



All-Wales Robotic Assisted Surgery Programme



The All-Wales Robotic Assisted Surgery Programme is transforming access to highly advanced robotic-assisted surgery for patients all across Wales.

- The world's first national rollout programme to increase access to robotic surgery.
- Improving outcomes for cancer patients across Wales, with over 1,300 patients expected to benefit annually once the programme is fully embedded.
- Three new robotic teams established in two hospitals within the first year.
- Life Sciences Hub Wales worked closely with the programme partners to develop the National Business Justification Case, securing Welsh Government approval and funding.



Lack of access for Wales

Although robotic-assisted surgery is associated with better outcomes for patients, up until 2022 access to robotic surgery was very limited for patients across Wales. As of 2014, one machine – at University Hospital of Wales in Cardiff – served pockets of Wales, with its use available for a limited number of specialties. Without a Wales-wide footprint of robotic systems and trained teams, patients that would benefit from robotic surgery often had to travel large distances to access it.

Partners and funding

Partners

- NHS Wales
- Life Sciences Hub Wales
- Moondance Cancer Initiative
- CMR Surgical

Funders

Welsh Government co-funded with **£4.2 million** over three years, alongside **£13.35 million** provided by health boards over 10 years.

World-first programme

Announced in March 2022, the All-Wales Robotic Assisted Surgery Programme is the world's first nation-wide surgical robotics programme. It aims to transform care and outcomes for cancer patients across Wales by increasing availability of advanced technologies and techniques for precision surgery.

With funding of £4.2 million from Welsh Government and £13.35 million provided by health boards, NHS Wales partnered with Life Sciences Hub Wales and Moondance Cancer Initiative to launch

the programme. CMR Surgical was soon selected as the chosen industry partner to implement their Versius surgical system, initially across two health boards.

By June 2022, the colorectal team at University Hospital of Wales (part of Cardiff and Vale University Health Board) were trained to use the new Versius system at their hospital. By September 2022, the gynaecology team at Ysbyty Gwynedd (part of the Betsi Cadwaladr University Health Board) were also up and running with their own new system.

Life Sciences Hub Wales input

- Developing the National Business Justification Case in close consultation with partners, which helped secure the approval and funding from Welsh Government
- Identifying potential technology solutions, engaging with companies and inviting them to be part of the tendering process
- Long-term communications support for the project

Benefits of robotic-assisted surgery

In robotic-assisted surgery, a robotic arm is controlled by an expert surgeon to perform keyhole surgery on the patient. Cameras and surgical implements on the arm allow the surgeon to operate within a tiny opening, and highly precise controls allow for greater accuracy in the procedure.

Benefits include:

- ▶ Smaller wounds mean patients experience less blood loss, have a quicker recovery, and can spend less time in hospital, returning to normal activity sooner.
- ▶ Highly accurate controls mean precision surgeries can be carried out with reduced risks of associated damage to nerves or other organs.
- ▶ For surgeons, the ability to sit or stand in a comfortable position during surgery has the potential to reduce stress and fatigue.

CMR Surgical's Versius is established as a valuable surgical tool in a number of hospitals across Europe, India, Australia, and the Middle East. CMR Surgical pride themselves on having designed a solution that is uniquely small and modular, thus able to be easily moved between departments and adaptable to patient needs.

“ Robotic surgery is the gold standard for many cancer treatments. And the Versius system really delivers maximum value for hospitals, because it is so flexible. It gives the option to move the tool in and out of theatres as necessary, meaning it can be shared across specialisms and easily stored when not in use. As a technology partner, CMR Surgical was an obvious choice because of their commitment to working closely with all the stakeholders in Wales to realise this ambitious programme. As well as the technology roll-out, CMR Surgical are working with us on groundbreaking research in Wales, co-designing training material and looking at ways we can learn from their worldwide data on robotic surgeries. ”

Professor Jared Torkington, Consultant Colorectal Surgeon and Clinical Lead for the National Robotic Assisted Surgery Programme at The University Hospital of Wales



Patient impact

Versius will be used to perform procedures across colorectal, upper gastrointestinal, urological, and gynaecology specialities. Once the programme is fully rolled out, the vision is for over 1,300 patients to benefit from the programme annually.

