



PHILIPS

Healthcare

Experience Solutions

Imagination sets sail at Noah's Ark Children's Hospital

Philips Ambient Experience transforms radiology services in Cardiff

Who/where

The new Noah's Ark Children's Hospital for Wales (CHfW) is based on the site of the University Hospital of Wales in Cardiff. It provides healthcare for the children of Cardiff and tertiary services for children across Wales. The hospital admits around 23,000 inpatients and 50,000 outpatients per year. The radiology department officially opened in May 2015 and has been specially designed for children from South Wales and England aged from newborn to 16 (and older if continuing treatment).

Challenge

To create a child-friendly paediatric radiology department to improve the experience for patients, their families and staff and to increase throughput.

Solution

A unique and immersive re-imagining of the traditional imaging department using Philips Healthcare Experience Solutions.

When the new Noah's Ark Children's Hospital for Wales was being planned, a dedicated child-focused radiology department was a crucial part of the vision. The old department had shared several areas with adults, and the young patients and their families often found visits intimidating, adding to their stress of dealing with serious illnesses such as cancer, heart disease and kidney disease.

Dr. Susan Morris, the hospital's paediatric radiologist wanted to create an area where people would feel relaxed and happy to visit, with lots of distractions to take away potential concerns.

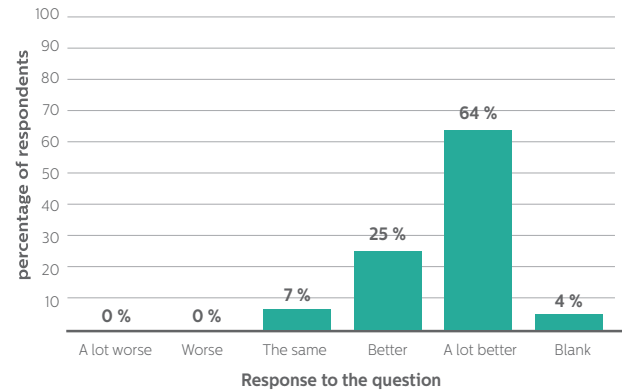
She explained: "One of the biggest challenges we have is trying to get children to cooperate. We have to get them to lie still, and they have to engage with us so that we can get the pictures we need. Sometimes you find that the children are very ill and they don't want to cooperate. Their parents are anxious as well, and the whole atmosphere becomes quite stressful."

Comparing the new department

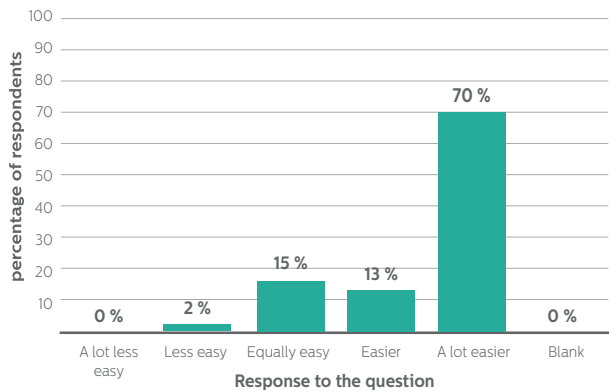
Results are based on a survey of 116 respondents, of whom 47 were familiar with the former department.

How does the Children’s Hospital for Wales’s paediatric radiology department compare to others you may have visited when it comes to child friendliness?*

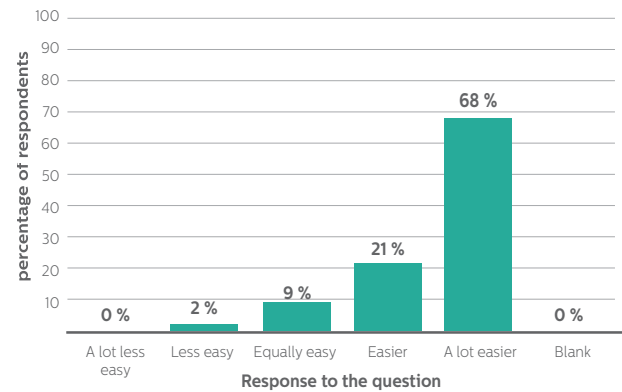
*excluding 35 respondents that indicated that they had not visited other departments and therefore could not compare



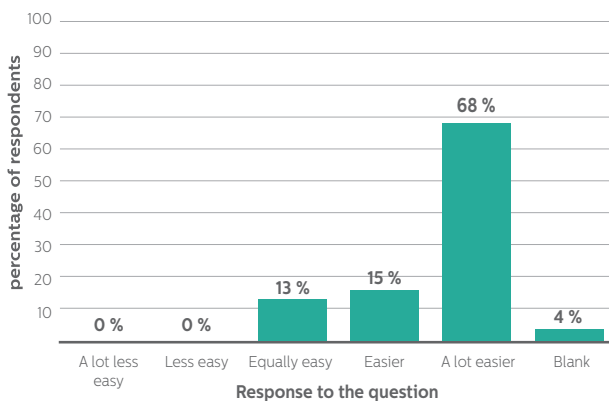
Compared to your experience in the “old” paediatric radiology department, how easy was it for you to calm your child in the new department?



