



Great Ormond Street
Hospital for Children
NHS Foundation Trust



Quality Report 2017/18

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Cover: **Naveen**, is seven years old and comes to GOSH regularly for treatment.

Understanding the *Quality Report*

We recognise that some of the information provided may not be easily understood by people who do not work in healthcare. So, for clarity, we have provided explanation boxes alongside the text.

This is a 'what is' box

It explains or describes a term or abbreviation found in the report.

"Quotes from staff, patients and their families can be found in speech bubbles."

Juliana is just about to turn two years old. Here she is playing with a toy telephone in one of the hospital's play rooms.



What is the *Quality Report*?

The *Quality Report* is an annual report produced for the public by NHS healthcare providers about the quality of services they deliver. Its aim is to enhance accountability and engage leaders of NHS organisations in their quality improvement agendas. The *Quality Report* is a mandated document, which is laid before Parliament before being made available to patients, their families, and the public on the NHS Choices website.

What does it include?

The content of the *Quality Report* includes:

- Local quality improvement information, which allows trusts to:
 - demonstrate their service improvement work
 - declare their quality priorities for the coming year and how they intend to address them
- Mandatory statements and quality indicators, which allow comparison between trusts
- Stakeholder and external assurance statements

Great Ormond Street Hospital for Children NHS Foundation Trust (GOSH) has a long-standing reputation as one of the finest paediatric hospitals in the world. We are keen to share information publicly about the quality of our services and about our continuous improvement work.

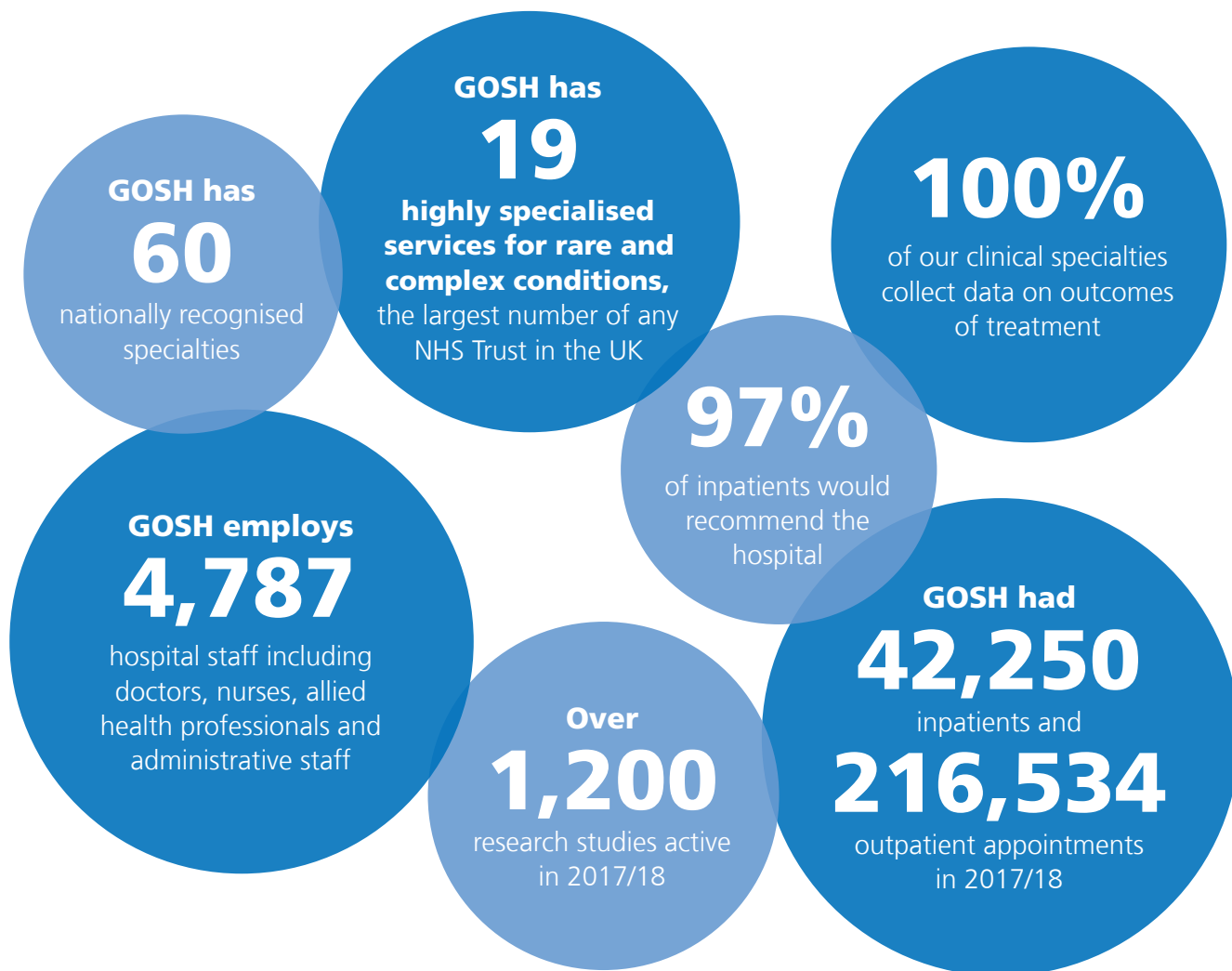
What is NHS Choices?

NHS Choices is the UK's biggest health website. It provides a comprehensive health information service to patients and the public.

What is a Foundation Trust?

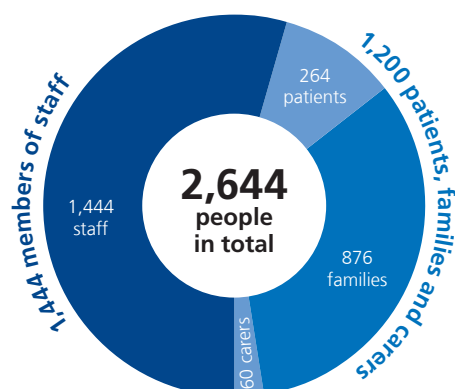
A Foundation Trust is a type of NHS trust in England that has been created to devolve decision-making from central government control to local organisations and communities. NHS Foundation Trusts provide and develop healthcare according to core NHS principles – free care, based on need and not on ability to pay. NHS Foundation Trusts have members drawn from patients, the public, and staff, and are governed by a board of governors comprising people elected from and by the membership base.

Our hospital



Our Always Values

We consulted very widely with staff, patients and families to derive our values:



After an extensive consultation and development period on values and the behaviours that demonstrate them, we formally launched *Our Always Values* in March 2015. Since then, *Our Always Values* has been a visible representation of our commitment to our patients, families and staff. These logos appear throughout the report where work described reflects *Our Always Values*.

Always



Welcoming



Helpful



Expert



One Team

Our strategy – fulfilling our potential

In spring 2017, the Strategy and Planning Team worked with our staff and Members' Council to review and refresh the GOSH strategy. We assessed the issues and opportunities we face, and thought carefully about our vision and future.

Our work identified the following priorities:

- We will achieve the best possible outcomes through providing the safest, most effective and efficient **care**.
- We will attract and retain the right **people** through creating a culture that enables us to learn and thrive.
- We will improve children's lives through **research** and innovation.
- We will transform care and the way we provide it through harnessing **technology**.
- We will use our **voice** as a trusted partner to influence and improve care.
- We will create inspiring **spaces** with state-of-the-art equipment to enhance care delivery and learning.
- We will provide timely, reliable and transparent **information** to underpin care and research.
- We will secure and diversify **funding** so we can treat all the children that need our care.

These priorities are presented in a 'strategy house' (see opposite page) along with our mission, vision and *Our Always Values*. Together, they form a framework for our staff and leadership team for planning, decision-making and the daily care of our patients.

In November 2017, the Trust ran its first ever 'Open House' – a week of activities to celebrate how we at GOSH help children and young people with the most complex needs to fulfil their potential.



Ali Mohammed and Nicola Grinstead get to grips with strategy characters to help launch GOSH Open House week in the Lagoon.



Nursing staff with the team from our Clinical Simulation Centre during GOSH Open House.

Fulfilling our potential.

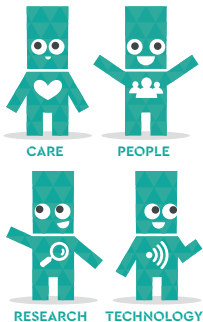
Our mission is to put the child first and always – this describes why GOSH exists.

**The child
first and always**

Our vision has been updated to better describe what lies at the heart of the work we do at GOSH – to help the sickest children with complex health needs to fulfil their potential.

**Helping children with complex
health needs fulfil their potential**

To turn our vision into goals we have defined four areas of focus around care, people, research, and technology.



CARE ♥

We will achieve the best possible outcomes through providing the safest, most effective and efficient care.

PEOPLE 👤

We will attract and retain the right people through creating a culture that enables us to learn and thrive.

RESEARCH 🔍

We will improve children's lives through research and innovation.

TECHNOLOGY 🤖

We will transform care and the way we provide it through harnessing technology.

VOICE 🗣️

We will use our voice as a trusted partner to influence and improve care.

SPACES 🏠

We will create inspiring spaces with state-of-the-art equipment to enhance care delivery and learning.

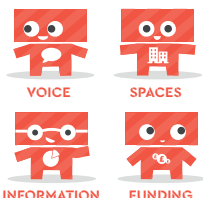
INFORMATION 📊

We will provide timely, reliable and transparent information to underpin care and research.

FUNDING 💰

We will secure and diversify funding so we can treat all the children that need our care.

To deliver our work we need to have the right capabilities, resources, and programmes of work.



Our Always Values are the guiding principles for everything we do and will help us deliver our ambition.

**Always
welcoming**

**Always
helpful**

**Always
expert**

**Always
one team**

Ethan was diagnosed with retinoblastoma when he was just nine days old. His treatment at GOSH started two weeks later, when he had a Hickman line put in and he started his first of six chemotherapy treatments on Lion Ward.



Electronic Patient Record programme

We are part way through an ambitious programme to implement a comprehensive, state-of-the-art, future-proof Electronic Patient Record (EPR) system. Our EPR vision is that every member of the team caring for a child can always access the information they need – rapidly, confidently and from a single source. Patients, parents and carers, as well as care providers in other hospitals and care settings, will also be able to see relevant records and contribute information between visits to GOSH.

The EPR, alongside the Digital Research Environment, will support a transformational change programme across the Trust and benefits will be realised through cultural change and full engagement from all staff and the leadership team. The EPR programme is being carefully managed in phases, in partnership with our EPR system provider, to ensure the best possible system is built for go-live in April 2019.

The three main benefits of our new EPR system are:

- Improved quality of care and enhanced patient safety
- Patients and their families become partners and the patient experience is improved
- Enabling research breakthroughs

Digital Research Environment

As part of the Research and Innovation Strategy, the Trust has procured a data store and digital research platform, called the Digital Research Environment (DRE), to work alongside the new EPR system. The DRE will provide a rich source of data for audit and will underpin pioneering research to find cures for complex and rare conditions.

The platform will allow us to keep pace with our peers regarding recruitment to clinical trials and also enable GOSH to capitalise on future digital developments such as artificial intelligence and advanced clinical decision support, underpinning research studies for many years to come.

FUTURE PROOF

ELECTRONIC
PATIENT RECORDS

Part 1:

A statement on quality from the Chief Executive

At GOSH, we are committed to fostering a culture of continuous improvement in everything we do. The *Quality Report* details our performance in the year's key improvement projects aligned to our three quality priorities:

- **Safety** – to eliminate avoidable harm
- **Clinical effectiveness** – to consistently deliver excellent clinical outcomes, with the vision to be the leading children's hospital in the world
- **Experience** – to deliver kind and compassionate care, and communicate clearly to build confidence and ease

Areas for improvement are identified in a number of ways. Issues may be flagged via staff, internal or external audit or review, or via any of the myriad ways through which we invite feedback from our patients and their families.

As detailed in Part 2c and Part 3, we have performed well against quality indicators set by the Department of Health and met nearly all our reportable healthcare targets set by NHS Improvement.

After considerable work to overhaul our processes and systems for data collection, I am pleased that we are now able to report referral-to-treatment (RTT) times (since January 2017) and for every month of quarter four 2017/18, we met the national target of treating 92% of patients within 18 weeks.

I am proud of the further progress made this year to identify and prevent deterioration in our young patients. This programme of work continues to draw together expertise from across the Trust, supporting our teams to deliver the excellent quality of care our patients deserve.

Safety

The Sepsis 6 protocol at GOSH was introduced last year to increase timely recognition and treatment of sepsis. This year we developed and launched an app to allow staff to complete the protocol electronically. For sepsis, we know that swift action is vital, so it is encouraging to see that with the app there have been continued improvements in actions being taken within one hour. To continue greater visibility of patients at risk of sepsis, an alert has been developed which links to the relevant ward's electronic patient status at a glance (ePSAG) board to notify the clinical team of any patient who may be at risk of developing sepsis. Our Clinical Site Practitioner team has a Trust-wide sepsis list to ensure they are informed and aware of those patients at risk.

