

# ALDER HEY CHILDREN'S HOSPITAL

## 3D PRINTING, DIGITAL X-RAYS AND VIRTUAL VISITS HELP YOUNG HOSPITAL PATIENTS

*By Alder Hey Children's Hospital*

Project Twitter: [@alderhey](https://twitter.com/alderhey)

Organisations Involved Alder Hey Children's Hospital ([@alderhey](https://twitter.com/alderhey))  
University of Liverpool

- Health
- Physical Computing

Abigail Alker, from West Derby, was just six years old when she was diagnosed with neuroblastoma – a cancer developed from specialised nerve cells. For two years, she had been in and out of hospital, undergoing a lengthy programme of chemotherapy, surgery, stem cell treatment and radiotherapy.

It's easy to forget that children and young people remain the most frequent users of the healthcare system in the UK, although children's health facilities don't always benefit from the latest technologies available.

"It's a bit embarrassing...how bad technology is in the health service," said Ian Hennessey, Director of Innovation and a paediatric surgeon at Alder Hey Children's Hospital near Liverpool. "I have better technology to manage my music collection than my patients have," he told the Liverpool Echo earlier this year.

Alder Hey is leading the way in research and innovation within paediatric medicine in the UK. In March 2016, the hospital opened the first phase of a dedicated research, education and innovation centre, which includes a hub with a specific focus on technology.

That's good news for Abigail, who was able to take part in a research study – the first in the UK – to reduce the chance of her cancer returning. It's also great news for thousands of children who will be able to benefit from cutting-edge technologies, like the hospital's 3D printing capabilities that allow surgeons to create a model of a patient's bone structure, and a 2D digital X-ray system, which is used to diagnose and treat orthopaedic patients, resulting in 80% less exposure to X-rays.

The hospital is also pioneering a virtual visiting programme that helps parents stay connected to their children while they are being treated. Find out more at [www.alderheycharity.org](http://www.alderheycharity.org)

*Image courtesy of Science and Technology Facilities Council*

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