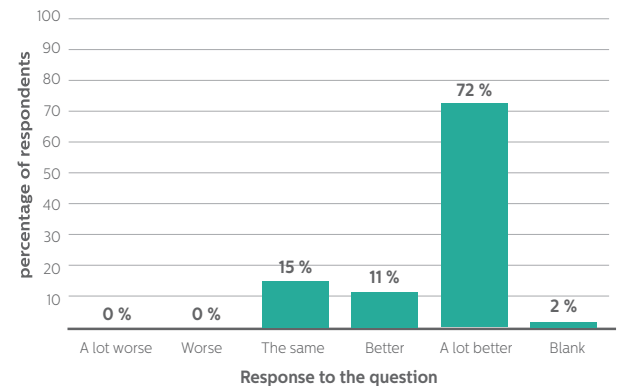
Compared to your experience in the “old” paediatric radiology department, how easy was it for your child to relax?



Compared to your experience in the “old” paediatric radiology department, how easy was it to spend the waiting time with your child?



Compared to your experience in the “old” paediatric radiology department, how was the experience of the imaging procedure for your child?





Dr. Susan Morris, paediatric radiologist

When Dr. Morris saw what Philips' had to offer, she realised there was huge potential to design an environment that was exactly tailored for the department's needs. Supported by the Welsh Children's Cancer Charity LATCH, the hospital team embarked on a project with Philips to design a unique immersive experience for Noah's Ark.

"We worked intensively with the Philips team to discuss what we wanted, their proposals and to establish what we could afford," explained Dr. Morris. "As plans developed with the builders, we worked with Philips to bring a new experience to the radiology department, within the allocated space, that would be most effective. We came up with a really good compromise in the end. The waiting area and each of the imaging rooms have got a different solution, catering to what we need to do in that room."

The majority of the department's imaging is plain X-rays, with the addition of paediatric ultrasound, screening X-rays, barium meals and also MRI scans.

The light, colourful reception area, with its touch-interactive walls and floor, gives the impression of a high-tech playground. Children can create ripples on projected images of water, and control what happens by changing pictures. A miniature "KittenScanner," with its own friendly educational characters, including a robot, chicken, elephant and a crocodile sits in the waiting area.

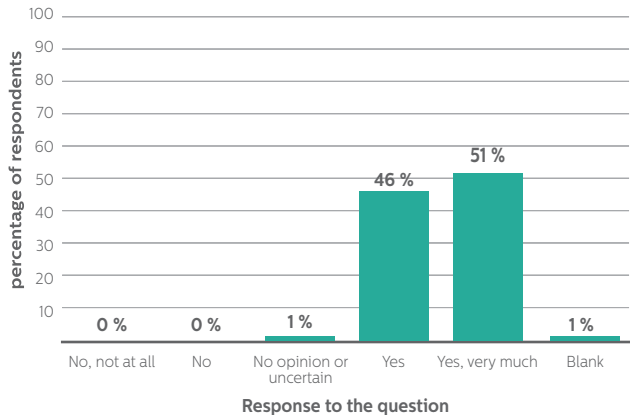
The KittenScanner helps children to understand the MRI and CT process: as the child scans a toy, a display tells them how a scanner works and why the exam is needed. The "insides" of the toy are seen on the screen, clarifying the scanner's purpose. As children play with the KittenScanner, attention is focused on learning and having fun, so they are less likely to worry about the upcoming procedure.

Mags Poole is Clerical Coordinator for the department and is the first person to greet families at reception. She said: "It's great to see the children's faces when they come through the door. They come in frightened but then look around and say "wow." The whole family relaxes and often the children don't want to leave."