Following our previous audit of neonatal care, we have continued to focus on the areas highlighted for improvement. As our neonatal patients can be located across more than 20 different wards, many teams are involved in their care and it is key that our systems are coordinated. We have developed a real-time report to identify where neonates are in the hospital at any time, and streamlined the admission processes, which includes an automated prompt to alert the nursing leads when a baby on their ward is eligible for screening, reducing the risk of missing patients who need a bloodspot test. As a result of our efforts, we have seen an increase in the percentage of babies admitted who had a bloodspot test within the required timeframe from an average of 93% to 98%.

As so many specialties and teams are involved in caring for our neonates, education and training for all these teams is critical. This year we launched a programme of neonatal education, including the appointment of a dedicated neonatal practice educator to deliver face-to-face training, an online hub for standardised resources, and e-learning modules in neonatal jaundice and bloodspot screening. Following these interventions, we have seen a sustained improvement in how we manage neonatal jaundice.

For many of the children who come to GOSH, one of the most daunting experiences of their stay is when a needle needs to be used to draw blood or give medication. This anxiety and fear can lead to distress which further intensifies their pain and can interfere with their procedure. If ongoing venous access such as a peripheral cannula is required, there is also a risk of extravasation, which is the inadvertent leakage of a medicine or fluid from its intended vein into the surrounding tissue. This has the potential to cause severe tissue injury or necrosis. To improve the safety and experience of our children and young people, we have developed a paediatric version of the national Vessel Health and Preservation Framework, and over the next year will be implementing it across all of our clinical areas.

Clinical effectiveness

In 2016 we developed the Clinical Outcomes Hub. This year, we focused on expanding its use to more clinical teams, developing dashboards of the key clinical measures for their services. This data enables clinical teams to more readily use this information in decision-making, to notice trends, and for service improvement.

As demand for our services remains high, we need to rise to the challenge of ensuring that we have sufficient capacity to see and treat all the patients that need our care. This means very careful management of patient flow through the hospital and back home or to local hospitals. Only then can we keep waits for treatment as low as possible and ensure operations are only rescheduled for clinical reasons.

This year we found that optimum decision making around how patients should be best managed was being hampered by incomplete or out-of-date information. There were multiple systems for providing key data such as current bed occupancy, expected admissions, and discharges. Over the last year a team of expert users from across the Trust has come together to redesign our systems. They developed a single source that captures all necessary information and improves the management of our patients and services. We also increased on-the-ground support to surgical specialties by expanding the operational team tasked with real time problem solving and improving coordination of services. I am pleased to say that these initiatives have already seen results with on-the-day cancellations falling from an average of six per week in 2016 to two per week since January 2018.

In 2018/19 we will be working to improve the early recognition of deteriorating children and young people through the electronic Paediatric Early Warning System (PEWS). This is a score-based system which uses a combination of factors, such as physiological findings, escalation responses and a strong communication framework, to identify potential deterioration.

Experience

The views of our patients and families are paramount in informing the continual improvement of clinical and support services across GOSH.

Many of our patients have conditions that impact on their lives beyond their time being cared for at GOSH. We therefore have a duty to ensure that the transition from paediatric to adult services is as positive an experience as it can be. It's a complex challenge, and an area that GOSH patients and parents have told us needs improvement. This year we focused on developing our *Growing Up, Gaining Independence* programme to ensure it meets the needs of all young people regardless of which specialty or specialties provide their care. We are now rolling this out across the Trust and over the next year we will be working to embed the programme into practice, aiming for all patients aged 12 and over to be started on the *Growing Up, Gaining Independence* programme.

We also know that the quality of our food is something that matters to our patients and families, and it is important to us that we provide food that is nutritious and appropriate for our patients. We have taken into account feedback from a range of sources to increase the variety and flexibility of our menus. We will continue to work to improve the options for our patients, including new ways of ordering and food packaging as well as menu choice by age.

Accuracy of data

We are very mindful that much of the information we have provided in this report is dependent on the quality of the data we can obtain. In preparing the *Quality Report 2017/18*, there are a number of inherent limitations that may impact the reliability or accuracy of the data reported. These include:

- Data is derived from a large number of different systems and processes. Not all of these are subject to external assurance, or included in internal audit each year.
- Data is collected by a large number of teams across the Trust alongside their main responsibilities, which may lead to differences in how policies are applied or interpreted. In many cases, data reported reflects clinical judgement about individual cases, where another clinician might reasonably have classified a case differently.
- National data definitions do not necessarily cover all circumstances, and local interpretations may differ.
- Data collection practices and data definitions are evolving, which may lead to differences over time, both within and between years. The volume of data means that, where changes are made, it is usually not practical to reanalyse historic data.

Where we have been unable to provide accurate data in relation to key healthcare targets, it is clearly stated.

The Trust and its executive team have sought to take all reasonable steps and exercise appropriate due diligence to ensure the accuracy of the data reported, but recognises that it is nonetheless subject to the inherent limitations noted above.

Following these steps, to my knowledge, the information in this document is accurate.



Peter Steer
Chief Executive

Part 2a:

Priorities for improvement

This part of the report sets out how we have performed against our 2017/18 quality priorities. These have been determined by a combination of national priorities as well as local priorities identified by staff, patients and their families, and wider stakeholders such as referrers and commissioners. The quality priorities fall into three categories: safety, clinical effectiveness and experience. These categories were defined by Lord Ara Darzi in his 2008 NHS review for the Department of Health, in which he emphasised that quality should be a central principle in healthcare.



Safety

We are committed to reducing avoidable harm and improving patient safety as rapidly as possible. Our safety initiatives aim to ensure that each patient receives the correct treatment or action the first time, every time.

Clinical effectiveness

At GOSH, we seek to provide patient care that is amongst the best in the world. As a major academic centre, we work with our patients to improve the effectiveness of our care through research and innovation. We use national and international benchmarks to measure our effectiveness whenever possible, and we publish this outcomes data on our website and in renowned academic journals. To measure our effectiveness from the patient's perspective, we use Patient-Reported Outcome Measures (PROMs).

Experience

We wish our patients and their families to have the best possible experience of our treatment and care. Therefore, we measure patient experience across the hospital and seek feedback from our patients, their families, and the wider public to improve the services we offer. We do this via:

- Membership, patient and member surveys
- Focus groups and events
- Social media
- Asking patients and families about their experience within 48 hours of discharge

To learn about the opening of the Premier Inn Clinical Building as part of our hospital site redevelopment work, see page 34 of the GOSH Annual Report 2017/18.

Reporting our quality priorities for 2017/18

The six quality priorities reported for 2017/18 are:

Safety

- Improving sepsis awareness
- Improving the quality and safety of care for inpatient neonates and small infants

Clinical effectiveness

- Developing Trust-wide access to outcomes data through the Clinical Outcomes Hub
- Optimising our capacity to improve patient access and flow

Experience

- Improving our young people's and their parents' and carers' experience of transition to adult healthcare services
- Improving the quality of our food

In this section, we report on our performance against each quality priority by outlining:

- What we said we'd do
- What we did
- What the data shows
- What's going to happen next
- How this benefits patients

Immanuela first came to GOSH when she was two and a half. She has Amniotic band syndrome in her right foot, which is like a ring on her leg that stops the blood from flowing properly. Over the years, Immanuela has had tens of plastic surgeries. She turned 14 last week.

Improving sepsis awareness

Since a national report in November 2015¹, sepsis awareness has grown as an NHS priority to avoid preventable health problems or death through early detection and treatment of sepsis. Research shows that for every hour of delay in treatment of a septic patient, mortality increases by 7%.

What we said we'd do

Having developed and implemented a new sepsis protocol in 2016/17 to increase timely recognition and treatment of sepsis in our patients, we said that in 2017/18 we would build on this work by:

- Ensuring all first-line antibiotics are stocked on every ward so that they can always be delivered within the first hour.
- Incorporating an automated alert for sepsis into our electronic patient observation system, which will guide staff through to an electronic Sepsis 6 tool when a patient triggers against the flag signs for sepsis.
- Providing further education to ward areas to overcome specific challenges in delivering the Sepsis 6 protocol in one hour.
- Raising greater awareness among parents through leaflets given post-surgery and in outpatients and via general communications on the hospital website.

What we did

Initially the Sepsis 6 protocol was introduced as a paper-based tool and data collection was manual and time-intensive. To improve this process, we began developing an in-house Sepsis 6 app which would allow staff to complete the Sepsis 6 electronically using their ward devices, and for Trust-wide data to be collected in a central database. This significantly improved the opportunity for data analysis and for support and further education to be directed to the wards that needed it most. The app was launched across the hospital in September 2017. Since then, we have seen an improvement in timely delivery of the Sepsis 6 protocol within one hour, and the level of documented decision-making among the clinical teams.

While the Sepsis 6 app allowed for some improvements once sepsis risks had been identified by staff, further support was required for staff in first recognising the patients who may be at risk of developing sepsis. Utilising the patient observation data we have available through our electronic system, we began creating and testing an algorithm that would auto-search the observation data for the risk signs of sepsis.

What is sepsis?

Sepsis is a life threatening condition that arises when the body's response to an infection injures its own tissues and organs. Sepsis leads to shock, multiple organ failure and death, especially if not recognised early and treated promptly.

UK Sepsis Trust

What is 'Sepsis 6'?

Sepsis 6 is a list of six actions that if applied within the first hour of presentation can double the chances of survival. They are the following:

1. High flow oxygen
2. Obtain intravenous (in to vein)/intraosseous (in to the bone) access and take bloods (gas, lactate and blood cultures)
3. Give intravenous/ intraosseous antibiotics
4. Consider fluid resuscitation
5. Involve senior clinician early
6. Consider inotropic support early (medicines that change the force of heart contractions)

What is a Clinical Site Practitioner?

A Clinical Site Practitioner (CSP) is a senior nurse in charge of the day-to-day operational management of the hospital.

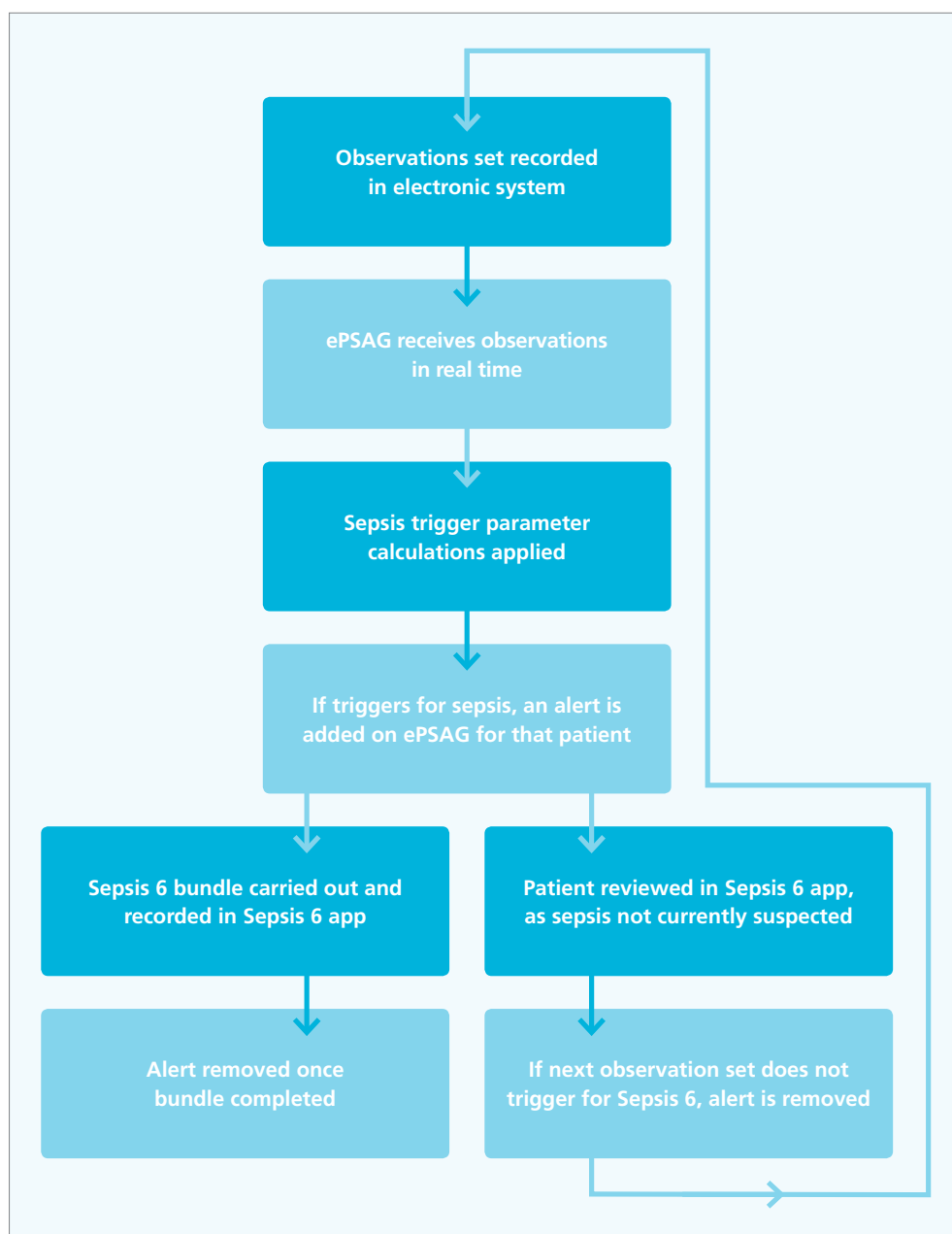


¹ National Confidential Enquiry into Patient Outcome and Death (2015) Sepsis: Just Say Sepsis! London: NCEPOD. Available online at www.ncepod.org.uk/2015sepsis.html



Risk factors found by the system then flag an alert on the relevant ward's electronic patient status at a glance (ePSAG) board to notify the clinical team of any patient who may be at risk of developing sepsis so they can initiate clinical review without delay. The alert was then linked to any data inputted on the Sepsis 6 app so it would change colour or be removed from ePSAG when Sepsis 6 was completed or when sepsis was ruled out by the clinical team. After testing on three pilot wards, the alert was rolled out across all wards in November 2017. This has ensured greater visibility of patients at risk of sepsis on each individual ward. In addition, a Trust-wide 'sepsis list' was developed for our Clinical Site Practitioner team in the new clinical operations room, to ensure their oversight was supported by our technology.

