

Welcome to our Highlights Report

Our mission at Great Ormond Street Hospital Children's Charity (GOSH Charity) is to enhance Great Ormond Street Hospital's (GOSH) ability to transform the health and wellbeing of children and young people, giving them the best chance to fulfil their potential.

On behalf of the hospital's young patients, their families and the staff at the hospital and charity, thank you. Your support is giving seriously ill children the best possible chance of a brighter future.

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Cover: Three-year-old **Isabela** is always smiling and loves watching sing-along shows on the TV.

Rising to the challenge in extraordinary times

The landscape of healthcare continues to evolve at an unfathomable rate. We have been faced with uncertainty and we have not been shielded from the extraordinary circumstances that the COVID-19 pandemic has brought to the world and to healthcare. And even though this last year has created extraordinary challenges for the hospital and the charity, it has also created new opportunities.

Although fundraising activity has been thwarted in some areas, we have adapted and innovated in others. Our in-person events like our RBC Race for the Kids and Christmas Carol Concert became virtual, resulting in supporters from all over the UK taking part in their local area.

Transforming the lives of seriously ill children through research, care and advocacy is why we exist. We aim to create the biggest impact to children and their families and we could not continue to do this work without your vital support.

Louise ParkesChief Executive

A heartfelt thank you

Support of any kind helps bring us one step closer to making our mission a reality. It means we can continue to support the most urgent needs of the hospital and help GOSH continue to deliver life-changing care to children and families.

We do this by funding specialist medical equipment, cutting-edge research and development in child health, new and refurbished clinical buildings, and a vital programme of child, family and staff support services.

Even in difficult times, we been overwhelmed with the generosity of our loyal and dedicated supporters – a huge thank you to you all. Whether you have hosted our events, decided to leave a legacy to us in your Will, made a one-off single donation, provided gifts in kind, supported us through a corporate partnership or volunteered your skills or your time, we thank you.

As always, we are hugely grateful for each and every one of our supporters, but we would like to highlight the continued and long-standing contribution of our major benefactors, dedicated appeal boards and event committees, who have helped to secure substantial funds in the last year in support of Great Ormond Street Hospital. In particular: The Friends of Adeona, Fundraising Patrons, GOSH Charity Children's Champions, Corporate Partnerships and Corporate Partnerships Board, The Tick Tock Club, Brighter Future fundholders and the following event committees: Christmas Carol Concert, Home for Christmas, Love GOSH, Shop Wear Care and Valentine's Party.



Your support in numbers

Funded 11 new research projects

as part of the National Call into some of the most hard to treat childhood diseases. Over £20.5m

raised for the new Sight and Sound Centre, supported by Premier Inn, which opened in June 2021. 173,250

The number of regular givers in 20–21.

The March
Facebook Challenge –
Walk 62 miles raised

£585,000

and had a total of

10,158 sign ups.

The 21st Christmas Carol Concert

was hosted on 8 December 2020, online for the very first time, featuring Holly Willoughby, Sam Claflin, Fiona Shaw and many others,

raising a huge £310,000.

Virtual RBC Race for the Kids had

3,365

participants, raising

£497,000.

Our first ever gaming collaboration with RARE Sea of Thieves raised

£75,000

by selling a unique and one-off 'Sails of Hope'. A total of

£11.4 million

was spent on pioneering research in child health.

In December 2020, we hosted our Home for Christmas online auction

which raised over £206,000 from 110 brilliant auctions prizes.

Finances: Every penny counts

Whether it's contributing to our four funding areas, helping us save for large upcoming projects or allowing us to raise more money for the future, every donation we receive helps to make a difference to the lives of seriously ill children, their families and the staff that treat them.

The way we spend money can vary year on year, especially if a big project like a new building requires an upfront sum. Additionally, large amounts may be held in redevelopment funds/reserves in anticipation of large scale upcoming projects. Because of this, we look at the long-term relationship between the cost of raising money and the donations you give us over a five-year period.



What We've Raised in 2020/21



What We've Spent in 2020/21



£7.7 million Child, Family and Staff Support

Investing in services to raise children's spirits, ease the burden on families and support the amazing staff who care for them.

