented in the context of the single-office practice, and therefore, the single-office version of Dashboard DDS is introduced. However, Dashboard DDS is also available in Multi-Location and Large Enterprise versions.
Introduction

In this age of the internet and data overload, many businesses are data rich but information poor. In dentistry we see this same overload – with daily charge summaries, production summaries, payment and adjustment reports, aging / collection spreadsheets, outstanding insurance claims reporting, etc. The challenge is to harness this richness of data to support intelligent decision making.

One of the biggest challenges in dentistry (or any business) is converting data into business insight by converting raw data into meaningful metrics, analysis and reports. A seemingly simple requirement to measure the average income generated per new patient during a given month — becomes more complicated as we attempt to identify the new patients seen during the month, then the income generated for these patients, and finally totaled by practitioner or by patient type — this task becomes very difficult because of the need to access multiple reports or data sets.

What’s needed is a way to consolidate data and make it easy to analyze and report. Spreadsheets are often used for this purpose but are far from ideal.

Introducing “Business Intelligence”.
The problem with Spreadsheets

Spreadsheets have long been the application of choice for budgeting, planning, forecasting and reporting. And they do work well for ad hoc analysis, but they falter when they are used to repeatedly gather, consolidate and report on large volumes of data collected from multiple systems.

Repeatedly cutting, pasting, linking and formula-building in spreadsheets is slow, introduces errors and provides no reliable audit trail. Business users spend a disproportionate amount of time consolidating data and crunching numbers instead of analyzing results. BI is specifically designed for data consolidation and reporting, providing a simple alternative to these cumbersome spread sheets.

“The widespread inappropriate use of spreadsheets in business reminds me of the tale of the poorly trained carpenter who was shown how to use a hammer to drive nails. Since he was familiar with the hammer, he used it for all his woodworking—even for breaking a board in two. Most people would agree that a saw is a more appropriate tool for that job. Similarly, while a spreadsheet is well-suited for some financial applications, it’s a poor choice for others.”

Richard Morochove,
Accountant and information technology strategist

BI essentials

BI software consolidates data from business systems, which in this context is the single-office practice management computer system, and presents the results through a reporting/analytics “dashboard” interface, for shared insight with the practitioner, accountant, advisor or consultant… any authorized person with a User ID and Password. Secure, accurate and consistent, BI facilitates meaningful analysis and reporting and increases the timeliness (daily) and reliability of business information. BI represents a big leap forward in terms of practice insight and decision support.

There are two approaches to implementing BI. A traditional BI deployment is where the required software and hardware is purchased and installed on premises at the dental office. The other option is a more recent innovation known as “Software as a Service” (SaaS), where nothing is purchased to be installed on the premises. Instead, you access the BI software tools simply and inexpensively over the internet.
On-premise BI

In a traditional on-premises BI solution, data is extracted from one or more data sources, transformed and then loaded into a data warehouse. Users are then able to manipulate and report the data using BI reporting and analysis tools. All elements of the BI solution are installed and maintained by the user organization.

The key components of an on-premise BI solution are...

**The Data Warehouse**

A data warehouse or data mart is a repository of the organization’s stored data. In essence, it is a place where content from one or more systems can be consolidated and stored over time.

**The extract, transform and load (ETL) process**

ETL is an acronym that stands for, *extract* the data from its sources, *transform* it into a consistent format and *load* it into a data warehouse.

**Presentation**

BI presentation tools enable users to view and engage the information, making it easy to explore trends and identify issues. BI’s presentation interface sits on top of the data warehouse, commonly in the form of an easy to read “dashboard” summary screen.

Dashboards present business data in a consistent, highly readable format using text, charts and graphs. Metrics and trends are presented visually using graphs and gauges. In some cases, “clicking” on a chart will “drill down” to the next (lower) level of detail.

**Analysis**

With these BI tools, users can quickly find answers to common business questions and report on the results. For example...not just the total charges by patient type, or income per month, but other more in-depth information... Which Insurance carrier is the slowest to pay and how much do they owe us, by claim, and which claims? How have new patient volumes changed over time compared to a year ago, two years ago?

**The challenges with on-premise BI**

On-premise BI implementations can cost hundreds of thousands of dollars to implement. And the time and effort involved in getting an on-premise BI solution up and running can be months or even years.

Small and medium sized businesses, including most dental practices, typically lack the infrastructure, time or budget to implement and manage an on-premise BI solution. Fortunately, another approach now exists, web-based BI, available as a “Software as a Service” (SaaS), where you can simply subscribe.
BI delivered as a service (SaaS)

**What is SaaS?**

Software-as-a-Service (SaaS) is a software delivery method that provides access to remote software as a web-based service. In other words, a third-party vendor owns and operates the application software for you; you simply access and use it under a subscription arrangement, without installing ANY software or hardware on your premises.

You may already be familiar with some SaaS applications... Salesforce.com is a well known example. Demand Force™, Denticon™ and AppointNow!™ represent a few examples of SaaS software applications now utilized in Dentistry.

**The Benefits of SaaS BI**

When BI is delivered to you as a service, you gain the benefits of using BI without the complexity and cost of installing and maintaining the tools yourself.

With typically no up-front cost and little effort to set it up, a SaaS BI solution is ideal for small to mid-sized businesses, including dental practices. This solution quickly provides access to critical reporting and analysis with a low risk and low cost.
Dashboard DDS™: Your web-based, dental-specific BI

Dashboard DDS™ is a SaaS Business Intelligence tool that interfaces with the most popular dental practice computer systems. Dashboard DDS does not interfere with, or in any way disrupt the operation of your office computer or the data stored there.

Each night, Dashboard DDS extracts a copy of specific practice data and updates your web-based Dashboard DDS. Your updated Dashboard DDS is “new” each morning, refreshing again each evening.

Daily production and collection totals, monthly and historical data, new patients seen, insurance and patient receivables, are all available on one easy-to-read screen. And because it’s served to you over the web, you can easily and securely access your Dashboard DDS at work, at home, or anywhere you have an internet connection.

Dashboard DDS has no set-up or software maintenance fees. Getting started is easy, and you may discontinue the service at any time. Dashboard DDS makes managing your practice easier than ever.

Security: Newcomers to SaaS sometimes ask about the security implications of having business data exported off-site. Dashboard DDS ensures maximum data security; it is HIPAA compliant and is hosted in secure, commercial data centers. Plus, each dental practice has a separate, secure Dashboard DDS database. Your Dashboard DDS will never be seen by another party unless you provide them with a User ID and Password to do so.

Dashboard DDS is integrated/integrating with all the popular practice management systems, both single-location and multi-location.
Conclusion

How many hours of productive or leisure time do you spend creating, running or reviewing daily, weekly and month-end reports and spreadsheets? Perhaps it’s time to consider a change! Spending hours repeatedly cutting and pasting data into spreadsheets is not an efficient use of your or your staff’s time. BI offers a more sophisticated and elegant approach... Use technology instead to enhance/replace your current reporting and analysis.

Dashboard DDS’s unique approach to SaaS BI helps dental practitioners improve the timeliness and reliability of their business information without a major IT investment.

For additional information, please visit www.DashboardDDS.com