Screenshot of Sepsis 6 app.



Electronic alert process for suspected sepsis.

In addition to the implementation of sepsis alerts on our electronic patient observation system, we have also made the following improvements:

1. All first-line antibiotics are now stocked and easily accessible on every ward to ensure that there is no unnecessary delay in patients receiving the antibiotics they need within one hour of recognition that they may be at risk of sepsis.
2. A comprehensive sepsis training package is now a required competency for all clinical staff at GOSH. Facilitated simulation training sessions are now available to any ward that requires further education to overcome specific challenges in delivering the Sepsis 6 protocol. Ward-level and specialty-level dashboards have also been created to enable teams to look at their recognition and management performance and to highlight areas for improvement.
3. At the point of discharge, all families at GOSH receive an information leaflet about the signs and symptoms of sepsis with their discharge summary. This, alongside information on our hospital website and social media accounts, aims to raise greater awareness amongst the public of what sepsis is, how to spot it, and what to do if you have a concern.

"The introduction of the Sepsis 6 pathway has provided a structured approach in recognition and management of the septic child. It is straightforward to use for staff of all levels, and ensures that our patients receive the appropriate care in a timely manner."
*Practice Facilitator,
Barrie Division*

What the data shows

Sepsis 6 protocols completed within one hour

The current international average for completing the Sepsis 6 protocol within one hour is 47%². Figures 1-3 demonstrate compliance with the protocol, which is significantly above the international average since it has been rolled out to all inpatient areas. The improvements have sustained, with teams achieving the highest rates in 2017/18³.

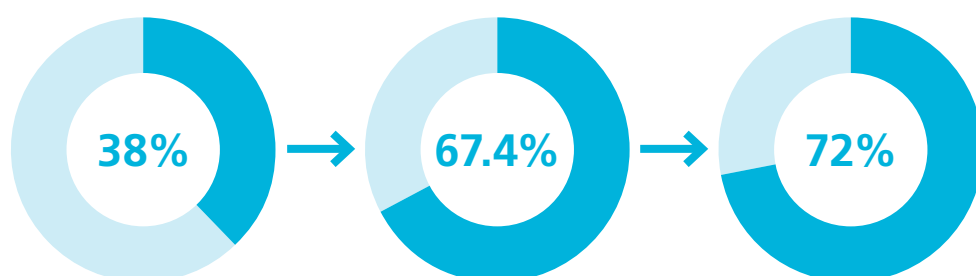


Figure 1: Sepsis 6 protocols completed within one hour in the pilot areas (Squirrel, Elephant, Lion and Giraffe Wards) from September 2016 to January 2017.

Figure 2: Sepsis 6 protocols completed within one hour in all inpatient areas (including ICUs) from January to March 2017.

Figure 3: Sepsis 6 protocols completed within one hour in all inpatient areas (including ICUs) from April 2017 to March 2018.



One Team

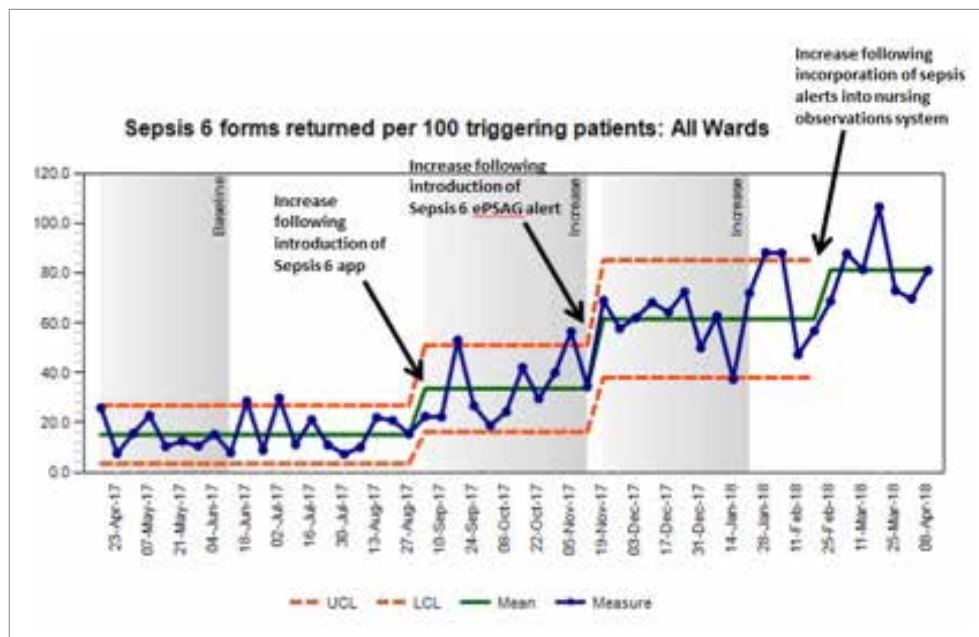


² Levy MM et al (2014). Surviving Sepsis Campaign: association between performance metrics and outcomes in a 7.5-year study. *Intensive Care Medicine* 40(11) pp 1623-33.

³ The indicator applies to children who are inpatients on wards that use the electronic observation system.

Sepsis 6 forms returned per 100 patients that met the risk criteria

An average of 62% of patients on the ward who met the risk criteria from November 2017 to February 2018 were screened for sepsis. The average increased to 81% from late February 2018 and has sustained for the last seven weeks. The annotated Statistical Process Control chart below shows the improvements made and the data from the past year:



What's going to happen next?

This improvement work has now become 'business as usual' and is managed by each clinical division. There is a nominated Medical Sepsis Lead for the Trust to ensure capacity to respond to any further national guidance that is published and to ensure best practice is reflected here at GOSH. The hospital successfully delivered a CQUIN focused on sepsis and antibiotic use in 2017/18 and agreement has been made for a further CQUIN in 2018/19 to continue to support this important work.

How this benefits patients

Earlier detection of patients at risk of developing sepsis:

- Reduces potential harm and risk of mortality
- Reduces likelihood of a prolonged hospital admission due to a sepsis-related complication
- Can reduce a patient's course of antibiotic treatment

What is a Statistical Process Control chart?

Statistical Process Control (SPC) charts are used to measure variation and improvement over time.

Importantly, SPC takes into account natural variation of data, which, if acted upon without analysis, is an inefficient approach to improvement work. Upper control limits (UCL) and lower control limits (LCL) are calculated to help with data analysis. SPC methodology enables us to focus on 'special cause' variation, which identifies areas that require further investigation and action.

What is a baseline period?

A baseline is the period of measurement to establish 'how things are' before changes are made to a process, to enable comparison 'before' and 'after'. An average (mean) of the data from the baseline period would be used for that comparison.

What is CQUIN?

The Commissioning for Quality and Innovation (CQUIN) payment framework makes a proportion of NHS healthcare providers' income conditional upon improvement. The framework aims to support a cultural shift by embedding quality and innovation as part of the discussion between service commissioners and providers, and constitutes 2.5% of the Actual Contract Value between commissioner and provider.

Improving the quality and safety of care for inpatient neonates and small infants

When babies are born very prematurely, or with a complex medical or surgical condition, they may require specialist or intensive care at GOSH. We don't have a dedicated neonatal ward, as babies are admitted to the most appropriate ward to provide the expert care they require. This means our neonatal patients can be located across more than 20 different wards, so it is really important that we coordinate our neonate care across wards to deliver the care every newborn baby needs, in addition to the specialist input they receive for their condition.

What we said we'd do

We said we would improve the quality and safety of care for inpatient neonates. This work was in response to findings from a clinical audit of our neonatal care, which identified three key areas for improvement:

- Reduce the numbers of avoidable repeat samples for bloodspot screening, and ensure every baby at GOSH eligible for screening receives this within the required timeframe so any serious conditions can be diagnosed and treated in a safe and timely manner.
- Ensure ward staff are able to effectively identify and manage the treatment of babies with neonatal jaundice in line with evidence-based practice.
- Raise awareness of the importance of neonatal fluid management and provide a standardised approach for babies.

What we did

We set up a project team led by the Consultant Neonatologist and Neonatal Nurse Advisor to implement improvements in the areas identified and standardise neonatal care across the hospital.

To help the neonatal team identify where neonates are in the hospital, we developed a real-time report on the intranet, using data from our patient information system that highlights current inpatient neonates and details such as age and weight.

We streamlined admission processes for neonates to ensure staff are able to access the demographic information required to complete bloodspot screening.

An automated prompt system was introduced that alerts the nursing leads when a baby on their ward is eligible for screening. This helps reduce the risk of missing patients who need a bloodspot test.

A comprehensive programme of neonatal education was launched to improve medical and nursing staff skills in the key areas of focus. This included the appointment of a dedicated Neonatal Practice Educator to deliver face-to-face training, information folders on every ward and an online hub to improve staff access to standardised resources. E-learning modules in neonatal jaundice and bloodspot screening have been developed, aimed at both medical and nursing staff.

A Trust guideline for the management of neonatal intravenous fluids has been developed and implemented with specialty, pharmacy and neonatal leads. This has improved standardisation of care, although ongoing work is needed to raise awareness of the importance of neonatal fluid management.

A new neonatal care pathway was developed for use on each ward so every infant receives the required neonatal care and screening at the right time. A standardised process for documentation means staff are better able to confirm that neonates have received the care they need.

We held 'Neonatal November', an awareness-raising month, across the hospital to highlight the core aspects of neonatal care and promote the new resources and training opportunities. This was delivered through information stands and drop-in teaching sessions for staff and parents.

What is a neonate?

'Neonate' means newborn – a full term baby under 28 days, or a baby born at less than 37 weeks gestation until they have reached a corrected gestational age of 44 weeks.

What is bloodspot testing?

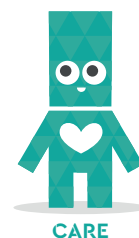
Bloodspot testing is carried out as part of the national newborn screening programme when a child is five to eight days old, to ensure early detection of nine rare but serious conditions. All newborn babies at GOSH in specialist care are tested if this has not already happened prior to their admission so any conditions can be diagnosed and treated in a safe and timely manner. If the original sample doesn't meet requirements due to practitioner error or delays in testing, repeat samples are sometimes required. This is referred to as an 'avoidable repeat'.

What is jaundice?

Jaundice is the medical word used to describe a yellowing of the skin and white parts of the eyes due to high levels of bilirubin, a waste product formed from our blood. Neonatal jaundice is a very common condition, particularly in babies born prematurely. In the majority of cases, jaundice is harmless and fades without treatment. A very small number of babies can develop more significant jaundice that requires treatment.



Expert

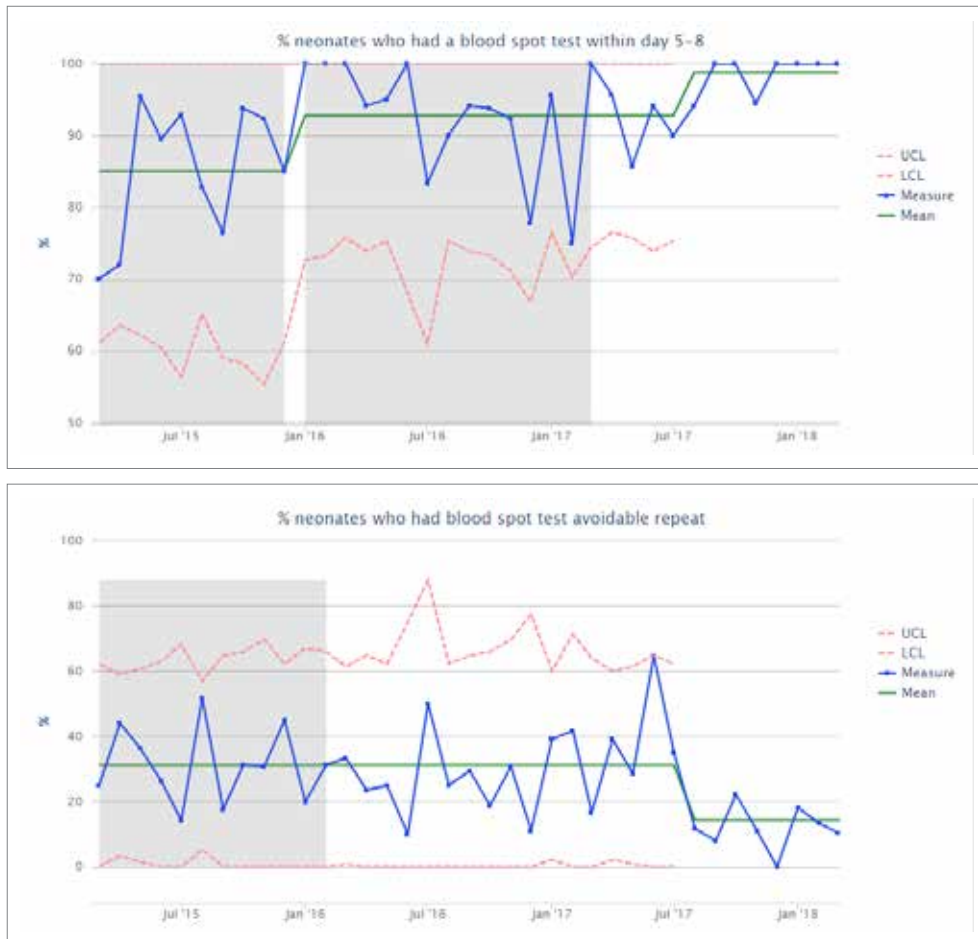


CARE

What the data shows

The Neonatal Nurse Advisor reviews every case of neonatal jaundice to identify whether it has been managed in line with evidence-based guidelines. We have seen a sustained improvement in how we manage neonatal jaundice, increasing from an average of 62% of neonates managed in line with National Institute for Health and Care Excellence (NICE) guidelines to 80% since June 2017 following the introduction of the new education package.