£4 million Advanced Medical Equipment and Systems

Funding cutting-edge kit toaddress the hospital's most urgent technology needs.

£11.4 million Pioneering Research

Supporting world-leading scientists to find the diagnoses, treatments and cures of tomorrow.

£5.8 million Rebuilding and Refurbishment

Creating flexible, future-proofed facilities designed around children and young people.

All the figures above include allocated support costs to cover essential administration of the grants.

Impact: Research



National Call

The GOSH Charity and Sparks National Call – the UK's largest dedicated fund for child health research – seeks to support the development of lifesaving treatments, from the laboratory bench to the children's bedside, as efficiently and as safely as possible.

In this year's National Call, awards totalling £2.5 million were made to fund 11 new child health research projects. The research will take place at seven institutions across the UK, including three leading research institutions.

Of the £2.5 million pledged to support research into some of the most difficult and hard to treat childhood diseases, £112,500 has been made available by two condition-specific charities (Acrodysostosis Support & Research, and Dravet Syndrome UK) to co-fund research into these areas.

Studying a potentially more effective and less toxic treatment for Diamond-Blackfan Anaemia, examining how increasing the amount of a specific protein can help to treat the life-limiting neurological condition Dravet Syndrome and investigating human cells with Acrodysostosis in the lab to better understand the condition and possible pharmacological intervention.

Loui<mark>se P</mark>arkes, Chief Executive at GOSH Charity, said:

"The impact of research has never been more visible than over the past year, following the development of the COVID-19 vaccines. It shows that essential funding into research can have a life-changing effect on so many people. We're thrilled that this year's GOSH Charity and Sparks National Call is investing over £2.5 million into paediatric research projects, with huge thanks to our partner charities. These projects have the potential to deliver kinder and more effective treatments for some of the rarest and most complex conditions and, more importantly, offer children and their families hope for a better future.

Kiki Syrad, Director of Impact and Charitable Programmes at GOSH Charity said:

"It has been great to receive so many high quality and diverse research applications from a variety of institutions across the UK. Each project brings about its own unique life-changing potential for children with rare and hard to treat conditions and I am enthused to see how these projects progress.

"I am thrilled that GOSH Charity has collaborated with two condition-specific charities this year through the funding call. Partnerships like these help to unite and streamline our efforts and drive research forward to improve the diagnostics and treatments, and help to develop cures for rare diseases that affect children."

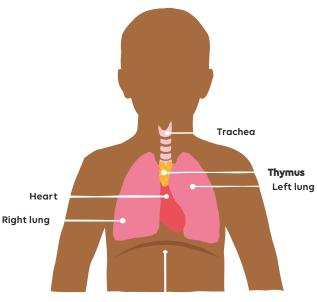


From bench to bedside

Thymus transplantation 50th patient

In February 2021, GOSH treated its 50th patient with a pioneering thymus transplant.

Location of the Thymus



Diaphragm

In 2018, funding was awarded to two GOSH researchers – Professors Graham Davies and Adrian Thrasher – to help further develop a cutting-edge new treatment for children with a rare immunodeficiency condition called complete DiGeorge syndrome (cDGS). The funding supports a research group in Thymus Transplantation which has enabled researchers to look at how to maximise the number of T-cells produced after thymus tissue is transplanted into children with cDGS.

The process uses healthy thymus tissue which has been removed by surgeons during surgery for congenital heart disease in infants. This tissue would otherwise be discarded but, with parental consent, can be donated for transplantation.

GOSH is one of two centres in the world to perform such transplants

The removal has little effect on the thymus donor as their immune system has already developed and not all the gland is usually removed. The tissue is then grown in the laboratory before implantation into the thigh muscles of the recipient. It has been demonstrated that around 75% of patients with cDGS had a successful outcome after receiving a thymus transplant. This means they developed immune cells and the ability to fight common infections, come off preventative measures such as antibiotics and were able to attend nursery and school.