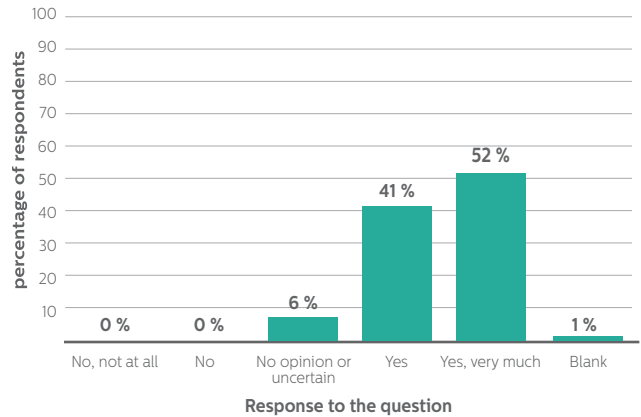
Dr. Morris added: "We've achieved something fantastic here. It is better than we anticipated and more effective than we anticipated. Children are more cooperative and we get the scans we need. I think some people were quite sceptical but now they've realised what it's all about and it's had a positive effect on everybody."



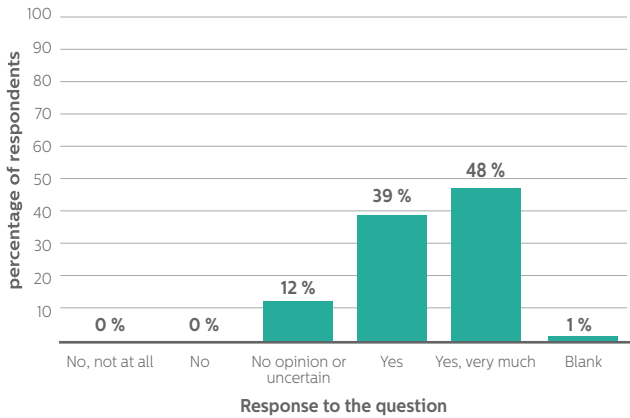
Do you feel like the department design helped your child to relax?



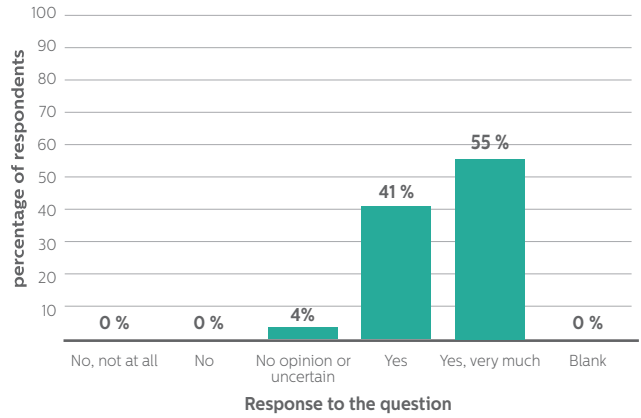
Did the department design help to improve the waiting time with your child?



Did the department design help to make it easier for your child to undergo the imaging procedure?



Did the department design help to meet the needs of your child?



A positive patient experience

“ The hospital made us **feel at home** and **relaxed** at a stressful time. The lights and the graphics make a hospital a **very pleasant place** for a young child to be in, **thank you** all for your contribution to making our daughter well!”

“ The department is very **child friendly** and all the sensory lights and projectors make it **a lot more calming** and **relaxing**, taking the children’s minds off why they are here.”

“ The screen above the ultrasound bed **helped my son relax and take his mind off** the procedure.”

Survey comments from parents and carers.



“Feedback from the families and the staff is that children are not so frightened coming here for the first time. One group of families and children that come here regularly for multiple scans and tests are children with cancer. The experience solutions have had a particularly good impact on those families.”

The whole team has been impressed at the extent of the new environment’s affect on the radiology service. Dr. Morris said: “The main unexpected benefit is that we can now get children of all ages, including very young children, to cooperate with the ultrasound scans. They will come and lie down on the couch and they don’t cling to their parents. They’ll happily look at the pictures on the ceiling while we do a scan and it just makes everything so much easier than it was before. We are also finding that children don’t need to come in the day before a MRI scan so they aren’t taking up hospital beds.”

A survey carried out in October 2015, gave excellent feedback about the new department. The hospital and Philips conducted a study amongst a group of

116 parents and caregivers (of which 47 were familiar with the old radiology department), and 52 staff. The responses were overwhelmingly positive, with parents praising the design features of the new department, and how much it created a more relaxed and calming environment for everyone.

Compared with the old paediatric department, 89% said that they found the experience for their child was “better” or “a lot better”, and 85% of parents claimed that their child was less stressed or a lot less stressed in the new department. The Net Promoter Score (the metric used for assessing loyalty and willingness to recommend a hospital and its services) reached a high score of 78.

Survey scores and comments from hospital staff were equally enthusiastic with 100% claiming that the design of new department had a positive impact on the patient experience and also made them feel as though they could better contribute to patient satisfaction.