We have seen an improvement in the percentage of babies admitted who had a bloodspot test within the required timeframe, increasing from an average of 93% to 98%. We have also decreased the percentage of neonates who required an avoidable repeat screening from an average of 31% to 11%.



What's going to happen next?

We will continue to monitor our data closely to make sure improvements are sustained. The project was completed in March 2018. Each ward is now operationally responsible for ensuring they have skilled staff able to deliver safe neonatal care using the new resources and education package.

Compliance with the new fluid management guideline was audited and further work will be carried out by individual wards to improve awareness and education in the areas identified.

We are currently developing an electronic solution to help reduce the risk of errors when plotting babies' bilirubin blood results onto treatment charts. We plan to launch this in the summer 2018.

How this benefits patients

- Timely identification of infants requiring treatment
- Reduction in the risk of potential harm through standardisation of care
- Ward staff better supported to provide safe neonatal care

Why is neonatal fluid management important?

Fluid and electrolyte therapy can play an essential role in caring for unwell children. The physiology of premature and newborn babies means they have higher total body water content than older children, particularly in their first month of life, which means their fluid therapy needs to be managed differently.

What is the National Institute for Health and Care Excellence (NICE)?

NICE provides national guidance and advice to improve health and social care in England and the rest of the UK.

"The new 'Current Neonates' report makes it so much easier for me to see where all the neonatal patients are around the Trust at a glance. Access to additional information such as current weight is especially useful when I am trying to look for premature infants and has helped me ensure they are receiving the care and screening they need."
Neonatal Nurse Advisor

"This work has made a huge difference to the care of the neonatal patient at the hospital. There have been significant improvements in compliance of both the management of neonatal jaundice in line with best practice guidelines and newborn bloodspot screening as a result of the project."
Consultant Neonatologist

Clinical effectiveness

Developing Trust-wide access to outcomes data through the Clinical Outcomes Hub

Clinical outcomes are broadly agreed, measurable changes in health or quality of life that result from healthcare. Clinical outcomes data is essential to the understanding of treatment effectiveness and efforts to improve clinical care.

Here at GOSH, every specialty collects outcomes data and many teams have published their outcomes to the Trust website. But, we also strive for greater visibility of outcomes data *within* the hospital, to enable our clinical teams to more readily use that information in decision-making, to notice trends, and for service improvement.

What we said we'd do

We said that by working closely with our specialties, we would develop our Clinical Outcomes Hub to display effectiveness data within the hospital in ways the clinical teams found most informative. We said that wherever possible, we would establish direct data feeds to enable these dashboards to update automatically.

What we did

In 2016, the Clinical Outcomes Hub platform was built and existing content was migrated to it, including charts of readmission rates for surgical specialties and a range of resources for clinical staff who wanted to make their outcomes data electronically available.

In 2017/18, we focused on working closely with clinical teams to develop dashboards of key clinical measures for their services. The work was underpinned by a commitment to the clinical teams to make their data available to them in ways they found most useful. This meant taking an iterative approach with each team until we had it right – both in terms of data analysis and in terms of visual display. In this past year, we have developed bespoke dashboards for the following services:

- **Neurosurgery**
Adverse event rate by severity grade and by sub-specialty, surgical site infection rates, non-elective readmissions, shunt infections and early shunt re-operations.
- **Specialist Neonatal and Paediatric Surgery**
Non-elective readmissions, unscheduled returns to theatre, inguinal hernia repair re-do surgery, surgical site infections, and a link to the Friends and Family Test data for patient experience.
- **Child and Adolescent Mental Health**
A range of 15 clinician, parent/carer and patient-reported outcome measures.
- **Urology**
Non-elective readmissions, pyeloplasty revision surgery, hypospadias repair revision surgery, primary closure revisions and bladder neck reconstruction revisions for bladder exstrophy, unscheduled returns to theatre after stones procedures, surgical site infections, and a link to the Friends and Family Test data for patient experience.



Clinical Outcomes Hub homepage.



Specialist Neonatal And Paediatric Surgery – unscheduled return to theatre within seven days.

What is the Clinical Outcomes Hub?

The Hub provides a one-stop-shop for:

- Information about the outcomes programme
- Outcomes dashboards
- Links to a range of data input tools
- Access to GOSH's national Specialised Services Quality Dashboard reports
- Links to outcomes on the Trust website

What are PROMs?

Measures of treatment outcome from the patient's perspective are called patient-reported outcome measures (PROMs). PROM questionnaires are important because they bring the patient voice to the understanding of treatment effectiveness.

"Having data from our departmental database presented on the Hub means we can easily refer to the figures. The dashboard updates automatically, so we have the most recent data at our fingertips without taking staff time to prepare it for meetings. The outcomes team also worked with us to ensure that the data was presented in ways that were most meaningful to us as a clinical team, enabling us to spot trends quickly."

*Mr Martin Tisdall,
Consultant Paediatric Neurosurgeon*

We also worked closely with the Infection Prevention and Control Team to upload and display data that is collected by the Trust-wide Surgical Site Surveillance (SSI) Programme. The programme collects and analyses the incidence and severity of surgical site infections to inform ongoing work to reduce their occurrence. This data is now part of the dashboards that we've developed for the surgical specialties.

Wherever possible, we've created links to data sources so that the data is refreshed automatically, saving staff time within services and ensuring the data is always up-to-date.



Landing page for collection of Craniofacial outcomes data sets.

Working in partnership with another project, we've linked to an electronic survey tool, built to capture a range of information by questionnaire. We've built several PROMs within this system, to enable clinical teams to collect outcomes data from the patient or family perspective using electronic handheld devices. For three services, we've created an interface on the Clinical Outcomes Hub that links to the survey tool, enabling a single point of access for outcomes data collection.

What the data shows

12/58

Proportion of specialties with a dashboard of outcome measures published on the Hub

59

Total number of outcome measures displayed on the Hub

12

Number of patient-reported measures collected via an electronic survey tool linked from the Hub

What's going to happen next?

- We will continue to add specialties' data to the Clinical Outcomes Hub, developing bespoke dashboards for all.
- Working in partnership with the Infection Prevention and Control Team, we will publish more SSI data to the Hub.
- We will increase the number of PROMs collected on the electronic survey tool via the Hub interface, with the aim to double that figure in the next year.
- We will work with the Electronic Patient Record programme team to ensure that all centrally-collected outcomes data is displayed on the Hub.
- We will develop a questionnaire for staff to discover what they find most – and least – useful about the Hub and what else they would like to be available on it.

How this benefits patients

Visibility of outcomes data:

- Supports clinical care
- Enables detection of trends for clinical learning or action
- Promotes openness and collaboration for patient benefit
- Presents opportunities for research and development

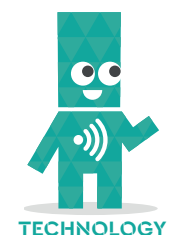
"As a surgeon on the international working group that agreed a standard set of outcome measures for craniofacial microsomia, I wanted to see us implement this data collection robustly. The sets incorporate detailed clinical assessments, parent-reported outcome measures and patient-reported outcome measures. The implementation had to be in a workable and inviting format for our very busy clinic, so data collection on paper was not an option. We worked closely with the outcomes team and QI analyst/developers to translate the outcome measures into electronic sets, available on an in-house survey tool.

Now, we're collecting rich and complete data that will build our knowledge of treatment outcomes for these conditions, and inform future research. This has been an exciting project to lead with exceptional and inspiring results from the Outcomes Team."

*Ms Justine O'Hara,
Consultant Craniofacial
and Plastic Surgeon*



Expert



TECHNOLOGY

Optimising our capacity to improve patient access and flow

With high demand for our care comes the challenge of managing patient access and flow through the system. We must ensure that the practical aspects of complex healthcare are well-managed so that waits are as low as possible, operations are only rescheduled for clinical reasons, and we can accept as many patients as possible who need our care.

What we said we'd do

We said that in 2017, we would launch the patient placement programme to explore and deliver system adjustments to improve efficiency and optimise capacity.

What we did

In the first few months, we learned that our ability to make excellent operational decisions was hindered by information that was often out-of-date or incomplete. This was because our systems for capturing and monitoring current bed occupancy, expected admissions, transfers, discharges and staffing levels for 'today, tonight and tomorrow' were an assortment of paper, spreadsheets and local databases. This meant that there was duplication, and that the complete picture was not available from any one source.

To address this, we brought together a group of expert users including bed managers, ward nurses, admission coordinators and information analysts to redesign our systems. The focus was on reliably capturing all necessary information electronically, in a timely manner, and in one system.

We also expanded our operational team to provide more on-the-ground support to the surgical specialties, to problem-solve in real time when issues arose, and to act as a coordinator to meet different clinical teams' priorities for their patients.

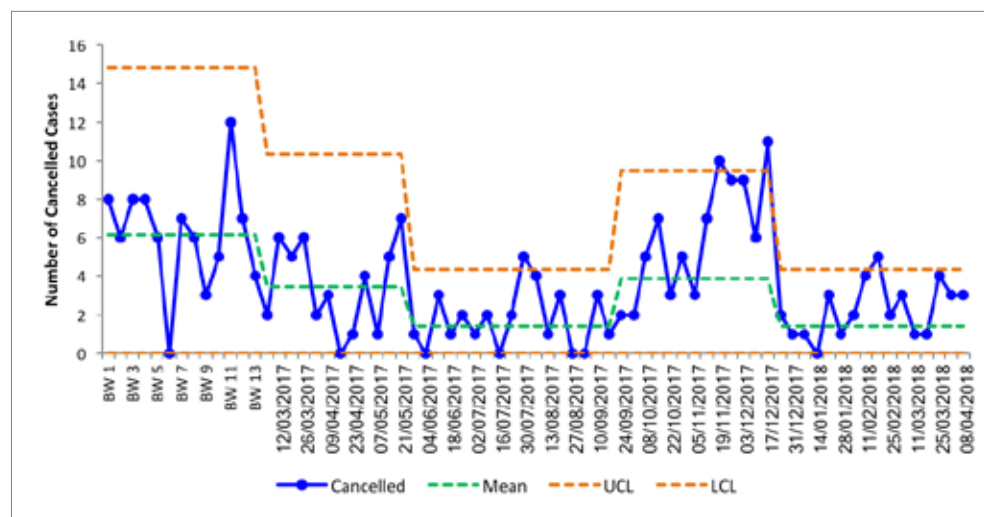
Through strengthening our operational team and developing a system to support day-to-day management of patient admissions, transfers and discharges, we have been able to treat more children and young people and reduce the number of patients we have had to reschedule at short notice.

"Having the planned admission lists in a standard format and available electronically is good for both our patients and our staff. Nursing teams report that now they have the right information to hand to place the patient on the ward that best meets their individual needs and in turn deliver the most appropriate care."
Clinical Operations Manager

What the data shows

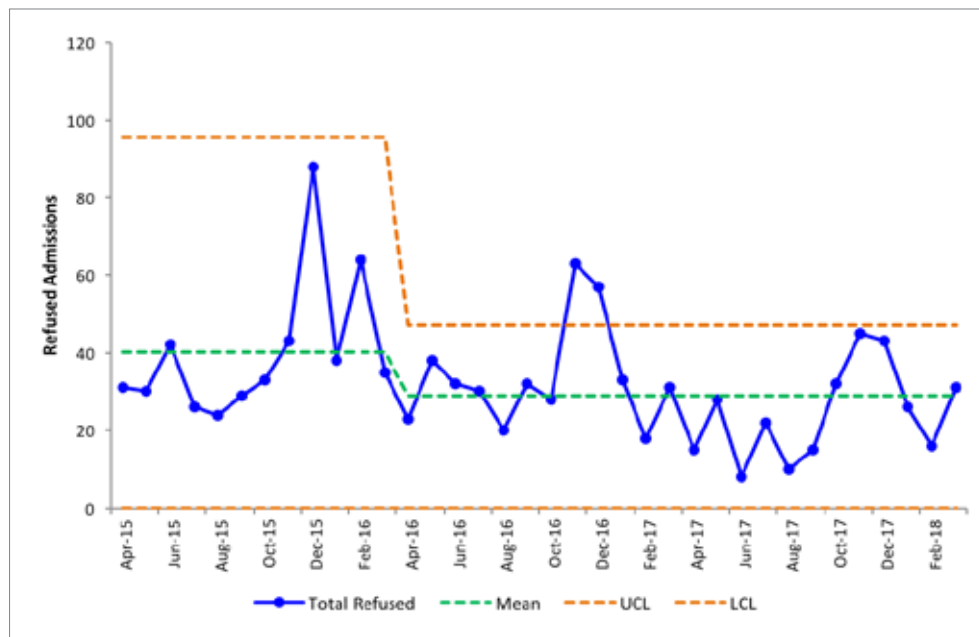
1. Number of on-the-day elective operation cancellations for bed capacity reasons

On-the-day cancellations of elective operations have fallen from an average of six per week in the best performing weeks (BW) of February to May 2016, down to an average of two per week since January 2018.