Some patients do develop complications after transplantation, as a result of the new T-cells being poorly regulated, which can cause some damage to the body's own tissues. These problems are usually treatable. However, the research team at GOSH are working to optimise the process and reduce the chance of such complications.

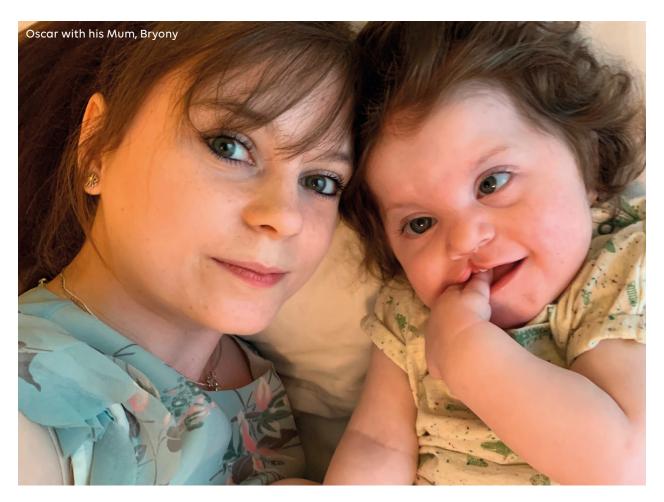
Despite the COVID-19 pandemic, the team at GOSH made great progress in 2020. They treated 10 patients; double the average number performed in each of the previous three years.

GOSH is one of two centres in the world to perform such transplants, the other being Duke University in the USA. Patients travel to GOSH from all over Europe and beyond, with one child travelling from as far as New Zealand.



Professor Adrian Thrasher

Oscar's thymus transplant



Oscar, from Ammanford in Wales, received his thymus transplant at GOSH in September 2019.

Oscar's health complications began as soon as he was born in May 2019. Early tests revealed that he had CHARGE syndrome. This is a rare genetic disorder that affects many areas in the body, including the eyes, heart and ear.

The severity of Oscar's conditions became more apparent when further blood tests revealed that he had an absence of T-cells, which play a central role in the adaptive immune response.

When Oscar was three months old, he was transferred to GOSH for a thymus transplant. The transplant was a success, and despite a few health scares in between – including a cardiac arrest – Oscar is now home for the first time in his life.

Osc<mark>ar's m</mark>um, Bryony, said:

"I can't fault the thymus transplant team – they were amazing. I never felt that I didn't know what was going on. They were there for me as well as Oscar.

"Oscar is very complex – he's deaf and blind in one eye. He's not crawling or walking yet either, but we hope he will pick that up. I'm also not sure whether speech will be possible in the future, but I always say 'never say never' with Oscar."

Research and projects focusing on the management of COVID-19

The COVID-19 pandemic has seen the research teams at GOSH and its research partner UCL Great Ormond Street Institute of Child Health (ICH) undertake and support pioneering research which will not only benefit the patients it serves, but also contribute to the international effort in the management of COVID-19.

GOSH Charity opened a rapid response funding call to GOSH and ICH researchers, making £750,000 available for 14 projects investigating, tracking and managing the spread of COVID-19.

One of these projects was looking at the neurological impact of a post-infection hyper-inflammatory syndrome, termed PIMS-TS, (paediatric inflammatory multisystem syndrome temporally associated with SARS-CoV-2) which has been identified in children.

As the hospital has adapted to the ever-changing COVID-19 pandemic, it was discovered that children who were once thought to be mostly unaffected by the virus have the potential to develop this rare inflammatory disorder.

Here, children present with COVID-19, which then triggers inflammation affecting organs like the heart,

kidneys and brain. In a small number of children this condition can be life threatening requiring intensive care treatment. As children recover, unanswered questions remain, including future relapse potential, and how the condition impacts on health, neurological, psychological and cognitive outcomes.

To address this, GOSH Charity, Guys & St Thomas' Charity and Imperial Health Charity collaborated in a first-of-its-kind funding partnership. This enabled researchers from UCL, Imperial and King's College London, and clinicians from GOSH, St Mary's Hospital and Evelina London Children's Hospital, to gather crucial information about the progression and long-term impact of PIMS-TS. The team will use detailed imaging to measure the effects of brain inflammation on brain growth and cognitive development, alongside monitoring muscle weakness.

