

INTEGRATED HEALTH SOLUTIONS<sup>SM</sup>

CAPITAL  
INVESTMENT.  
**ACTIVITY  
INCREASE.**  
WASTE  
REDUCTION.

A case study of University Hospital  
of South Manchester NHS Trust



“The reasons to consider this partnership were to address questions such as can we do our day job more efficiently, can we treat more patients, can we have a leaner approach to care delivery, can we procure in a more cost-effective way?”

**Dr. Richard Levy**  
Medical Director - Scheduled Care,  
Consultant Interventional Cardiologist

## THE CHALLENGE

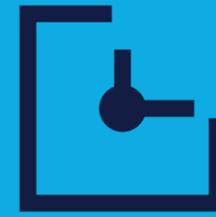
University Hospital of South Manchester NHS Trust is a major teaching hospital recognised as a centre of excellence in cardiology and cardiothoracic surgery, heart and lung transplantation, respiratory conditions, burns and plastics, cancer and breast care services. With 950 beds, it draws patients from the North of England and beyond. Dealing with growing demand driven by changing demographics, the hospital needed to do more with the same budget 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 to free-up capacity and reduce waiting lists, while improving the focus on core clinical activities
- **Treat** more patients with the same resources

"This partnership includes immediate replacement of 2 labs and planned replacement of the other labs in 2015, management, service and replacement of all CathLab equipment and provision of medical devices used in the CathLab."

**Dr. Neil Davidson**  
Clinical Director of Cardiothoracic Services



Every second of every CathLab is worth \$1 in revenue\*

# THE SOLUTION

The University Hospital of South Manchester entered into a seven-year partnership with **Integrated Health Solutions<sup>SM</sup>** in June 2013.

We created a tailored solution

- to provide **funding** and access to latest cardiac technologies
- to improve **operational efficiency**, "do the same with less", resulting in savings
- to increase **operational capacity**, "do more with the same or less", resulting in incremental revenue

## HOW WE DID IT

- **State-of-the-art CathLab refurbishment and equipment maintenance**
  - Invested £1.6 million into the refurbishment of two CathLabs in 2013-14
  - Planned refurbishment of two more CathLabs for 2015-16
  - Determined appropriate equipment needs and coverage level
  - Developed a Quality Framework for CathLab operations management
- **Vendor independent material and supply chain management**
  - Took responsibility for 3,300 stock lines and 10,000 line items
  - Reorganised processes and workplace using Lean Six Sigma principles
  - Applied a Quality Framework to standardise and maintain best practices
  - Implemented a smart stock management solution to automate procurement and inventory
- Assumed responsibility for provision of directly sourced stock through a single supplier
- Provided experienced CathLab and inventory managers on-site
- **Operational excellence**
  - Introduced patented framework 'Discover – Design – Deploy' which helped hospital staff differentiate important issues from trivial minutiae
  - Implemented a clinically-led improvement programme chaired by an interventional cardiologist
  - Deployed a best practice integrated Care Pathway focusing on minimising patient wait time and optimising throughput
  - Enhanced data analytics tools
  - Introduced a standard automated performance dashboard
- **Enhanced patient experience**
  - Created a short form questionnaire in collaboration with the Trust's "patient experience" team and in line with NHS requirements
- Implemented iPad functionality to capture real-time patient feedback
- Shared feedback and data analysis with staff via a dedicated dashboard
- **Lean Academy training**
  - Through our Lean Academy programme, we are empowering staff and embedding a culture of continuous improvement. We are providing training and on-the-ground support to staff identified by the Trust to deploy selected projects that drive efficiency gains. Our courses have international accreditation from the Lean Enterprise Research Centre of Cardiff University.
    - Initiated a 12-month Lean Six Sigma training and certification path
    - Deployed 30 efficiency projects on lab start times, turnaround times, list planning and patient experience

# THE IMPACT

One year into the partnership, significant **efficiency gains** were delivered.

