

The use of data to harvest clinical and business intelligence is a complex discussion that can meander through several topic areas including the processes by which organizations collect and report on data and the types of conclusions to which those reports can come—mainly financial or clinical conclusions. In determining the level of an organization's maturity regarding these activities, one need to consider the purpose of its intended activities.

This case study examines ThedaCare's journey along a business intelligence maturity curve and highlights several observations and lessons that can help others who might want to setup a similar function at their institution. ThedaCare Historical Context.

Like most health care networks, ThedaCare found itself facing growing data challenges over the past decade. The volume of requests for data reporting was growing at a pace the organization could not meet. Business partners would end up frustrated with wait times, data warehouse system performance and staff availability. In addition, the organizational structure's complexity and processes hampered the ability to meet quality improvement endeavors. Twelve years ago, during the organization's implementation of its LEAN initiative¹, a business intelligence team was created to better provide data and analysis solutions leveragable across the entire organization. The purpose of this team was twofold: enable clinical and business decision making and improve the efficiency of the overall data delivery system. Business intelligence would be made available to drive business transformation through a collaborative, networked process focusing on constantly supporting and optimizing performance.

ThedaCare is a Wisconsin-based community health system consisting of five hospitals, ThedaCare Physicians, ThedaCare Behavioral Health, ThedaCare At Work & ThedaCare At Home. There are over 20 clinic sites. Physicians 600 private practice and 180 employed (120 Primary Care 60 in Orthopedics and Cardiology) Hospitals 5 hospitals totaling ~440 beds; Over 22,000 admissions in 2011 Senior Care 58 bed skilled nursing facility and Assisted Care Behavioral Health ~59,000 office visits yearly. Home Care Over 92,000 visits in 2011. Ambulatory Sites 27 sites with ~575,000 office visits in 2011. IT platform Epic client for over 12 years.

ThedaCare has been a leader in implementing healthcare value and reforms. As part of the Healthcare Quality Coalition (www.qualitycoalition.net), ThedaCare is part of a group of 25 leading health systems, hospital associations and medical societies from 15 states advocating for healthcare delivery system reform that prioritizes value through high quality, low cost care. As part of the Wisconsin Collaborative for Healthcare Quality (www.wchq.org), ThedaCare's ambulatory quality measures ranked #1 in 2012. ThedaCare established the ThedaCare Center for Healthcare Value (www.createvalue.org) whose mission includes collaborating with patients and leaders in the provider, employer, insurer, and government communities to create transparency of healthcare performance; care delivery with less waste and fewer errors; and payment systems that reward patient value creation.

Through the years, the continuous process improvements have led to some impressive results: From 2008 to 2012, reduced year over year business intelligence software maintenance by \$130K (>60% savings) while doubling overall user volume; Improved service level demands with 7:00 AM new data delivery; Savings of \$800K in overtime in 2011, additional reduction of 3.5% in 2012; Essentially eliminated the annual budget cycle process by moving to a rolling forecast, reducing labor by about 20,000 hrs/year at an estimated savings of \$1 million 4, 5, 6; Collaborative problem solving: over 6 analysts free to focus on analytics; Support for workbench reporting to provide end users with real-time data; Consistent measurement and meeting of demand.

Source : https://www.himss.org/files/HIMSSorg/Content/files/HIMSS%20CBI_2013-02-25_ThedaCare%20Case%20Study-FINAL.pdf

(a) What are the challenges faced by ThedaCare before using BI? (10 marks)

Question 4a

- Facing growing data challenges over the past decade (1 mark)
- The volume of requests (1 mark) for data reporting was growing (1 mark) at a pace the organization could not meet (1 mark)
- Business partners would end up being frustrated with wait times (1 mark), data warehouse system performance (1 mark) and staff availability (1 mark)
- In addition, the organizational structure's complexity (1mark) and processes hampered (1 mark) the ability to meet quality improvement endeavors (1 mark).

- Facing growing data challenges over the past decade (1 mark)
- The volume of requests (1 mark) for data reporting was growing (1 mark) at a pace the organization could not meet (1 mark)
- Business partners would end up being frustrated with wait times (1 mark), data warehouse system performance (1 mark) and staff availability (1 mark)
- In addition, the organizational structure's complexity (1mark) and processes hampered (1 mark) the ability to meet quality improvement endeavors (1 mark).

(b) Explain the continuous process improvements that have led to some impressive results in ThedaCare. (15 marks)

[Total : 25 marks]

- From 2008 to 2012 (1 mark), reduced year over year business intelligence software maintenance by \$130K (>60% savings) (1 mark) while doubling overall user volume (1 mark)
- Improved service level demands with 7:00 AM new data delivery(1 mark)
- Savings of \$800K in overtime in 2011 (1 mark)
- Additional reduction of 3.5% in 2012 (1 mark)
- Essentially eliminated the annual budget cycle process (1 mark) by moving to a rolling forecast (1 mark)
- Reducing labor by about 20,000 hrs/year (1 mark) at an estimate of \$1 million
- Collaborative problem solving: over 6 analysts free(1 mark) to focus on analytics (1 mark)
- Support for workbench reporting to provide end users (1 mark) with real-time data (1 mark)
- Consistent measurement and meeting of demand (1 mark)