14 projects investigating, tracking and managing the spread of COVID-19







Zayed Centre for Research into Rare Disease in Children: Pivotal in COVID-19 research

The state-of-the-art facilities in the Zayed Centre for Research into Rare Disease in Children, made possible thanks to a transformative £60 million gift to GOSH Charity from Her Highness Sheikha Fatima bint Mubarak, wife of the late Sheikh Zayed bin Sultan Al Nahyan, Founder of the United Arab Emirates, has meant that GOSH had capacity to better cope with the emerging COVID-19 pandemic. The Zayed Centre for Research, a partnership between GOSH, UCL and GOSH Charity, became a hub for testing patients, families and staff members for SARS-CoV-2 to help with infection control at the hospital.

<mark>Dr</mark> Ka<mark>thry</mark>n Harris, former Principal Clinical <mark>Sc</mark>ie<mark>ntist</mark> at GOSH, explains:

"When the pandemic hit in March 2020, we needed to massively increase our testing capacity at GOSH. If it hadn't been for the Zayed Centre for Research we would not have been able to have the testing service needed to help keep children, families and staff safe at GOSH."

At the time the number of UK COVID-19 cases admitted to the Intensive Care Unit rose and the UK was put into a national lockdown. In line with national NHS guidance, GOSH paused non-urgent surgery. The hospital also moved patient appointments online where possible, and took in children from nearby hospitals to free up space for those hospitals to treat adult patients with COVID-19.

In addition, the researchers at this facility had the capabilities to contribute to national and international research efforts into the virus.

The COVID-19 Genomics UK (COG-UK) consortium was created to deliver large-scale and rapid wholegenome virus sequencing to local NHS centres and the UK government. Sequencing genetic information from the virus allows us to better understand how the virus is changing over time and can reveal how it is spreading to different parts of the population. This research will inform decision making around infection control in hospitals to help prevent further spread of the virus, and how hospital infections are monitored in the future.

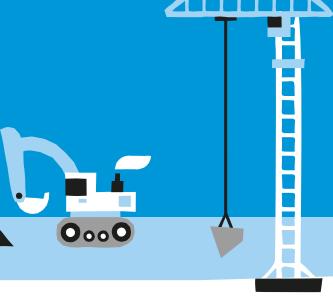
Professor Judith Breuer of GOSH and UCL has played a key part in the national research effort:

"We've been continuing the UK effort to sequence SARS-CoV-2 genomes, which is being used to understand the spread of the virus in the UK. We're also using sequencing to try and understand the impact of drugs, and that follows on directly from the work that is already underway in the Zayed Centre for Research to understand more about how viruses affect children.

"The Zayed Centre for Research is a wonderful place to work, it's so light and beautiful. It's been particularly good when we've had to socially distance, as the large space is incredibly adaptable to the requirements for safe working during the pandemic. We have been fortunate to have access to these exceptional facilities to match the expertise of the teams working around the clock to help us improve the care we can offer to seriously ill children."

Impact: Redevelopment





Sight and Sound Centre supported by Premier Inn

GOSH aims to deliver high-quality specialised care to patients every day. That is why GOSH Charity, with the support of Premier Inn and Restaurants, pledged £25 million to fund The Sight and Sound Centre, the first medical facility in the UK specifically designed for children with sight and hearing loss.

The state-of-the-art facility was opened in June 2021 and is the new home for GOSH's Audiology and Ophthalmology teams, who see the largest outpatient group at GOSH with more than 8,000 patients annually, resulting in more than 30,000 appointments each year. The Centre will also house Speech and Language Therapy, Cochlear Implant and the Ear, Nose and Throat (ENT) team.

Built with the specific needs of children with sight and hearing loss in mind, the new Centre with its outdoor space, brings a very much desired and welcome change to the indoor hospital environment for patients, families and staff.