Before this programme, patients in Wales had to travel long distances to access robotic-assisted surgeries. Now, instead of travelling to Cardiff, many patients in North Wales can benefit from the Versius robot at Ysbyty Gwynedd in Bangor. It was here that the first robotic-assisted hysterectomy was completed in September 2022, on 33-year-old Nicola Hughes from Bagillt. Her surgeon, Miss Ros Jones, said:

Clinical impact

As well as the benefits to thousands of patients across Wales, this programme will bring real benefits to NHS Wales and the Welsh healthcare system more broadly.

As part of the programme, CMR Surgical will support research into the adoption of robotic-assisted procedures and provide access to its global clinical registry to understand the development of patient outcomes and enhance patient safety.

It's also expected that the pioneering approach will bring new training and recruitment opportunities to Wales, as specialist staff come to Wales to train and practice.

Finally, a more comfortable, ergonomic position for surgeons should help reduce the physical impact of conducting operations, and potentially prolong careers. In turn, this will increase future capacity for offering robotic surgery to cancer patients across Wales.

“ We are very proud to have completed the first robotic hysterectomy at Ysbyty Gwynedd. Nicola has recovered very well, and we are pleased to have this technology available to us to help us perform complex procedures precisely and accurately. ”



How Life Sciences Hub Wales has supported the programme

Life Sciences Hub Wales is proud to have played a key role in the early stages of this programme. In close consultation with collaborators involved in the programme, we worked to develop the National Business Justification Case, which helped secure the approval and funding from Welsh Government in February 2022.

Our horizon scanning and engagement with ground-breaking companies also helped identify potential technology partners offering innovative solutions. These introductions culminated in a competitive procurement process, ultimately won by CMR Surgical.

As the programme progresses, we continue to provide long-term communications support. Our work with clinical teams within NHS Wales also continues, as we seek out new areas for innovation in the future.

“ Having worked closely with all the stakeholders to develop the business case for the All-Wales National Robotics-Assisted Surgery Programme, Life Sciences Hub Wales is delighted to see it grow from strength to strength. It exemplifies what can be achieved in partnership and is already delivering real benefits for people across Wales, with many more yet to come. ”

Rhodri Griffiths, Innovation Adoption Director at Life Sciences Hub Wales

Achievements by April 2023



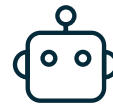
100
Cases



8
Surgical Teams



55
Staff Trained



140
Hours of Robotic-Assisted Surgery

What next?

One year into the initial implementation, the All-Wales Robotic Assisted Surgery Programme is already bringing tangible benefits to patients in Wales.

The programme team are constantly learning lessons from the implementation, sharing across partners in the programme, and building understanding of the Wales-specific outcomes associated with robotic surgery.

Immediate next steps include:

- ▶ Continuing to work with the two health boards already on board, to further embed robotic surgery within existing sites, and train more teams working across different specialisms.
- ▶ Actively working with remaining health boards in Wales to roll out access to new sites.
- ▶ Working with CMR Surgical to gain insights, benchmark against others internationally, and make data-informed assessments of how to get the greatest value out of robotic surgery for Wales.

We're here to help drive system-wide transformation! If you want to access support similar to that outlined in this case study, then we want to hear from you.

Submit your enquiry today via our website: lshubwales.com/innovation-enquiry-form



Hwb Gwyddorau Bywyd Cymru
Life Sciences Hub Wales



Bwrdd Iechyd Prifysgol
Betsi Cadwaladr
University Health Board



Bwrdd Iechyd Prifysgol
Caerdydd a'r Fro
Cardiff and Vale
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