2. Number of clinically appropriate emergency referrals refused for non-clinical reasons

The data shows that the average refused admissions for non-clinical reasons was 40 per month for April 2015 to March 2016. The average reduced to 29 refused admissions per month from April 2016. Though there has not yet been a further reduction in refused admissions according to SPC methodology, there has been a clear reduction in seasonal variation, with 2017/18 seeing refusals during the high-demand winter months at their lowest level in recent years.



"The introduction of the clinical operations managers has markedly reduced the time taken to transfer a patient to another care provider when the provider is declaring they have no capacity to admit. As this liaison role was traditionally done by the nurse in charge on the ward, this has enabled nurses to focus on what they do best – providing clinical care."

Bed Manager



One Team



INFORMATION

What's going to happen next?

In 2018/19, we plan to extend our work with the electronic solution. We will build an Operational Hub, which will be a dedicated system where the operational teams can view real-time information across the whole hospital to support their decision-making. Once the Operational Hub is established, we will work closely with the Trust's Electronic Patient Record implementation team to maximise the benefits of a dedicated system and environment. We will also use the latest data science techniques such as predictive analytics to help us better plan our admission lists and staffing rosters.

How this benefits patients

- Fewer referrals refused
- More patients treated
- Fewer same-day cancellations of surgery

Experience

Improving our young people's and their parents' and carers' experience of transition to adult healthcare services

How young people with long-term conditions and their families are prepared for their move from paediatric to adult services has come under increasing scrutiny in recent years. In 2016, NICE published the guidelines, *Transition from Children's to Adults' Services for Young People Using Health or Social Care Services*. One of the underlying principles is that young people should start to be prepared for adult health services by the age of 14 at the latest.

As a stand-alone paediatric hospital providing highly specialised care, this principle presents a challenge for GOSH. It is not always clear by 14 years whether transfer to specialist adult health services will be necessary. In addition, some young people move to dedicated adolescent services located in other Trusts. In doing so, they may encounter similar challenges as those who move to adult services (including different environments, procedures and personnel) and consequently have similar preparation needs. In our transition improvement work, we wanted to follow the NICE guidelines as well as find new solutions to the mix of challenges we face.

What we said we'd do

- Define and set standards for transition plans.
- Focus on putting transition plans in place for young people aged 16 and over in 2017/18, and from 14 and over in 2018/19.
- Work in partnership with Barts Health NHS Trust and University College London Hospitals NHS Foundation Trust to improve support for young people with learning disabilities or additional needs.
- Build IT infrastructure to better support planning and documentation of transition.

NICE guidelines describe transition as the preparation of a young person for adult services. The age at which specialist children's services finish and adult services start is sometimes determined by service commissioning and/or geographical location.

List of transition circumstances GOSH is involved with:

1. GOSH patients who move to dedicated adolescent services usually move to a different hospital.
2. GOSH patients are often under more than one specialist team.
3. Adult services may be located in different hospitals, and the age of transfer can be different.
4. There are specialist services that exist at GOSH without a directly comparable adult service.
5. Some young people attend GOSH for:
 - a. A course of treatment and are then discharged back to primary care. This can occur at any age.
 - b. Diagnostic tests only; results will determine the need for ongoing care at GOSH.
 - c. Second opinion only.
6. Referrals received after the age of 14 can follow any of the above pathways. NICE states that transition must start by the age of 14 at the latest.
7. Some young people are seen at GOSH several times each year; others are seen only once each year.

The complexity of transition needs at GOSH.

What is transition?

Transition is 'the purposeful, planned process of preparing young people under paediatric care and their families or carers for, and moving them to, adolescent- or adult-oriented healthcare'.

GOSH, 2017, adapted from Blum et al, 1993⁴.

"I used the Part One information sheet in clinic. I found it a very useful prompt and easy to use. It was well received by the young person and his mother."
GOSH clinician

"This is really helpful. I really hadn't thought about any of this."
Parent after receiving the GUGI information sheet

"This will really make a difference. I wish GUGI was around when I was being transitioned."
Transition Improvement Steering Group member, 21 yrs

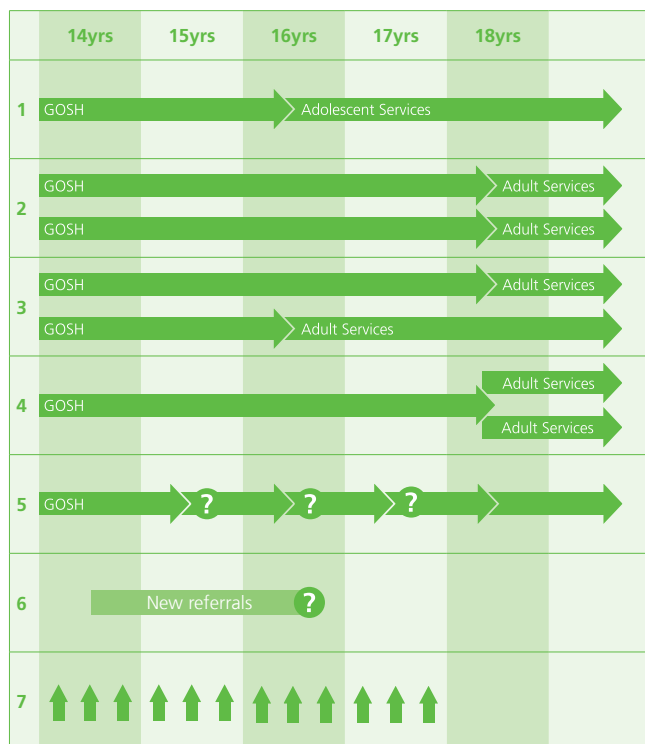


INFORMATION



Welcoming

⁴ Blum RW, Garell D, Hadgman CH et al. Transition from child-centred to adult health-care systems for adolescents with chronic conditions. A position paper of the Society for Adolescent Medicine. *J Adol Health* 1993; 14; 570-6.



Variety of transition types and timings.

We knew from our mapping of the transition circumstances our patients face, that we must ensure that any system we designed would work with this variety.

What we did

Following on from the work we began in 2016/17, we worked with young people, parents, carers and healthcare professionals to define minimum standards for all transition plans. These standards have been incorporated into a two-part programme entitled *Growing Up, Gaining Independence* (GUGI) that all young people at GOSH will be introduced to from the age of 12. GUGI will encourage and support all young people to become as independent with their healthcare as they can be. Part One of GUGI focuses on encouraging the development of life skills required by all young people regardless of whether they will transfer to specialist adolescent or adult health services. It will also inform them, and their parents and carers, of their changing legal responsibilities and entitlements. Part Two of GUGI will specifically prepare those who will, or might, need to transfer to specialist adolescent or adult healthcare services.

This year's work has focused on developing the GUGI programme and its supporting information to ensure it meets the needs of all young people regardless of which specialty or specialties provide their care. We focused our efforts on GUGI to build a strong and inclusive foundation that would meet the diverse transition needs of our patients.

GUGI is in effect a transition plan, but it replaces the traditional model. We have avoided using the term 'transition plan' to describe GUGI because of its wider purpose – to support and equip *all* of our young people, whether they transfer to other specialist services or not.

We established a Learning Disabilities Transition Steering Group with Barts Health NHS Trust, University College London Hospitals NHS Foundation Trust, and Barking, Havering and Redbridge University Hospitals NHS Trust to explore the particular needs of our young people with learning disabilities and to share transition best practice across centres.

The Growing Up Gaining Independence (GUGI) programme has been developed to:

- Make all young people and their parents/carers aware of the skills and knowledge they need to engage with adult health care services.
- Support the young person to develop these skills.
- Prepare those who need to continue onto specialist adolescent or adult healthcare services.

New dashboards have been developed that allow staff to identify future clinic attendees. The dashboards show:

- How old the patient will be at the time of the appointment
- How frequently patients are seen each year (information essential for effective transition planning)
- If a patient is recorded as having a learning disability or additional need

As GUGI is rolled out across the Trust, we will also record and display who has started on the GUGI programme.

What the data shows

This chart shows the total number of people aged 12–19 years who had outpatient appointments at GOSH in 2017/18.

Age	Unique Patient
12	3911
13	3952
14	3735
15	3491
16	2795
17	1848
18	714
19	263
Total	20709

Over the same period, a total of 74,350 patients aged 0-19 years were seen. Therefore, 28% of our patients were in the 12-19 age bracket. Not all of these patients will need to transition to specialist adult care but we recognise that the majority will need to engage with health services as adults.

What's going to happen next?

In 2018/19, the GUGI programme will be rolled out across the Trust and embedded into practice. The aim is for all patients aged 12 and over to be started on GUGI Part One. Those older than 16 will commence on Part Two. We are currently developing further supporting information in a variety of formats (written, 'easy read' and video). Specialties are being supported to develop dedicated clinics for young people, which are designed to support their readiness for transition to adult healthcare services.

The Transition Improvement Project will run for a further year and we will report the coming year's progress in the *Quality Report 2018/19*.

How this benefits patients

- Well-coordinated transition empowers young people to be as involved in their future health and healthcare as they are able, and supports them to develop to their full potential.

Improving the quality of our food

The quality of our food is important to us, whether hospital food delivered to our patients on the wards, or meals sold in our Lagoon restaurant for families, visitors and staff. Good food is a fundamental part of inpatient healthcare and is an aspect of NHS hospital services that has been commonly criticised.

What we said we'd do

Here at GOSH, we are committed to ensuring that the food we provide is nutritious, appropriate for our patients, and tasty. We also want to ensure sufficient variety, especially for those with longer hospital stays. We said we would listen to feedback by patients and families, our Young People's Forum, and by regulators, and that we would act to improve our food provision in the areas highlighted.

What we did

We examined feedback from a range of sources:

- Patients and families through our listening event in November 2016 and our Pals service data
- Young People's Forum
- Patient stories shared at our Trust Board
- PLACE assessments
- CQC reports

We found that the priorities for improvement were:

- Greater variety of food served
- Flexible mealtimes
- Maintain and improve nutritional value
- Maintain and improve flavour
- Ability to promptly provide information on ingredients when requested

Salt, sugar and saturated fat reduction

We adjusted our recipes and production methods in patient catering to reduce salt, avoid added sugar, and to use oils such as cold-pressed rapeseed, which are lowest in saturated fats.

We participated in a CQUIN scheme, Healthy Food for NHS Staff, Visitors and Patients, to effect change on the organisational behaviour and culture towards the food and drink sold at GOSH. Through NHS England's Healthy Workforce Programme, we also participated in a voluntary sales reduction scheme, to reduce the volume of sugar-sweetened drinks sold.

In retail catering, we have removed the majority of sugar-sweetened fizzy drinks and reduced to below 10% the overall sales of other sugar-sweetened drinks by offering alternatives. We no longer offer loyalty points on sweetened hot beverages and have also removed the 'extra sugar' option from all machine-vended hot beverages. Most confectionery has been removed from the till areas in our Lagoon restaurant.

Fresh alternatives and nutrition

Fresh fruit is displayed prominently in The Lagoon. There is now a daily fresh salad bar. In May 2017, a weekly 'theme bar' was established, offering a range of additional freshly-prepared meal options. Themes include: Lebanese, Vietnamese, Italian, Indian, 'Yum Buns', and the 'Naked Detox' range. Theme bar meals offer a variety of freshly prepared salads as well as raw toppings, all included in the price.

Information about ingredients

We are better able to provide this information when asked. However, it is still done in response to requests, rather than provided as standard. We will include details of ingredients on all our new menus, which we plan to introduce in 2018/19.

What is Pals?

The Patient Advice and Liaison Service (Pals) offers confidential advice, support and information on health-related matters. They provide a point of contact for patients, their families and carers, and are available in all NHS hospitals.

What is the Young People's Forum (YPF)?

The YPF is a group of young people aged 11–25 who are or have been patients, or siblings of patients, at GOSH. The mission of the YPF is to improve the experience of teenage patients at GOSH. The group meet formally six times a year, as well as participating in Trust projects and consultations, and meeting with the executive team and other key decision-makers.

What is a PLACE assessment?

Patient-led assessments of the care environment (PLACE) began nationally in 2013.

'PLACE assessments put patient views at the centre of the assessment process, and use information gleaned directly from patient assessors to report how well a hospital is performing in the areas assessed – privacy and dignity, cleanliness, food and general building maintenance.'

NHS England

What is the CQC?