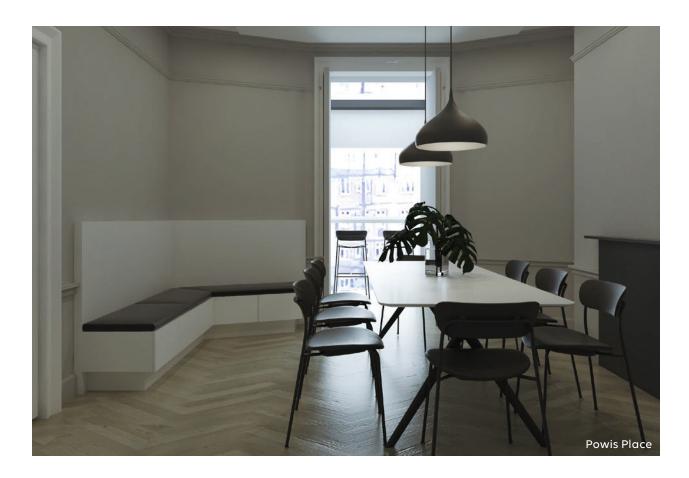


The Valentine Sensory Garden within the Centre has been designed to not only stimulate the senses but also provide a calming environment. The four droplet-like structures join to form a uniquely shaped walking space, with benches to enjoy the sensory elements dotted throughout the garden. There is an emphasis on touch especially in some of the planting, with plants such as lamb's ear used for its velvety evergreen leaves. There are herbs to provide new smells depending on where you are in the garden. The snow globes light up in different colours and are carefully positioned among the greenery.

Herra Bhutta, Deputy Lead Audiologist at GOSH, said:

"We were very much looking forward to moving into the new Sight and Sound Centre and it did not disappoint! The new equipment, facilities and extra space provide a smoother, improved experience for patients, families and staff. Although it is still early days, we hope that the new centre will be much more friendly and accessible than our older department.

"Some of the most notable improvements are the waiting area for patients, the increased number of rooms to perform testing in and new equipment amongst everything else. The audiology and cochlear implant team are even more integrated than before which allows for greater sharing of knowledge between the teams. The Sight and Sound Centre supported by Premier Inn, allows us to consolidate our vision as an unparalleled audiology and cochlear implant department and to be the benchmark for audiology services. The facilities are innovative and cutting edge and it is an exciting new space to work in."



Accommodation

We know that having a child in hospital is a difficult and stressful time for any family. This is why GOSH Charity funds family and patient accommodation at GOSH so that families can stay close together while their child or family member is receiving lifechanging care.

The hospital has begun to change its model of care, assisted through the provision of both short-stay accommodation to help day treatment patients and long-term accommodation for families of children with complex needs. These families can practice taking care of their child's medical needs in a homely environment, before taking their child home. Parent and family accommodation has been vital during the COVID-19 crisis as hotels and B&Bs were closed across London. The family accommodation stayed at high capacity, allowing families to be near their loved ones while they were receiving vital treatment at GOSH.

Powis Place

Our patient and family accommodation provides a 'home away from home' for patients and their families, with kitchens and facilities where families can eat together. For families, being able to stay the night before an appointment not only minimises the disruption to a child's routine but reduces stress for everyone. For those with a child in intensive care at the hospital, a place to stay close to the hospital is essential.

No. 2 and No. 3 Powis Place are two adjoining town houses located in the small drive, just 25 metres to the left of the main entrance of GOSH. Comprising a mixture of room sizes, a communal kitchen and dining area to accommodate different family sizes, Powis Place helps families feel comfortable while their child is receiving vital care and treatment. However, in recent years and due to the popularity of the family accommodation, the facilities were in need of refurbishment, and additional rooms were required. Support from Royal Bank of Canada and McColl's has enabled us to redevelop this accommodation. The building is now really starting to take shape with completion expected later in Spring 2022.

Impact: Supporting GOSH staff and families



Health and wellbeing for staff

To give the best care to seriously ill children from across the UK, the health and wellbeing of GOSH staff needs to be carefully considered. Over the last year this has been more important than ever, with the added stress of this challenging period. Throughout the pandemic, the charity has supported the Health and Wellbeing Programme at GOSH, helping ensure staff have the necessary support to perform the best they can and deal with mental and physical stress.

