Healthcare Dashboards for Performance and Quality Improvement

Posted on October 7, 2022

Describe what a dashboard is. How do we use it in healthcare? What type of data would you measure with it? What are the three groups that have led the development of this tool? What are some of the benefits that Kaplan and Norton identified? What are the four key elements of an effective dashboard?

Several processes and tools are employed by business owners and administrators to track progress and identify business performance. The quality improvement (QI) teams design numerous success indicators for a particular domain of business. When the indicators from different domains of a business are viewed together, this sums up to somewhere between 50 and 120 indicators. Businesses, therefore, require an efficient system of data monitoring and analysis. One such tool employed by company managers is the dashboard (Lewis, 2021; Lloyd, 2017). This research paper aims to describe the use of a dashboard in healthcare and identifies the type of data it measures. The paper also explores the groups that have led to its development and the benefits and key elements of an effective dashboard.

Dashboard

A modern analytics tool employed for monitoring the achievement of measurable numbers or key performance indicators (KPIs) is a dashboard. It is a dynamic tool that allows company managers and owners to analyze data interactively. It displays an overview of the most important quantitive data that can be utilized by administrators to conduct business analysis effectively and efficiently. The use of dashboards is most prevalent by the senior level managers as it enables them to identify their business performance at a glance, however, it can be employed at any or all levels as well. The data studied at any level reveals what is most important for managers at the business tier. For example, the dashboard for the human resource department of a business may display data related to employees' and customers' satisfaction. In contrast, the dashboard for the finance department may reveal profitability, revenue, etc. Similarly, the dashboard for business owners may present data from

each of these departments to give an overview of how each business sector is performing in comparison to the overall company's success (Lewis, 2021).

Use of Dashboard in Healthcare

In health care, a dashboard is employed to monitor the related KPIs. It enables healthcare practitioners to access statistical information about patients in real-time. It facilitates healthcare officials in increasing overall patient satisfaction and hospital performance. Hospitals gather vast patient data that is mostly scattered across various departments, collected on different systems, or manually recorded in separate files. Such dispersed data often leads to ineffective patient care, leading to hazardous results. It is, therefore, imperative that healthcare metrics are analyzed and monitored, ensuring the smooth operation of the organization. The use of a dashboard in health care provides a way forward to improving patient care and levels of satisfaction. It also helps generate automated healthcare reports, resulting in optimized performance (Datapine, 2020).

Type of Data for Health Care Dashboard

The dashboard of a healthcare organization may present the data most relevant to the departmental needs. Generally, the type of data measured with health care dashboards includes but is not limited to patient satisfaction, allocation of physicians, wait times for emergency rooms, and the number of beds occupied at a particular time. These indicators are organized under five categories of data. The first type of data is the volume metrics, which provide an overview of the flow of patients. This includes the number of patients, appointment time, duration of visit, and referrals. The second type of data is the revenue leakage metrics that provide information about lost income opportunities such as cancelled appointments, outbound referrals due to the unavailability of specialized staff, and rescheduled appointments. The third data type is the utilization metrics that identify the consumption of resources by monitoring the appointments scheduled and completed by doctors, as well as the surgeries performed. Quality metrics are the fourth data type, and they are related to initiatives related to quality, access, and safety. This type of data helps to analyze employee and patient satisfaction along with post-treatment statistics. The fifth type of data involves fiscal performance and is referred to as the financial metrics. It focuses on revenue generated per doctor, department, and specialization (Jain, 2016; Lloyd, 2017).

The Drivers of Dashboard Development

In the United States, three groups are primarily responsible for the development of this monitoring and analysis system. The first group is the purchasers of care, i.e. the patients who pay for the hospital services. For this group, the measure of quality against the cost paid is important. The second group that has driven the development of dashboards is the healthcare researchers and vendors. This group has been effectively developing measures for what was previously unmeasurable

and is eager to offer its products and services. The third group is the providers of care who are interested in analyzing data to provide their customers with information about quality, services, and cost (Nelson et al., 1995).

Benefits of a Dashboard

Researchers have identified various benefits of a dashboard. A balanced scorecard or dashboard compiles and consolidates the otherwise seemingly unrelated data into a single overview report that can be utilized to serve the company's strategic agenda. Since every day, systems are bombarded with data; a dashboard helps cleanse it, reducing the overload of information and emphasizing the focused indicators. It protects the company against sub-optimized measures by providing an overall view of measures. It helps the senior administrators analyze the impact of improvement on other areas. Dashboards highlight the importance of the company's vision and strategic management rather than control measures and identify the interconnectedness of systems and suctions. This interrelatedness helps managers to focus on improving the collective functions rather than individualized units. Additionally, it enables executive-level managers to be informed and knowledgeable about the departmental and overall outcomes (Kaplan & Norton, 1992).

Elements of an Effective Dashboard

The dashboard designs of the various organizations are optimized to display the data most relevant to them and provide an interactive interface to analyze various aspects of this data. For health care, general guidelines for dashboard development emerged in 2000. These guidelines identify the main problems faced by an ineffective dashboard, such as the issues arising from a suboptimal management system. It also suggests the four key elements of an effective dashboard. For an efficient and effective dashboard, a balanced set of key performance indicators should be in place. Instead of focusing on a wide range of measures, a vital few should be selected. This austere set of measures can increase the effectiveness of the dashboard. Effective dashboards present data in the form of graphs, which are easy to read and provide important information at a glance, as opposed to tables of numeric figures. Action triggers are another feature of an effective monitoring system. These action triggers are certain targets or goals that may induce a certain response from the relevant department (Lloyd, 2017).

Conclusion

A dashboard is an effective tool for any organization, especially health care. A correctly designed dashboard not only caters to the needs of internal stakeholders but also enables external groups to build effective reports. With an accurate measurement and analysis of important indicators at various levels within an organization, companies can optimize strategies to achieve ideal results and ensure stakeholders' satisfaction.

References

Datapine. (2020). *Healthcare Dashboards—Explore Examples For Hospitals etc.* https://www.datapine.com/dashboard-examples-and-templates/healthcare

Jain, T. (2016, May 21). *Healthcare Dashboards: 5 performance metrics | Kays Harbor*. Kays Harbor Technologies. https://kaysharbor.com/blog/healthcare/5-healthcare-dashboard-metrics

Kaplan, R. S., & Norton, D. P. (1992, January 1). The Balanced Scorecard—Measures that Drive Performance. *Harvard Business Review*. https://hbr.org/1992/01/the-balanced-scorecard-measures-that-drive-performance-2

Lewis, J. (2021). *How Are Dashboards Used for Business?* Small Business – Chron.Com. https://smallbusiness.chron.com/dashboards-used-business-32876.html

Lloyd, R. (2017). *Quality Health Care: A Guide to Developing and Using Indicators*. Jones & Bartlett Learning.

Nelson, E. C., Batalden, P. B., Plume, S. K., Mihevc, N. T., & Swartz, W. G. (1995). Report Cards or Instrument Panels: Who Needs What? *The Joint Commission Journal on Quality Improvement*, *21*(4), 155–166. https://doi.org/10.1016/S1070-3241(16)30136-5