## THIS SOLUTION HAS

- **Achieved 25% improvement** in start time efficiency
- **Reduced underrun by 72%** (time difference between last patient out and planned end time)
- **Refurbished two CathLabs** with state-of-the-art medical technologies and equipment without the burden of high capital costs for the Trust
- **Increased lab uptime to 100%** due to consistent stock availability, increased maintenance levels, and weekend preventive visits
- **Increased lab activity by 15%** for the period of June 2013 - June 2014
  - Based on average tariff, this is worth about £2 million revenue to the Trust
- **Reduced waste**
  - Reduction in expired stock from circa 13% to 0.4%
  - Based on a stock turn of 1 year, this is worth £200,000 to the Trust
- **Enhanced patient experience**
  - Real-time feedback via iPad allowed staff to respond while the patient was still on-site
- **Empowered** staff with Lean Six Sigma methodology to sustain change

\*Based on "NHS Payment by Results. Guidance for 2013-14"

# WHY PARTNER WITH US?

With more than 65 years of experience in the medical technology industry, combined with our global in-hospital presence and long-standing relationships with health providers and physicians, we have an in-depth understanding of your needs and challenges. Partnering with us brings you:

- **Benchmarks:** Our broad hospital footprint allows you to compare with other world-class institutions and gauge variability in patient outcomes, length of stay, workforce productivity, and asset utilisation
- **Resources:** Our access to capital resources enables you to equip your cardiac departments with the latest technology
- **Unique mix of skills:** Our 200+ experts in consulting, hospital management, biomedical engineering, clinical experience, and building and managing cardiac departments can complement your own organisation's competencies

## TAILORED SOLUTIONS BASED ON FOUR PILLARS

- 1. Turnkey set-up:** Provide affordable access to state-of-the-art technologies and infrastructure
- 2. Manage:** Manage non-clinical operations so you can focus on patient care
- 3. Optimise:** Deliver best-in-class cost efficiency and patient outcomes
- 4. Develop:** Accelerate patient recruitment and referrals, and enhance your services and reputation

## SHARED RISK AND REWARD

We aim to be the leading company to support hospitals, physicians, payers and health systems to **deliver high quality care in a cost-effective way.**

Our business model is therefore 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.**

## BEST POSSIBLE OUTCOMES

**Working together**, we can help you move toward **value-based healthcare** by designing tailored solutions that **optimise your outcomes** – enabling you to

- Improve quality of care
- Enhance operational performance
- Boost financial returns



"We had a need to maintain the highest standard of CathLab facilities. Partnering provided a major source of capital."

**Dr. Richard Levy**

Medical Director - Scheduled Care, Consultant Interventional Cardiologist

"The partnership has had a massive impact on the day-to-day availability of products. There were seven storage rooms with products scattered across; we reorganised the whole storage structure and now every single product has a specific place with clear labelling. When the nurses need a product, they now know exactly where to go and find it, which reduced the time wasted during the procedure to go and look for products."

**Ms. Christina Davie**

Cardiac Catheter Lab Service Manager, Integrated Health Solutions<sup>SM</sup>

"Medtronic has a more holistic view of the role they can play; not just the CathLab provision but also having a pathway look at the way patients should be efficiently managed."

**Dr. Richard Levy**

Medical Director - Scheduled Care, Consultant Interventional Cardiologist

"We have been very impressed by the way the IHS team has tackled the issues of maintaining CathLab activity during the replacement process, implementation and integration of new IT and stock management systems."

**Dr. Neil Davidson**

Clinical Director of Cardiothoracic Services

INTERESTED IN  
BALANCING  
ACCESS AND COST  
OF TREATMENT  
**WITH HIGH  
QUALITY OF CARE?**

WE ARE  
**HERE TO HELP**

Contact us at [integratedhealthsolutions@medtronic.com](mailto:integratedhealthsolutions@medtronic.com)

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**Medtronic**

Medtronic International Trading Sàrl.  
Route du Molliau 31  
Case postale  
CH-1131 Tolochenaz  
Tel: +41 (0)21 802 70 00  
Fax: +41 (0)21 802 79 00

[www.medtronic.eu](http://www.medtronic.eu)