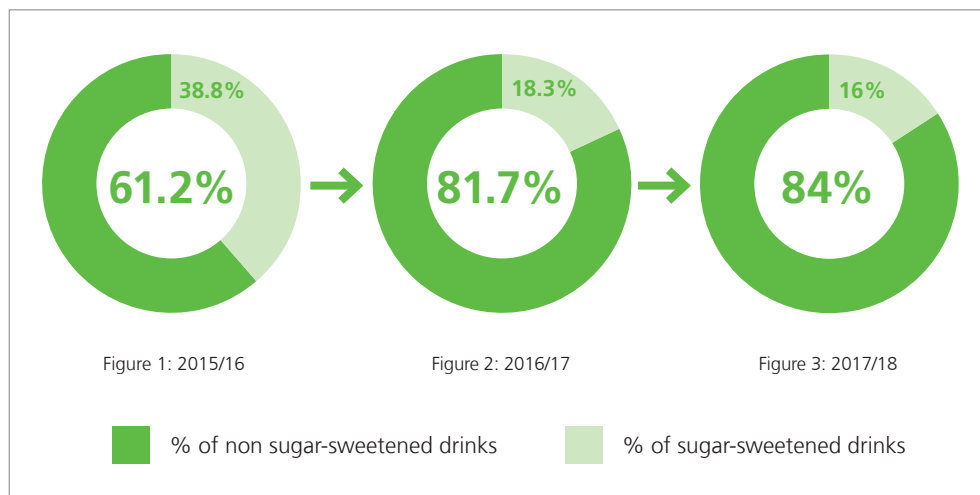
The Care Quality Commission (CQC) is the independent healthcare regulator for England and is responsible for inspecting services to ensure they meet fundamental standards of quality and safety.

What the data shows

Sugar sweetened beverages voluntary sales reduction

	2015/16		2016/17		2017/18	
	Count	%	Count	%	Count	%
Total sugar-sweetened	102118	38.8	51676	18.3	3811	16
Total non sugar-sweetened	161216	61.2	230611	81.7	20018	84

"I look forward to the theme bar days! The food tastes so good, and I end up eating a lot more raw vegetables than I ordinarily would in a working day."
Project Manager,
Corporate Services



2017 PLACE comparative scores

2017 PLACE results show that GOSH scores higher than both the national average and the London average for the three assessment components related to food. We still do receive feedback about areas for improvement by our families and patients, so despite good results from PLACE we are committed to an ongoing programme of improvements in our catering and retail food provision and management.



Source: NHS Digital

2018 PLACE results will be available after this report is published, and they will be used to inform ongoing improvements.



What's going to happen next?

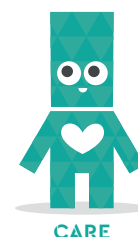
- We're designing a set of menus by age group, working in partnership with the specialist paediatric dietitians to ensure that meals meet patients' nutritional needs as well as their tastes. New menus will include lists of ingredients.
- We are planning to provide ordering on iPad by picture as well as description.
- We are exploring options for personalised menus, for instance so that only gluten-free selections are offered to patients whose diets require it.
- We are going to adjust our protected meals times on the ward so they better meet the needs of all ages, with age-appropriate food available in between mealtimes as required.
- We are reviewing how our food is packaged, transported and served to the patient, to ensure hot food is served hot every time and to present food in ways that are more appealing.


How this benefits patients

- Better tasting, better quality food supports wellbeing
- More responsiveness to individual needs



Helpful






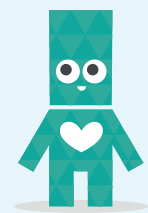
Arthur, aged nine, had never been in hospital before he got leukaemia, and when he was first diagnosed it was a really scary time for all of the family; but with the support of staff on Lion and Safari Ward he's much better and will be finishing treatment soon.

Quality priorities for 2018/19

The following table provides details of three of the quality improvement projects that the Trust will undertake in 2018/19. These priorities were determined with input from staff, patients and their families, and commissioners. This was sought through a range of mechanisms including a survey, consultation, and use of established meetings such as our Members' Council, Young People's Forum, and Patient and Family Engagement and Experience Committee. The new quality improvement projects are in line with our strategic priority to provide the safest, most effective and efficient care, with the best possible outcomes.



Safety

To eliminate avoidable harm.

Improvement initiative	What does this mean and why is it important?	How will progress be monitored, measured and reported?
<p>Improving the safety and experience of children and young people at GOSH when venous access is needed for their care.</p> <div data-bbox="148 1498 308 1697">  <p>Expert</p> </div> <div data-bbox="148 1771 296 2007">  <p>CARE</p> </div>	<p>For many of the children who come to GOSH, one of the most daunting experiences of their stay is when a needle needs to be introduced into a vein to draw blood or give medication. This anxiety and fear can lead to behavioural distress which further intensifies their pain and can interfere with their procedure. If ongoing venous access such as a peripheral cannula is required, there is also a risk of extravasation, which is the inadvertent leakage of a medicine or fluid from its intended vein into the surrounding tissue. This has the potential to cause severe tissue injury or necrosis.</p> <p>To improve the safety and experience of our children and young people, GOSH developed a paediatric version of the national Vessel Health and Preservation Framework, and are systematically implementing it across all of our clinical areas.</p> <p>The framework supports staff to choose the right device, make sure the right procedure is considered based on the child's individual needs, help prepare the child and family for the procedure and, make sure the right person is performing the task.</p>	<ol style="list-style-type: none"> 1. Number of extravasation injuries referred to Plastics Team 2. The percentage of patients with more than two unsuccessful cannulation attempts before referral to Venous Access Team 3. Missed medication administration due to reason of 'no IV access available' <p>Progress is reported quarterly to the Quality Improvement Committee.</p>

Clinical effectiveness

To consistently deliver excellent clinical outcomes, with the vision to be the leading children's hospital in the world.

Improvement initiative	What does this mean and why is it important?	How will progress be monitored, measured and reported?
<p>Improving the early recognition of the deteriorating child and young person at GOSH through the introduction of the electronic Paediatric Early Warning System (PEWS).</p>  <p>One Team</p>  <p>INFORMATION</p>	<p>PEWS is a score-based system designed to identify potential deterioration in children and young people using a combination of factors such as physiological findings, escalation responses and a strong communication framework.</p> <p>It's designed to support clinical judgement and help reduce adverse patient outcomes by enhancing multidisciplinary team working, communication, and confidence in recognising, reporting and making decisions about a child at risk of deterioration.</p> <p>Integrating PEWS electronically means clinicians are able to access live patient scores at both a ward and Trust level. This contributes to improved situational awareness and supports the early identification and prompt review of patients at risk of clinical deterioration.</p>	<ol style="list-style-type: none"> 1. Number of cardiac and respiratory arrests outside of ICU 2. The number of clinical emergency calls outside of ICU wards 3. The number of unplanned internal transfers to ICU by the clinical site practitioner team 4. The number of cardiac and respiratory arrests in high-dependency and non-high-dependency beds 5. The number of clinical emergency calls classified as 'not preventable' <p>Project progress is reported quarterly to the Quality Improvement Committee and Patient Safety and Outcomes Committee.</p>

Experience

To deliver kind and compassionate care, and communicate clearly to build confidence and ease.

Improvement initiative	What does this mean and why is it important?	How will progress be monitored, measured and reported?
<p>Improving our young people's and their parents' and carers' experience of transition to adult healthcare services.</p>  <p>Helpful</p>  <p>INFORMATION</p>	<p>Young people and their families consistently told us that they felt inadequately prepared for adult health services and unaware of the changing responsibilities and rights of young people.</p> <p>National guidelines recommend that young people should start on a transition plan to prepare them for adult health services by the age of 14. For GOSH patients, it's not always clear at that age how many will need to transfer to specialist adult care.</p> <p>The Growing Up, Gaining Independence (GUGI) programme developed by GOSH is relevant to all young people aged 12 or above. It will better prepare young people and their families for their futures.</p>	<ol style="list-style-type: none"> 1. Numbers and percentage of young people aged 12–16 started on Part One of the GUGI. 2. Numbers of young people aged 12–16 started on Part Two of the GUGI. <p>This will be reported at specialty and divisional meetings and at Trust Board, and presented at the Patient and Family Experience and Engagement Committee.</p>



Leo has Williams syndrome. He's 17 years old, but he's been coming to GOSH for more than nine years. Leo has had a number of life-saving operations at the hospital, including a kidney transplant and heart bypass surgery.

Part 2b:

Statements of assurance from the Board

This section comprises the following statements:

- Review of our services
- Participation in clinical audit
- Learning from deaths
- Participation in clinical research
- Use of the CQUIN payment framework
- CQC registration
- Data quality
- Gastroenterology service review
- Priority clinical standards for seven-day hospital services

Review of our services

GOSH is commissioned by NHS England to provide 58 specialised, or highly specialised, paediatric services. These services account for approximately 90% of the Trust's healthcare activity. The remaining 10% of our activity is typically care which, although not specialist, is provided to patients with complex conditions and is commissioned by clinical commissioning groups.

In order to ensure that we maintain excellent service provision, we have processes to check that we meet our own internal quality standards and those set nationally. These processes include scrutiny by committee. One example is our Quality, Safety and Assurance Committee, where there is a focus on improvements in quality, safety and patient experience. Assurance is provided through reports on compliance, risk, audit, safeguarding, clinical ethics, and performance. Patient stories are often presented to this forum and to the Trust Board.

As a matter of routine, key measures relating to the Trust's core business are presented to the Trust Board. These include measures of quality and safety, patient and referrer experience, and patient access to services.

The Trust's performance framework enables clinical divisions to regularly review their progress, to identify improvements, and to provide the Trust Board with appropriate assurance.

Participation in clinical audit

During 2017/18, 13 national clinical audits and clinical outcome review programmes covered the NHS services that GOSH provides. The Trust has participated in them all and data submissions have been outlined below.

Name of national audit/clinical outcome review programme	Cases submitted, expressed as a percentage of the number of registered cases required
Cardiac arrhythmia (NICOR: National Institute for Cardiovascular Outcomes Research)	100% (186/186)*
Congenital heart disease including paediatric cardiac surgery (NICOR)	100% (1,372/1,372)**
Diabetes (paediatric) (National Paediatric Diabetes Association)	100% (36/36)
Inflammatory Bowel Disease Registry (British Society of Gastroenterology (BSG), The Royal College of Physicians (RCP), and Crohn's and Colitis UK via IBD Registry Ltd)	100% (85/85)
Maternal, Newborn and Infant Clinical Outcome Review Programme (MBRRACE-UK: Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK)	100% (28/28)
National Confidential Enquiry into Patient Outcome and Death (NCEPOD) Chronic Neurodisability study	71% (5/7)
NCEPOD Cancer in Children, Teens and Young Adults Study	93% (38/41)
NCEPOD Adolescent Mental Health Study	100% (2/2)
National Cardiac Arrest Audit (ICNARC: Intensive Care National Audit and Research Centre)	100% (21/21)
National Neurosurgical Audit Programme	Data is taken from national Hospital Episode Statistics rather than submitted by the Trust.
Paediatric Intensive Care Audit Network (PICANet)	100% (1,747/1,747)
Renal replacement therapy (UK Renal Registry)	100% (185/185)***
UK Cystic Fibrosis Registry (Cystic Fibrosis Trust)	100% (180/180)

The three NCEPOD studies collecting data in 2017/18 involved care provided to children and young people. The Cancer in Children, Teens and Young Adults study aims to identify areas for improvement nationally in the care of children and young people who receive chemotherapy. A GOSH consultant is the national clinical lead for this study.

What is clinical audit?

'Clinical audit is a way to find out if healthcare is being provided in line with standards, and lets care providers and patients know where their service is doing well and where there could be improvements. The aim is to allow quality improvement to take place where it will be most helpful and will improve outcomes for patients.'

