

Medtronic

Integrated Health SolutionsSM

Case study: How St. Antonius hospital increased its daily TAVI capacity through an improved pathway

St. Antonius, Netherlands



Overview

Heart centers are facing growing demand for TAVI, which is being driven by a number of factors, including an aging population, increased adoption, and an expansion of indications for the procedure. At the same time, heart centers are dealing with scarce resources and cost sensitivities, and therefore must maximize their operational efficiency and productivity to ensure patients have timely access to this procedure.

To achieve TAVI operational excellence, a heart center must undergo a systematic analysis of its operations. This requires visibility into current performance, knowledge of TAVI best practices and sustainable implementation, as well as developing a mindset of continuous improvement. By optimizing the TAVI pathway, heart centers can unleash greater productivity, while maintaining or improving the quality of care.

The hospital & heart centre



St. Antonius Hospital has multiple locations in and around Utrecht, and is one of the leading hospitals and heart centers in the Netherlands.

Its heart centre is a leader in cardiology and cardiothoracic surgery, performing more than 7,000 Cath Lab interventions (in five Cath Labs) and more than 2,800 operating room procedures annually.

Medtronic Integrated Health SolutionsSM (IHS) has worked in strategic partnership with the hospital on various efficiency and optimization solutions over the last seven years. It is in this context that St. Antonius Hospital engaged IHS to help them accelerate patient access to TAVI, improving their resource and capacity utilization in a cost-effective way, and ensuring good clinical outcomes and a positive patient experience.

5

Cath Labs

7,000+

Performed Cath Lab interventions

2,800+

Operating room procedures annually

The challenge

The hospital aimed to become the primary center of reference in transcatheter aortic valve implantations (TAVI's). To do this, the hospital wanted to increase the number of procedures without increasing their budget, staffing, or infrastructure. However a number of operational challenges were standing in the way, including:



Planning and scheduling issues that included last-minute changes, lack of staff awareness of key patient preparation processes, and inadequate case prioritization



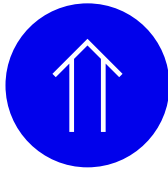
Procedural issues including delays in patient transport from ward to Cath Lab, inadequate TAVI team preparation and cooperation, and a high number of general anesthetics procedures



Post-procedural issues including poor slot reservation for pacemaker implantation, relatively long lengths of stay (LOS), poor visibility into LOS, and high peak load for the ward

The solution

St. Antonius Hospital engaged Medtronic IHS to implement the TAVI Pathway Accelerator Solution with these objectives in mind:

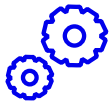


Increase the number of daily TAVI procedures from three to four procedures within six months using the same or fewer resources



Maintain clinical outcomes and patient satisfaction

A multidisciplinary hospital team, including cardiologists, surgeons, Cath Lab and clinical nurses, and planning staff worked together with the Medtronic IHS team to increase daily TAVI capacity. Working together, they successfully:



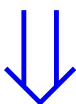
Optimized procedure planning by:

- Clustering patients with similar clinical profiles to aid prioritization
- Adjusting the procedure schedule to minimize peak demand
- Streamlining and redesigning the pre-procedure checklist and gaining Heart Team buy-in to improve patient preparation
- Improving communication between Planning, Cath Lab and Ward



Increased daily production levels by:

- Employing several improvement initiatives to increase on-time starts and reduce changeover time
- Implementing a TAVI team routine to establish roles and schedules at the start of the day
- Filming procedures and evaluating with the team to establish better cooperation
- Increasing number of local anesthesia and light sedation procedures to reduce procedure time and length of stay



Reduced LOS and freed up ward capacity by:

- Adjusting pacemaker protocol to enable earlier decision for implantation
- Redefining target LOS and discharge criteria and improving communication and discharge preparation
- Building an LOS dashboard and introducing a management system to improve awareness and performance

Pathway Accelerator solution

Pathway Accelerator is a comprehensive and integrated approach to helping providers implement, run, and sustain evidence-based, best-practice-informed, and patient-centric care pathways. Capitalizing on hundreds of care pathway optimization projects across a broad array of medical conditions, Pathway Accelerator can quickly transform your pathway and deliver sustainable results.



The impact

Within six to eight months, the hospital increased the total number of procedures by 24 percent without adding resources or capacity by:



Increasing daily procedures by

33%

(from 3 to 4 TAVI procedures)



Reducing average LOS by

27%

In addition, patients are experiencing a smoother admission process, less time spent anxiously awaiting the procedure in the pre-procedure area, and shorter hospital stays – with comparable clinical outcomes and complication rates.



What the hospital is saying:



“Due to Medtronic IHS’ expertise and structured and multidisciplinary approach, we were able to increase production levels and realize our growth ambitions.”

Heart Center Manager



“The different interventions, fact-based analysis, and best-practice sharing helped us to make informed choices for a new way of working.”

Interventional Cardiologist



About Medtronic IHS

Integrated Health SolutionsSM builds on Medtronic's unique combination of capital resources, process optimization expertise and therapy knowledge. In cooperation with medical institutions, IHS develops innovative services and solutions to improve efficiency, reduce costs, facilitate patients' access to different types of treatment, and improve outcomes.

Would you like to know more about our TAVI Pathway Accelerator solution?

Visit our [website](#), reach out to your Medtronic contact or email us at: integratedhealthsolutions@medtronic.com

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