“Helping more patients with optimised resources to provide a better service”

Medtronic Integrated Health Solutions℠ supports health providers to optimise costs and outcomes, generating higher value and patient satisfaction.

This quote from Raymond van Oosterhout, former Managing Director Heart+Vascular Centre, Maastricht University Medical Centre in the Netherlands, summarises the results of a typical partnership with Integrated Health Solutions. Indeed within one year of a five-year partnership, $2.5m cost savings were delivered driven by optimised resource use, which lead to productivity and capacity increases.

Who we are
Acutely aware of the need to balance access and cost of treatment with high quality care, Medtronic created Integrated Health Solutions, a new business unit to partner with health providers beyond devices.

Our team has a unique mix of skills to complement your organisation’s competencies: 300+ experts in healthcare consulting, hospital management, biomedical engineering and building and managing healthcare facilities.

Together
Working together, in the past three years, we helped our customers implement strategies, operating models and organisational enhancements to improve quality of care, boost cost effectiveness and move towards value-

“Sometimes you need a sharp, unbiased external eye to visualise the routine inefficient steps embedded in a big organisation.”

Prof Dr Michael Jacobs
Chairman and Professor of Surgery, Executive Director Heart+Vascular Centre
based healthcare. Managed Services for CathLabs, Operating Rooms and ICUs is one of the high impact solutions we offer to hospitals and is the focus of this article.

**Shared risk and reward**
Our business model is based on taking an active role with long-term partnerships that hinge on risk and value-sharing schemes as well as on predictable ‘fee-per-procedure’ models. In short, we have a larger stake in your success than ever before.

**Tailored solutions based on four pillars**

**Turnkey set-up:** we fund and deliver state-of-the-art infrastructure (from design phase to installation) for ORs, CathLabs, and ICUs. We also provide capital equipment financing, purchasing and installation.

**Manage:** we manage non-clinical operations so your staff can focus on patient care. Through our on-site operations managers, we manage your equipment and material, covering procurement and inventory management of all devices and consumables, including products from Medtronic as well as products from competitors.

**Optimise:** we leverage our expertise in Lean Six Sigma and our catalogue of best-practices and benchmarks to deploy transformational programmes that bring efficiency gains in daily operations and optimise patient pathways.

**Develop:** we improve patient recruitment, reinforce referral networks and raise your institution’s profile and reputation through our consulting services and expertise in market analysis and development.

**Benefits**
Our suite of integrated services is based on a unique and holistic approach that gives you:
- Access to funding and latest technologies
- Efficiency gains and cost savings
- More time for frontline care
- One-stop-shop solution: complete infrastructure set-up from planning to execution
- Vendor-independent service: we procure the equipment and the products of your choice

**A case study of Maastricht University Medical Centre**

$2.5m cost savings. Optimised use of resources. Empowered staff.

**The hospital challenge**
Maastricht University Medical Centre (MUMC+) is an academic hospital in the southern part of the Netherlands that faced increases in both patient volume and complexity of cases, and is under continuous pressure to maintain a high quality of care for more patients without increasing costs.

**Our solution**
MUMC+ entered into a five-year partnership with Integrated Health Solutions in 2014 with three objectives:
1. Optimise processes and clinical pathways with a goal to reach outcomes excellence
2. Delegate management of the CathLabs operations
3. Engage staff for successful change management.

We started in the Heart and Vascular Centre of MUMC+, with the ambition of having it ranked as one of the top 20 ‘Best in Class’ cardiovascular centres in Europe by 2020.
Optimisation of processes and clinical pathways

We deployed our operational excellence programme and organised a ‘one-stop-shop’ care centre through the integration of six specialty silos into one organisation, the redesign of workflows of the outpatient clinic, operating rooms and CathLabs, the implementation of daily morning preparation meetings and the use of improvement boards to tackle process bottlenecks.

We also optimised the heart failure and Cardiac Resynchronisation Therapy (CRT) clinical pathway. We brought together leading clinicians from three major European hospitals to design the “ideal” pathway, according to existing medical guidelines. We mapped value stream and patient flow patterns and built consensus on standard of care. We trained a multidisciplinary team on patient identification and implemented IT enablers to reduce administrative and follow-up burden.

Onsite management of CathLab operations

The Integrated Health Solutions CathLab manager is fully responsible for the management of operations and staff (27 full time equivalents). The manager’s objective is to achieve a gold standard from a quality and safety standpoint and to optimise utilisation of resources and high-value equipment.

His key tasks include implementation of a time-out, sign-out procedure, deployment of safety protocols, set up of a CathLab preparation room, optimisation of the planning and scheduling system and introduction of staff development and education programmes.