NHS England⁵

*2016/17 data, as the submission deadline for the 2017/18 audit is 30 June 2018

**2016/17 data, as the submission deadline for the 2017/18 audit is 25 May 2018

***2016 data, as the submission deadline for the 2017 audit is 31 May 2018

⁵ www.england.nhs.uk/ourwork/qual-clin-lead/clinaudit/

The following national clinical audit reports were published and reviewed in 2017/18, which are relevant to GOSH practice:

Name of national audit/clinical outcome review programme	Relevance to GOSH practice
Congenital heart disease including paediatric cardiac surgery (NICOR)	<p>Data published in March 2018 shows that survival 30 days after paediatric cardiac surgery for children with congenital heart disease has continued to improve for children in recent years and is currently close to 98%.</p> <p>GOSH performance highlighted exemplar clinical outcomes, and was cited in the report which looked at data between 2013 and 2016:</p> <p><i>"Best practice: Overall risk adjusted survival at 30 days was much higher than the predicted level at one centre: Great Ormond Street Hospital in London for the second three year cycle in a row. This is indicative of good performance and should present an opportunity for sharing best practice across specialist centres."</i></p>
Diabetes (paediatric) (National Paediatric Diabetes Association)	<p>The audit compares outcomes for seven standards of care for patients with type 1 diabetes. Individual data is available for each centre for 2015/16. GOSH did not have any type 1 patients in the reporting period, therefore no outcome data can be compared.</p> <p>The report makes recommendations for the management of type 1 and type 2 diabetes in children and young people. All recommendations were reviewed and assessed. No changes to clinical practice at GOSH were required.</p>
MBRRACE Term, Singleton, intrapartum stillbirth and intrapartum-related neonatal death	<p>Recommendations are primarily aimed at maternity services but have been reviewed by the Trust neonatal service.</p>
MBRRACE - Perinatal Mortality Surveillance 2015	<p>The report assesses outcomes for centres where babies were born.</p> <p>Recommendations mainly address perinatal mortality, and no clinical practice changes are directly required at GOSH. The report has been reviewed by the neonatology service. A refinement has been made to how GOSH uploads data to ensure all cases are reported on as required.</p>
National Cardiac Arrest Audit (ICNARC)	<p>Data and recommendations are included in resuscitation reports to the Trust Patient Safety and Outcomes Committee. No specific actions were identified as necessary in response to the report.</p>
Paediatric Intensive Care Audit Network (PICANet)	<p>The primary outcome measure used in Intensive Care Units (ICU) is the survival rate for patients, recorded at the time of discharge. Raw survival/mortality rates may be challenging to interpret as patients that are admitted in a sicker condition are at greater risk, and therefore the outcomes need to be 'adjusted' to consider the level of severity of the patients in respect of case mix.</p> <p>The most recent PICANet report was published in September 2017 and compares Trusts' Standardised Mortality Ratio (SMR) for the calendar years of 2014–16.</p> <p>The data in this report shows GOSH mortality was within what would be expected based on case mix.</p> <p>ICU mortality is reviewed on an ongoing basis using the Variable Life Adjusted Display (VLAD) at ICU Mortality and Morbidity meetings. This allows the ICU teams to notice any trends in real time and explore reasons for any change.</p>

What is the Patient Safety and Outcomes Committee (PSOC)?

The PSOC is the Trust-wide committee responsible for the monitoring, sharing and decision-making about quality and safety at the Trust.

What is the Standardised Mortality Ratio (SMR)?

The SMR is the ratio of observed deaths in the ICU compared to the expected number of deaths based upon the PIM2r score: the SMR is calculated periodically and is used as a method of benchmarking the outcomes between ICUs nationally via PICANet.

What is Variable Life Adjusted Display (VLAD)?

VLAD is a statistical monitoring tool that provides a visual method for monitoring clinical outcomes continuously over time, based on the SMR. The VLAD plot provides a mechanism for rapidly identifying outcomes that deviate from the norm, either favourably or unfavourably.

Key learning from clinical audit in 2017/18

We use clinical audit as a way to provide assurance about the quality of care provided and identify areas where quality improvement is required. A central clinical audit plan prioritises audits to support learning from incidents, risk, patient complaints, and to investigate areas for improvement in quality and safety.

Two examples of Trust-wide audit completed in 2017/18 are outlined below.

Quality of World Health Organization (WHO) Surgical Safety Checklist

Background

In our *Quality Report 2016/17*, we highlighted audit work to identify how effectively staff engaged in the WHO Surgical Safety Checklist to promote safety in the operating theatre. The audit showed good engagement in the checklist, and a positive safety culture.

The audit highlighted an area for improvement – that checks should always be performed with reference to the checklist rather than at times being performed from memory.

We have followed up on this area for improvement with a re-audit in 2017/18.

Results

Our re-audit in December 2017 showed that 84% of surgical sign-ins – safety checks for patients ahead of an invasive procedure under anaesthetic or sedation – were being completed with reference to a checklist, rather than checks being done from memory. The 2016 audit showed 35% of staff confirming that checklists were used.

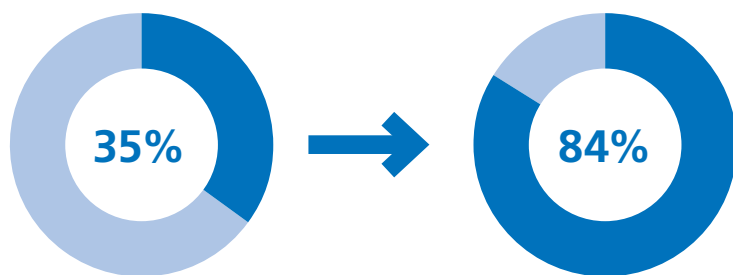


Figure 1: 2016, staff who reported competing checks with reference to the checklist

Figure 2: December 2017, staff observed to be competing sign-ins using a checklist

Another area for improvement noted in this audit is the completion of debriefs. Debriefs are an opportunity for teams to reflect at the end of operating lists and discuss any learning points. This is done by a whole team discussion which might focus on:

- What went well
- Any problems with equipment or other issues that occurred
- Any areas for improvement

A debrief was completed for 48% of operating lists observed in the audit in December 2017, up from 20% in 2016. Debriefs have not yet been adopted nationally into routine clinical practice but they are very welcome as an opportunity for staff to reflect and learn.

This audit work and the improvements made are highlighted in the GOSH CQC inspection report published in April 2018:

"The Trust had significantly improved the use of the World Health Organisation surgical safety checklist in theatres. Quality and safety staff had audited the work to improve this safety tool, which resulted in a demonstrable trajectory of better practice."

Plans for improvement

Improvement interventions to support the further roll out of team debriefs are being managed through the National Safety Standards for Invasive Procedures workstream, which has senior clinician engagement and is overseen by the Medical Director. A follow-up audit will further promote engagement and monitor improvement.

What is the WHO Checklist?

The WHO Checklist is a three-stage set of documented safety checks that are performed by clinical staff in the operating room to enhance safety practices.

What are the National Safety Standards for Invasive Procedures (NatSSIPs)?

NatSSIPs have been developed by a multidisciplinary group of clinical practitioners, professional leaders, human factors experts and lay representatives brought together by NHS England. They set out the key steps necessary to deliver safe care for patients undergoing invasive procedures and will allow organisations delivering NHS-funded care to standardise the processes that underpin patient safety.

Nasogastric Tube Testing

Background

This was an audit of best practice of nasogastric tube management in line with Trust policy and an NHS Improvement safety alert. There was a Never Event (a patient safety incident listed by the NHS as an event that should never happen) in 2016 at GOSH involving nasogastric tube management. The audit was conducted as part of the Trust commitment to check if lessons have been learned from past harm.

Key findings

The audit showed:

- 85% of standards were met in the Trust.
- Best practice was found in testing the position of a nasogastric tube, and awareness of the techniques that should be avoided.
- No practice or safety concerns were raised through this audit. The areas of non-compliance in this audit were about documentation of practice. These have been fed back to action by relevant wards.

Specialty-led clinical audit

A total of 96 clinical audits led by clinical staff were completed at GOSH during 2017/18. To promote the sharing of information, a summary of completed projects is published on the Trust's intranet and shared with the Patient Safety and Outcomes Committee. In this report it is not possible to list every clinical audit completed in 2017/18 that has had a positive impact on quality and safety. A summary of completed clinical audits in 2017/18 can be obtained on request by contacting the Clinical Audit Manager on 020 7405 9200 extn 5892 or by emailing clinical.audit@gosh.nhs.uk.

Three examples of completed clinical audits led by specialties are outlined below.

Medication overuse among patients presenting at headache clinic (Neurology)

The audit assessed if NICE guidelines were being met in prescribing medication for headache treatment among paediatric patients over the age of 12.

The audit has made contributions in the following three areas:

- Helped develop a baseline assessment of compliance to NICE guidelines on medication overuse by patients.
- Helped develop understanding of incidence of medication overuse in headache clinic.
- Identified the demographic profile of medication overuse patients, including underlying primary headache disorders.

Medication overuse incidence was found to be 9.5% in the assessed cohort of patients. Compliance with NICE guidance on advice to patients was observed in 90% of cases. The audit has highlighted the frequency of patients overusing their medication in the management of headaches, and interventions are planned in the GOSH headache clinic to address this.

Satisfaction of patients undergoing orthodontic and orthognathic treatment

This audit assessed patient satisfaction with orthodontic treatment and whether it met their expectations. The audit highlighted that:

- Patient satisfaction with treatment is high.
- Orthodontic and orthognathic treatment are making significant contributions to improving patient confidence and improving their bite, smile and facial appearance.
- Patients are finding it difficult to make contact with the department to reschedule appointments or speak to a member of the administrative/secretarial team.
- Patients reported that they felt they sometimes had to wait a long time to be seen when they attended their appointment.

As a result of this audit, changes have been implemented to improve patient experience by ensuring a clinical waiting time board is used, and that reception staff are trained to relay messages to clinical staff as needed.

Lean protocoling for children with multiple sclerosis (Radiology)

This audit evaluated a change in protocol to ensure patients are being scanned using the correct protocol. This has highlighted the need for teaching of radiographers on terms used for scanning patients with multiple sclerosis.

A re-audit is planned to monitor improvements.

What is a nasogastric tube?

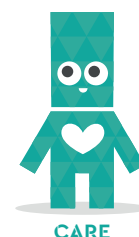
A plastic tube through the nose, past the throat, and down into the stomach to allow food and fluids to be administered.

What is orthognathic treatment?

Surgery to correct conditions of the jaw and face related to structure, growth, sleep apnea, temporomandibular joint and muscle disorders, malocclusion problems owing to skeletal disharmonies, or other orthodontic problems that cannot be easily treated with braces.



One Team



Learning from deaths

Death in childhood is a rare event. Whenever a child dies, it is important to reflect and to learn if anything could be done differently in the future.

Background

In March 2017, the National Quality Board published guidance, 'National Guidance on Learning from Deaths', which aims to initiate a standardised approach to reviewing and learning from deaths.

The GOSH Mortality Review Group (MRG) is a multidisciplinary group of senior clinicians that conducts routine, independent structured case record reviews of all deaths that occur at GOSH. The MRG has been in place since 2012.

The purpose of the MRG is to provide a Trust-level overview of all deaths to identify themes and risks and take action, as appropriate, to shape quality improvement activities in the Trust. This process is linked with local case reviews undertaken by specialty teams and provides an additional oversight of deaths in the Trust. The MRG reviews the patient care pathway to identify whether there are modifiable factors, and identify any learning for the Trust.

Deaths in 2017 and case record reviews

- Between 1 January 2017 and 31 December 2017, 110 children died at GOSH. All but one of these deaths have been subject to a case record review by the MRG. One case cannot be reviewed until the completion of additional investigations.
- Ten (9.17%) of the reviewed patient deaths had modifiable factors at GOSH that may have contributed to vulnerability, ill health or death.
- No deaths in 2017 had modifiable factors at GOSH that provided a complete and sufficient explanation for death.

Learning from clinical case reviews

The learning points from case record reviews are shared at the Trust Patient Safety and Outcomes Committee, and at Trust Board. Modifiable factors identified outside of GOSH are shared with the Child Death Overview Panel.

Where modifiable factors or other issues are identified about GOSH care, these are fed back in an appropriate manner to the relevant clinical team and/or the divisional director(s) for action. The feedback mechanism will be determined based on the nature of the information to be shared, but could include a specialty case review meeting, email, and/or Divisional Board meeting.

Some key themes have been identified, including the recognition and response to the deteriorating patient, and the identification and management of sepsis. The Trust has existing priority quality improvement work to ensure that early warning systems are in place to support staff to identify the deteriorating patient, and that the Sepsis 6 protocol is applied.

See page 14 for our reporting on improving sepsis awareness.

What are modifiable factors?

Modifiable factors are defined as those factors which, by means of nationally or locally achievable interventions, could be modified to reduce the risk of future child deaths.

What is the Child Death Overview Panel (CDOP)?

The CDOP is a multi-agency panel. The purpose of a child death overview panel is to undertake an overview of all child deaths within the locality.



Expert



Participation in clinical research

At GOSH, we understand the immense importance to patients and their families of pushing the edges of medical understanding to make advancements in the diagnosis and treatment of childhood diseases. As a specialist hospital with strong academic links, many of our doctors are clinician-scientists who specialise in research and we are dedicated to harnessing opportunities for collaboration between clinicians and scientists. Much of what we do is at the forefront of research in diseases of children and young people and we are also working to implement new evidence-based practice beyond GOSH, so that more patients can benefit in the UK and abroad.

GOSH's strategic aim is to be a leading children's research hospital. We are in the unique position of working with our academic partner, the University College London (UCL) Great Ormond Street Institute of Child Health (ICH), to combine enviable research strengths and capabilities with our diverse patient population. This enables us to embed research in the fabric of the organisation. In addition to ICH, GOSH benefits from access to the wealth of the wider UCL research capabilities and platforms. Together, GOSH and ICH form the largest paediatric research centre outside North America.