A better environment for staff

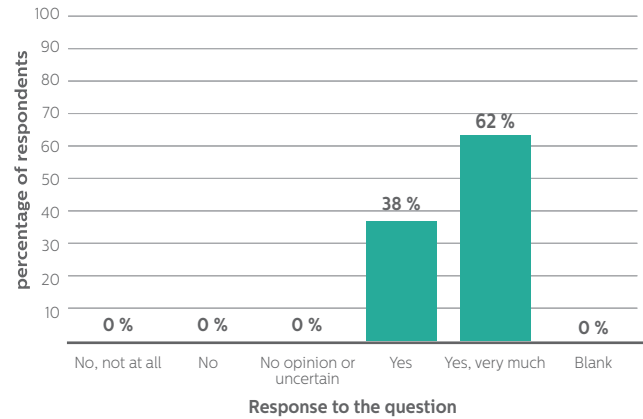
“ I think the department is **fantastic** and the standard of what radiology departments should be looking to achieve.”

“ The design and light effects help children to relax, they are better able to comply with procedures.”

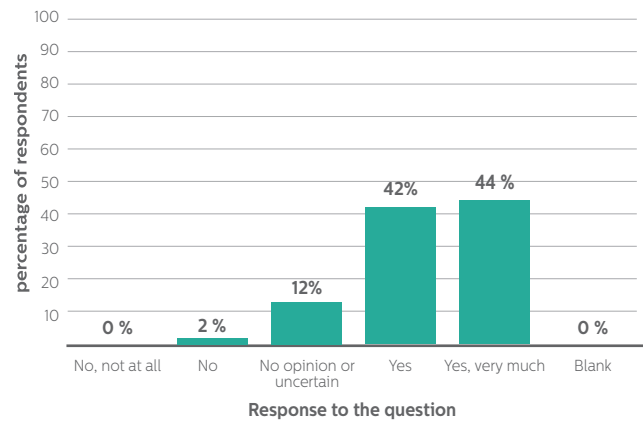
“ It’s much easier to distract a child during procedures if there are interesting things to look at.”

“ It’s easier to explain to children what their investigation involves and children seem happy to come to the department.”

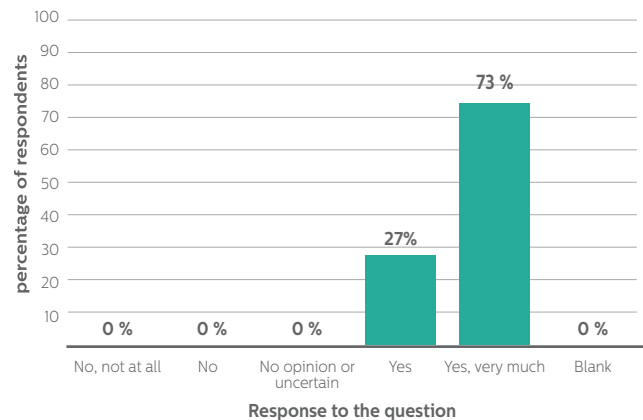
Does the new department make you feel like you can contribute to patient satisfaction better?



Do you feel like you can work more effectively in/with the newly designed department?



Do you have the feeling that the new department design positively impacts the patient’s experience





Sian Hulbert is a hospital play specialist who works with children coming in for procedures. She claims the Ambient Experience has made a fantastic difference.

“Oncology patients may have scans every three to six months and we have found that since the Ambient Experience has been added, the distractions of the music and pictures have enabled us to successfully complete scans on younger children who would have previously struggled with an MRI.”

“Even something like ultrasound, that adults may think is simple, small children can find difficult as they have to lie still, flat on their back. But now the pictures on the ceiling make a big difference.”

Superintendent radiographer Sarah McIntyre, has also witnessed the improvement in patient experience first-hand, explaining the Ambient Experience was not only distracting but that special features also supported improved compliance with specific acquisition requirements.

“One of the nice features when a patient needs a chest x-ray, is that the child can choose a character, and we can actually get that character to breathe in and hold their breath and get the child to watch and copy rather than just follow our instructions.”

She is proud of the new department and describes how other staff enjoy coming to visit radiology. “We are the envy of the hospital. The department was designed with kids in mind and we couldn’t have asked for anything better.”

Working with Philips

Dr. Morris praised the team from Philips and claimed they listened to what she and her colleagues wanted and developed a bespoke solution. She said: “I found Philips very enthusiastic which was important because it was a very positive project, and they were very adaptable to what was most appropriate for us. They came back as many times as we needed them and they continued to come back as we move forward.”

“I was very pleased with the survey results as they very much echoed what I expected that people were going to say. I would definitely recommend what we have here to other children’s radiology departments and probably adult departments too.”



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