Change management deployment

We deployed our proprietary Lean Academy training hospital-wide, which combines classroom, mentoring and on-the-job formats to embed proven, process-improvement principles into the daily life of the organisation and ensure lasting, transformational change. We involved frontline staff up to executive level professionals, established a Project Management Office to manage more than 120 Lean Six Sigma projects and set up 40+ improvement boards to reduce variability in processes. 2500+ employees have been trained hospital-wide.

“To become a centre of excellence you not only need the cardiologist’s technical ability, you need the whole infrastructure to be optimised to deliver better outcomes.”

Prof Dr Michael Jacobs
Chairman and Professor of Surgery, Executive Director Heart+Vascular Centre

“Through pathway optimisation, we improved some essential steps of our patient flow and reduced the length of stay in hospital, thereby reducing costs and creating capacity for other patients to come in.”

Prof Dr Michael Jacobs
Chairman and Professor of Surgery, Executive Director Heart+Vascular Centre
The impact
In one year we delivered $2.5M in cost savings driven by optimised resource use.

The best example of efficiency gains is illustrated by the reduction in time needed for diagnosis: from five patient visits over two months to one visit of two hours. Other examples include:

- Capacity increased by 20% through better patient triage
- Number of requested ultrasound echocardiography tests dropped by 30%, worth $156,000 in savings.
- Length of stay for CRT patients reduced by 33%, which resulted in $120,000 savings.
- Patient capacity doubled with less staff through planning optimisation, which enabled them to reduce the waiting list and increase patient satisfaction.
- Productivity in CathLab operations management increased by 15%, brought about by a reduction in cancelled procedures and in expensive overtime.


Mr Graham Lomax
Divisional Director of Operations, Scheduled Care

The hospital challenge
Imperial College Healthcare NHS Trust is a major teaching hospital recognised as a centre of excellence in cardiology and cardiothoracic surgery, treating more than 20,000 patients annually. Dealing with growing demand, the hospital faced the stark reality that it needed to accomplish more with the same resources to minimise a funding gap. Short-term cuts were not going to address this challenge.

In that context, the Trust was eager to renew ageing CathLab equipment with the most innovative medical technology, optimise daily operations, improve capacity, and reduce waiting lists.

Our solution
Our seven-year partnership with the Imperial team started in November 2013 and included a cardiology transformation programme identifying £1.5m of efficiency savings.

We supported the refurbishment of five state-of-the-art CathLabs without the burden of high capital costs for the Trust. We took full responsibility for the capital equipment (funding, provisioning, commissioning and maintenance) and developed a Quality Framework for CathLab operations management.

We provide vendor-independent material and supply chain management; we took responsibility for 2942 stock lines and 12,436 items, re-organised processes and the workplace using Lean Six Sigma principles, assumed responsibility for provisions of directly sourced stock through a single supplier and developed a dashboard to easily monitor performance.

“How can we invest in our Cardiac Services at a time of extreme financial pressure? We were also looking at alternative models to improve value in our procurement system.”

Mr Graham Lomax
Divisional Director of Operations, Scheduled Care

“There was a strong focus on on-time start and on-time finish to optimise CathLab utilisation, and we were able to reduce some weekend elective lists – which enabled a reduction of overtime cost of staff.”

Mr Graham Lomax
Divisional Director of Operations, Scheduled Care
To optimise processes and CathLab use, we implemented a structured morning preparation meeting for cardiac ward representatives, consultants, registrars, bed managers and the lab-coordinating nurse. We also identified and proposed a structured process for advance booking and scheduling of procedures. This helped avoid cancellations, low utilisation of the labs, and poor patient experience.

**The impact**

Just 1.5 years into the seven-year term, savings made by the Trust have totalled £3.8m.*

We actioned several levers to generate efficiency savings.

On-time starts were increased from 58% to 93% through the initiation of daily planning meetings, the restructuring of the coordinator role with specified actions of the day and authority to delegate, and the redistribution of lab management responsibilities from external contractor to the in-house team.

The throughput was increased during the week so the planned Saturday list could be discontinued, bringing a £260,000 recurring saving for the Trust over three years.

Lab uptime was increased to 100% due to consistent stock availability, increased maintenance levels, and weekend preventive visits.

Waste was significantly reduced: 10-fold reduction in expired stock, decreased time looking for items by 75 minutes per day.

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*I David French, MBA, independent consultant, former Head of Finance, Cardiovascular Sciences, Imperial College Healthcare Trust.

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“I think one of the key benefits of having a commercial partner is thinking about new options. We have a partner here on-site for the long term that we can engage with, and this partner has a different skillset than our own.”

Mr Graham Lomax
Divisional Director of Operations, Scheduled Care

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Interested in balancing cost of treatment with high quality care?
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Visit our website www.medtronicintegratedhealthsolutions.eu

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