



# Demonstrating the economic value of minimally invasive spinal surgery on the iPad

Economic value, in addition to clinical value, has become increasingly important to a broad set of stakeholders – from physicians to hospital administrators, payers and governments. But evidence from economic studies can be difficult to comprehend if one lacks an understanding of health economics. Medtronic's commercial teams needed a way to present complex data in a clear and intuitive format, understandable for non-experts. This case study describes the use of a web-based platform to demonstrate the value of minimally invasive surgery on the iPad.

## Background

### About Medtronic

Headquartered in Minneapolis, Minnesota, Medtronic, Inc. is the global leader in medical technology - alleviating pain, restoring health, and extending life for millions of people around the world. Medtronic has over 45,000 employees in 120 different countries, and 2011 revenues exceeded \$16 billion. Medtronic's Spinal Business (based in Memphis, Tennessee) is the global market leader and committed to advance the treatment of spinal conditions.

### About Minimally Invasive Spinal Surgery (MIS)

In contrast to traditional open-back surgery, MIS requires a smaller incision, leaving patients with smaller scars. MIS has also been reported to minimize cutting to muscles, tendons, and other normal tissues that are not directly involved with back disorders.



## Business needs and challenges

### Communicating economic value

Medtronic has traditionally differentiated its products by generating evidence to demonstrate clinical value. While this remains important, additional focus is now put on translating the clinical value into its corresponding economic value. According to Dr. Zenichi Ihara, Senior Analyst at the Medtronic Spinal Business in Switzerland, economic arguments are not so easy to transmit: "The clinical evidence can be put forward in a relatively straightforward way, but our challenge was to communicate the economic value proposition. When we started this project, we had no good way to communicate very basic economic value messages."

In today's marketplace, customers often want to see a quantification of the clinical and economic impact of new products in their populations, using their own assumptions and data. Such an analysis is often performed with either an Excel spreadsheet or using sophisticated software. But the individuals in hospitals that make the purchasing decisions, such as the hospital heads, surgeons or hospital pharmacists, are either not familiar with such spreadsheets or have concerns with the transparency of the mechanism of cost calculation. Also, in general the commercial teams are not very comfortable using these in customer interactions.

### The economic value of minimally invasive surgery

To prove the economic value impact of MIS, Medtronic conducted a micro costing study at two hospitals in Italy: one in Milan and the other in Bologna. The study looked at the entire process from patient admission to patient discharge. The study results showed the potential cost savings of MIS versus traditional open-back surgery, by reducing hospital stays and hospitalization costs. Medtronic needed a strategy for communicating these results to the stakeholders in various markets.

### OBJECTIVES

- To convey the value proposition of MIS to stakeholders in a single screen
- The presentation needs to be as simple as possible, while remaining accurate and credible

### INTERNAL AUDIENCE

- Senior sales representatives
- Strategic key account managers
- Country reimbursement managers
- Product managers

### EXTERNAL AUDIENCE

- Hospital heads
- Hospital pharmacists
- Surgery heads

### INITIAL COUNTRIES

- UK
- Italy
- France



## Strategy

To present the data from the micro-costing study, a value communication app was developed using BaseCase, a web-based value communication platform. BaseCase consists of a presentation layer to create intuitive and visual presentations, and a spreadsheet layer to integrate economic models and calculations.

### THE MAIN ADVANTAGES OF BASECASE:

- Data can be visualized in an interactive and intuitive manner
- Apps can be created rapidly, without requiring any programming
- Apps work on multiple devices (including the iPad)
- The flexible format allows for timely local country adaptations

Selected cost inputs such as the cost of a hospital day were integrated into the app, allowing for easy modifications during a customer presentation. Background information and references were included to be displayed as needed.

## Evaluation

The app was initially launched in the UK in July 2012, with Italy following two months later. It met the stated objectives: to visualize the key messages in a single screen.

During customer meetings, the app provided a way to capture the customers' attention and customers understood what was presented. Compared to a classic slide deck with bullet points, the app was found to keep the attention of customers for a longer period of time. The simplicity of the app makes the value proposition easy to understand, and this encouraged active participation and discussion. At internal meetings, the app helped to increase the awareness of the economic value of MIS within Medtronic. The app helped to explain the reasons for conducting economic studies such as micro costing to executives and colleagues from marketing.

The BaseCase environment allowed Dr. Ihara's team to rapidly test out new ideas: "Based on a suggestion from sales representative in the UK, we rapidly developed a version of our app that focused on decompression. We copied the app and removed some of the content on spinal fusion. It took less than a day to get a working prototype out into the field, obtaining valuable feedback." When asked about what aspect of this approach that stands out most, Dr. Ihara emphasized that interactivity and animated graphs are key elements:

"On BaseCase, information is presented in a visually attractive way. You can instantly see how a change to an input impacts the results. This allows people to connect the dots. When seeing a graph move, people can more easily grasp the meaning of the data. For MIS, we had great study data, but the crucial last step is to present it in a way that makes sense to everyone".

## Lessons Learned

From this project, the importance of pre-training for the sales force became apparent, according to Dr. Ihara: "It's important to use these tools for a well defined customer segment, as not all stakeholders have economic value on the top of their minds. Also, it's a good idea to engage all the internal stakeholders early in the development process of the app, and test the presentation with selected customers."

Dr. Ihara also recommends putting a lot of work into formulating the key messages: "You have to know what your message is. Reducing all benefits down to a simple and clear value message that works in the field is hard work. Try to view your product from the perspective of the customers' economic environment."

## Looking forward

“ Obviously, the ultimate goal of this project is to increase market adoption, but it is too early to measure a market response. Our next step is the evolution of the app into the next and improved version, incorporating all the things we have learned so far, from our commercial teams and our customers.

*Dr. Zenichi Ihara,*  
Senior Analyst, Medtronic

“ One of the key challenges of health economics has always been to communicate complex information to decision makers. Our field has been perceived as something too difficult to understand. The communication platforms facilitate a better dialogue with providers and payers and there is a lot of potential to use this with other audiences and purposes. We have just begun to appreciate the potential.

*Dr. Carolin Miltenburger,*  
Senior Director, Global Health Economics & Reimbursement