Among the benefits staff can access are:

- Rapid 24/7 access to qualified professionals for counselling, support, advice and information.
- Face-to-face counselling, trauma and critical incident support and debriefing, plus additional support for managers to help them deal with health and wellbeing issues in the workplace.
- Physiotherapy to help staff return and remain at work.
- Subsidised massage therapy which can provide staff with relief from long hours on their feet in PPE.
- Stress and resilience training.

As many staff at the hospital increased their clinical hours, it's important to keep them fit and well to ensure a robust workforce. This service continues to play a vital role.

Lisa Liversidge, Head of Staff Health and Wellbeing at GOSH said:

"The Health and Wellbeing Programme has been hugely helpful in ensuring GOSH staff remain fit and well, both before and during the pandemic, and will continue to play a vital role once the crisis is over." In addition, the charity made funds available to support GOSH staff to...

...come to work

For those staff with childcare responsibilities, we have supported the staff nursery, which has allowed many staff to continue their essential work at the hospital. We have also provided laptops for staff to work from home.

...stay energised

We installed the GOSH pop-up shop – a free shop where staff could pick up household essentials - and funded an onsite coffee cart. Hot meals were delivered for frontline workers, thanks to the generosity of our corporate partners, local companies and food chains.

...stay safe

The charity funded a project led by Professor Silvia Schievano as part of the rapid response COVID-19 funding call to ensure staff had the correct fitting PPE. The charity also helped fund scrubs for hospital staff that wouldn't normally wear them.



The staff pop-up shop



Food vouchers for families

It's essential that children and their families at GOSH remain well-nourished and the Family Assistance voucher scheme goes some way in supporting those with financial difficulties. Lunch vouchers funded through the charity's COVID-19 Appeal were distributed by the Social Work and Family Support team at GOSH; more than 1,800 breastfeeding mothers alone are supported through the scheme.



Elleni, Head of Social Work and Family Support at GOSH, said:

"The vouchers serve to lift a lot of the financial stress associated with having a child in hospital, with some staying for months, in a particularly high-cost area of central London. During the COVID-19 pandemic there were very limited low-cost food outlets open, so the vouchers have been a lifeline. Financial pressure and hunger for low-income vulnerable families can impact severely on their ability to cope and be there for their sick child. We have remained open throughout the COVID-19 crisis and will continue to be to support families.

"Parents tell us they feel overwhelmed and relieved by the prospect of being able to get 'free food'. It takes a huge amount of pressure off them to be able to feed themselves, especially as the food trollies on the ward only serve the patients.

"Vouchers fill a big gap, helping families to have access to basic meals while waiting for Universal Credit, or after redundancy and losing their job. It's particularly helpful to some families relying on food banks, which they cannot afford to travel to once their child is admitted to hospital."



Every year, GOSH Charity funds state-of-the-art medical equipment for the hospital. During the pandemic, the charity also funded additional vital testing equipment to increase the testing capacity at GOSH for SARS-CoV-2 and other virus strains. Through the COVID-19 appeal, the charity funded two pieces of equipment, the ABI PCR Analyser and the DiagCORE.

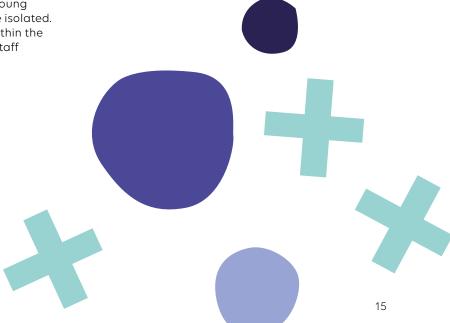
The ABI PCR Analyser helps identify and diagnose patients with severe infections. Being able to precisely diagnose difficult-to-treat infections enables clinicians to tailor and personalise treatment for a specific patient. The ABI PCR Analyser at GOSH is the same as that used by Public Health England for SARS-CoV-2 testing and it has allowed GOSH to carry out testing on its patients and staff. The analyser also allows the hospital to implement a surveillance service that will hopefully enable us to better understand how, and if, the virus is carried and spread by children, as well as understanding why they are asymptomatic if they test positive.

The DiagCORE allows the rapid testing of respiratory infections, including SARS-CoV-2. They are normally used in an intensive care setting to ensure a child is treated quickly and in the best way possible. This has been especially important during the COVID-19 pandemic, as we can ensure children and young people who test positive for SARS-CoV-2 are isolated. This helps control the spread of infection within the hospital, protecting patients, families and staff at GOSH.

Unlike other methods that may take days to test someone for a respiratory infection, the DiagCORE is rapid and can process a test in hours. Additionally, the DiagCORE can be used to test clinicians who need to come into work but may have a family member with COVID-19 symptoms, further helping to manage infections and ensuring patients stay safe while receiving their treatment.

Having two additional machines resulted in testing capacity increasing from 6-12 a day to around 100 per day!





Charity partnerships supporting enhanced testing at GOSH

Thanks to a donation from Mail Force, GOSH Charity was able to fund a further three machines which has further supported rapid and accurate testing for SARS-CoV-2. The equipment identifies individuals who are infected with SARS-CoV-2 at the time of testing, as well as other respiratory viruses, meaning that the hospital will be able to quickly differentiate between those with COVID-19 and those with other diseases.

The testing equipment is made up of three components:

Hamilton STAR

The first of its kind in GOSH, this helps enable pre-admission testing to ensure that those entering the hospital, including patients and staff, are free of SARS-CoV-2. This piece of equipment is vital for creating the additional capacity needed to screen all patients for SARS-CoV-2 prior to admission, and for symptomatic staff.

QlAsymphony

This is used to run regular full screening for all inpatients. As well as testing for SARS-CoV-2, this equipment tests for a range of other respiratory viruses.

QuantStudio

This is used to analyse the samples from QIAsymphony and allows the hospital to identify who has SARS-CoV-2 and other viruses.

The new equipment is housed in the Camelia Botnar laboratories at GOSH, and has revolutionised GOSH's COVID-19 testing capacity, allowing staff, patients and their families to be rapidly and accurately tested at any time of day. It is the first time the hospital has had access to a testing kit like this. The equipment has delivered a pre-admission screening process for patients as well as large-scale testing across the entire hospital, targeting inpatients, their families and staff. Earlier on in the pandemic the hospital had to borrow testing equipment and repurpose other testing equipment to meet demand. With the new suite of equipment, the hospital has been able to expand its capacity, and reassure patients and their families that they are coming into a safe environment.

With the new suite of testing equipment, the hospital has been able to expand its capacity, and reassure patients and their families that they are coming into a safe environment.



Get in touch

This has been an extraordinary year with extraordinary challenges, but this year has also drawn out the best in people and inspired innovation in healthcare and treatments. Despite everything, we continue to work hard to adapt to the evolving landscape and continue to support the incredible work that the hospital is involved in every day to benefit children and their families.

There are so many ways you can help us continue to make a difference to the inspiring children, their families and the remarkable staff at the hospital. Whether you choose to take part in an event, fundraise for us, make a donation, or leave a gift in your Will – your support, however big or small, is helping to create a better future for seriously ill children at GOSH and around the world.

Do get in touch if you'd like to find out more how you can help further, we'd love to hear from you. To make a one-off or regular gift, please visit **gosh.org/donate** or call **020 3841 3131**.

If you would like to discuss making a major gift, please email **philanthropy@gosh.org** or call Rachel Hughes on **020 3841 3083**. If you are thinking about leaving a gift in your Will please visit **gosh.org/legacy** or email **legacy@gosh.org**.

For corporate partnerships, such as employee fundraising and engagement, commercial opportunities, one-off events and campaigns, or to introduce payroll giving, please contact **companies@gosh.org**.

To take part in one of our charity fundraising events, please visit **gosh.org/events** to find out more.

If you're interested in finding out more about our Special Events and Galas, please contact **special.events@gosh.org**.