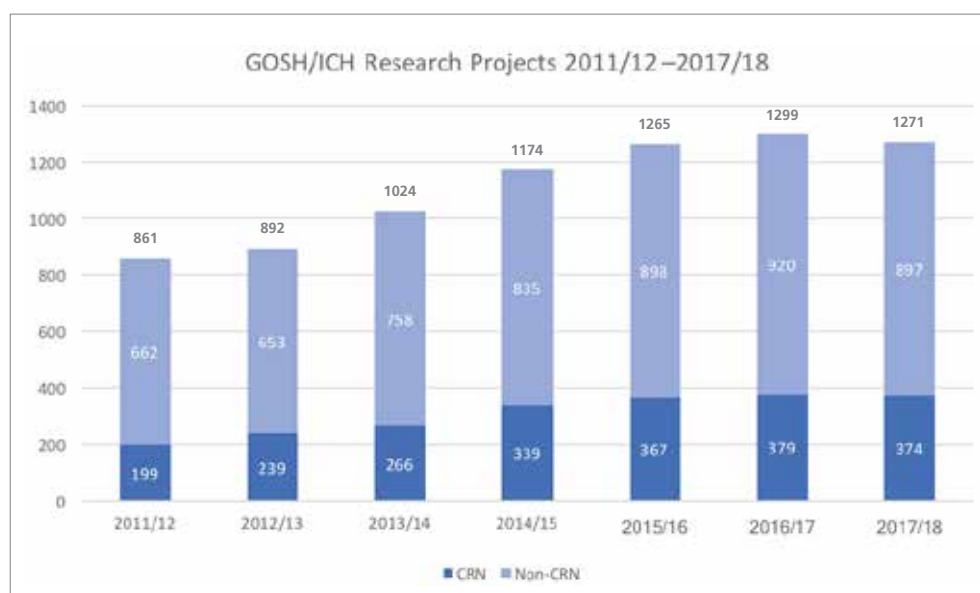
GOSH also hosts one of the few centres dedicated to supporting nurses and allied health professionals (AHPs) in research activity. This team of researchers prioritises understanding the patient and family experience, helping to describe the care that families receive, and exploring both processes and outcome.

Together, GOSH and ICH form the largest paediatric research centre outside North America.

Research activity

During 2017/18, we have run over 1,200 research projects at GOSH/ICH. Of these, 374 were adopted onto the National Institute for Health Research Clinical Research Network (NIHR CRN) Portfolio, a prestigious network that helps deliver research across the NHS.

Our already extensive research activity has consistently increased year-on-year. The chart below shows the numbers over time of all our research, including the high-quality NIHR CRN Portfolio projects:



In 2017/18, over 3,400 patients and family members took part in research at GOSH. In addition, GOSH leads the North Thames Genomic Medicine Centre (GMC), one of 13 regional centres that are responsible for coordinating recruitment of patients to the 100,000 Genomes Project. This pioneering project aims to better understand and treat rare conditions and cancers and this year reached its halfway point. Over 14,500 genomes have been collected by the North Thames GMC including 4,310 rare disease and 84 cancer genomes collected at GOSH, with over 1,500 GOSH families recruited.

Funding

This year we saw an overall 18% growth in our research income to £20 million in 2017/18, which supports research infrastructure and projects across the Trust.

2017/18 also marked the start of our third funding term of the NIHR GOSH Biomedical Research Centre (BRC) and the commencement of our new NIHR Clinical Research Facility (CRF) funding.

Innovation

This year also saw the launch of *Innovation at GOSH* and our Innovation Accelerator competition. Our staff are best placed to come up with new ideas to improve patient care or save resources, but taking an idea to the next stage can require specialist knowledge of, amongst

other topics, intellectual property, regulatory legislation and how to obtain funding. *Innovation at GOSH* offers support and technical expertise to nurture new ideas with the ultimate aim of benefiting patients at GOSH and across the NHS, and improving the working lives of our staff.

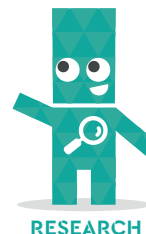
In 2017/18, we also launched our Generic Consent pilot. This enables families to donate surplus tissue and blood samples to support our pioneering research.

Journal publications

With our academic partner, we publish over 1,500 papers a year. In the five year period 2012–2016, GOSH and ICH research papers together had the second highest citation impact⁶ of comparable international paediatric organisations.



One Team



RESEARCH

In the five year period 2012–2016, GOSH and ICH research papers together had the second highest citation impact of comparable international paediatric organisations.

Research highlights

A daily tablet has been shown to reduce the debilitating symptoms experienced by children with multiple sclerosis (MS) and cut the chance of relapse by 82%. GOSH coordinated the UK arm of this study, which was the first time that an MS drug had been trialled specifically in young people. The results are extremely significant as there are currently no treatments specifically approved for young people with MS. Based on the findings, the pharmaceutical company that makes the drug is now applying for a licence to prescribe it to children.

A trial of 120 children across Europe and the USA showed that cannabidiol – derived from cannabis but with the psycho-active elements removed – reduces seizures by nearly 40% in children with a form of drug resistant epilepsy, known as Dravet syndrome. For 5% of patients, seizures stopped completely. Further trials have also been completed in another type of complex epilepsy, Lennox Gastaut syndrome, and are planned in infantile spasms.

Nusinersen, the first drug for spinal muscular atrophy (SMA) is now being offered to children affected by Type 1 SMA on an Expanded Access Programme following a phase 3 trial led by GOSH. Children who received the drug displayed a significant improvement in the achievement of motor milestones compared to those who did not receive treatment. Currently there is no cure for SMA, so this step represents a significant breakthrough for patients. The drug has been granted early approval by the US Food and Drug Administration (FDA) and the European Medicines Agency (EMA).

A new test to help diagnose and predict a range of serious childhood eye conditions has been developed by researchers at GOSH and ICH. The gene panel test, known as Oculome, screens for mutations in more than 400 genes that are known to lead to eye disease, including those that can cause malformations of the eyeball and those linked to inherited retinal degeneration and cataracts. The test can help pinpoint the exact mutation that is causing the condition, enabling a faster, more accurate diagnosis and access to the most appropriate care. The test is currently available at GOSH and has been approved to be offered on a national basis.



⁶GOSH citation impact = 1.997. The average citation impact is calculated from the number of citations for reviews and original papers normalised for research field and year of publication

Use of the CQUIN payment framework

A variety of CQUINs have been undertaken by the Trust in 2017/18. Some of these are national indicators, which may also be undertaken by other trusts across the country, and some were locally defined in order to improve our individual performance. Due to the specialist nature of our care, some of the national CQUINs needed to be adapted to fit with the services we provide for our patients.

CQUIN Reporting 2017/18	
CQUIN title	Overview
Anti-microbial resistance/Sepsis	The aim of the project is to improve the timeliness of both identification and treatment of sepsis, as well as reducing inappropriate antibiotic usage within the Trust.
Child and Adolescent Mental Health Services – Long-term conditions	The aim is to establish screening and provision of mental health services for specialised paediatric inpatients with a chronic and severely disabling medical condition.
Cardiac Devices	This scheme seeks to ensure that device selection for patients remains consistent with the commissioning policy, service specification, and relevant NICE guidance. It also aims to ensure that contractual requirements are in place for providers while new national procurement and supply chain arrangements are embedded.
Critical care – Paediatric Networked Care	This scheme aligns with the national Paediatric Intensive Care service review. It aims to gather information which allows the demand across the whole paediatric critical care pathway to be considered.
Haemtrack	This scheme intends to improve adherence, timeliness, and accuracy of patient data submissions to the Haemtrack patient reporting system.
Medicines Optimisation	This scheme aims to support the procedural and cultural changes required to optimise use of medicines commissioned by specialised services. A number of priority areas for implementation have been identified nationally by clinical leaders, commissioners, trusts, the Carter Review and the National Audit Office.
Neuroscience Network	The scheme aims to support the development of the North Thames Neurosciences Paediatric Network.
Enhanced Supportive Care	This scheme aims to better integrate the work of the disease-specific clinical nurse specialists and advanced nurse practitioners with the paediatric oncology outreach nurses in the Palliative Care team. The aim is to review the cancer clinical pathways and identify where it would be expected for Palliative Care to be involved.
Severe Asthma	This scheme aims to ensure that assessment and investigation of children with difficult-to-control asthma is completed within 12 weeks of referral. This is so that all eligible children have appropriate and timely intervention in order to improve asthma control, reduce hospital admissions and avoid inappropriate escalation of therapy including the initiation of expensive monoclonal antibodies.
Transition Planning	The aim is to increase the number of transition plans for young people aged 13 years and above across the Trust.
Univentricular Home Monitoring	This scheme involves implementation of home monitoring programmes for children following palliative cardiac surgery for patients with a primary diagnosis of: hypoplastic left heart syndrome, functionally univentricular heart or pulmonary atresia with intact ventricular septum. Collectively, these conditions are referred to as univentricular hearts or univentricular circulations.

What is CQUIN?

The Commissioning for Quality and Innovation (CQUIN) payment framework makes a proportion of NHS healthcare providers' income conditional upon improvement. The framework aims to support a cultural shift by embedding quality and innovation as part of the discussion between service commissioners and providers, and constitutes 2.5% of the Actual Contract Value between commissioner and provider.

In 2017/18, 2% of GOSH's NHS income (activity only) was conditional upon achieving CQUIN goals agreed with NHS England for the above schemes. If the Trust achieves 100% of its CQUIN payments for 2017/18, this will equate to £5.29 million. During Q1 to Q3 of the financial year, we reported high compliance against all our CQUIN indicator milestones. We expect to report approximately 78.7% compliance at year end.

CQC registration

GOSH is required to register with the CQC and is currently registered, without conditions, as a provider of acute healthcare services. GOSH has not participated in any special reviews or investigations by the CQC in 2017/18.

In January 2018, the CQC conducted a scheduled unannounced inspection of two services (surgery and outpatients) and an announced inspection against the Well Led criteria. The report was published in April 2018. The Trust was rated 'good' overall. An action plan is in development to respond to the recommendations, which includes a requirement notice related to accessibility of clinical information for staff planning to undertake procedures (Health and Social Care Act 2008 (Regulated Activities) Regulations 2014: Regulation 17).

NHS Improvement well-led framework

As part of their routine scheduled inspection programme, the CQC conducted a well-led inspection of the Trust in January 2018. The Trust was rated as 'requires improvement'. The inspectors identified the areas of good practice including:

- Recognition of the excellent work undertaken to address our waiting time data and management issues (see page 48 of this report and page 20 of the GOSH Annual Report 2017/18).
- Effective systems are in place to identify and learn from unanticipated deaths, serious incidents and complaints.

The report identified issues with nursing leadership and said that nurses feel that they don't have a voice. There were perceptions of an overly complicated divisional structure, and the need for further engagement with local stakeholders particularly around sustainability and transformation partnerships (STPs). We are developing an action plan in response to the points raised in the report, noting that for some, we had already identified the issue and started to put plans in place. The action plan will be monitored by the Trust Board.

What is the CQC?

The Care Quality Commission (CQC) is the independent healthcare regulator for England and is responsible for inspecting services to ensure they meet fundamental standards of quality and safety.

Data quality

Good quality data is crucial to the delivery of effective and safe patient care and to the running of GOSH. Data is vital to enable us to run our services efficiently as well as to identify any care quality issues and predict trends in order to take early action.

In the past year, we have made significant progress in our data quality action plan which was completed in December 2017. Some of the key highlights were:

- The establishment of a dedicated data assurance team that works closely with staff to improve data quality through training and coaching.
- The data quality dashboard has now been rolled out across the organisation and enhanced further to include data quality reporting for theatres. The dashboard now encompasses 158 individual data quality indicators and as such we continue to prioritise work around these.
- The establishment of regular weekly data quality focus groups with each division to tackle and prioritise data quality measures.

For 2018/19, we have developed a new data quality improvement plan which allows us to focus on the improvement work that is needed as we progress towards going live with the EPR system in April 2019.

Secondary Uses Service

As required by NHS Digital, GOSH submitted records during 2017/18 to the Secondary Uses Service (SUS) for inclusion in the national Hospital Episode Statistics. These are included in the latest published data.

The table below shows key data quality performance indicators within the records submitted to SUS.

Indicator	Patient group	Trust score	Average national score
Inclusion of patient's valid NHS number	Inpatients	97.8%	99.4%
	Outpatients	98.8%	99.5%
Inclusion of patient's valid General Practitioner Registration Code	Inpatients	99.7%	99.9%
	Outpatients	99.8%	99.8%

Notes:

- The table reflects data from April 2017 – January 2018 at month 10 SUS inclusion date.
- Nationally published figures include our international private patients, who are not assigned an NHS number. Therefore the published figures are consequently lower at 92.7% for inpatients and 93.8% for outpatients.
- Figures for accident and emergency care are not applicable as the Trust does not provide this service.

Clinical coding

GOSH has a dedicated and highly skilled clinical coding team, which continues to maintain high standards of inpatient coding. Due to the complexities of our patients, each inpatient stay tends to have a higher number of codes applied compared to the national average. GOSH carries out internal audits to ensure that accuracy and quality are maintained, and complied with the Information Governance Toolkit clinical coding audit requirements for 2017/18. The most recent audit for the Information Governance Toolkit showed results of over 97% accuracy, representing the highest level of achievement recognised in the toolkit. GOSH was not subject to a national Payment by Results clinical coding audit during the 2017/18 reporting period.

Information governance

The current Information Governance Toolkit provides NHS organisations with a set of 45 standards against which we declare compliance annually. GOSH's Information Governance Assessment Report overall score for 2017/18 improved from last year to 77% and was graded green, 'Satisfactory'. The improvements over last year's submission related to a full action plan for staff training and in the documentation and identification of contracts which required additional information sharing controls.

For 2018/19, the Information Governance Toolkit is to be relaunched as the Data Security and Protection Toolkit. This will be aligned with the National Data Guardian's ten data security standards and the General Data Protection Regulation (GDPR) and will be a full redesign of how the Trust demonstrates compliance. Over the coming year, GOSH will ensure all appropriate evidence is available to measure performance against the data security and information governance requirements mandated by the Department of Health and Social Care.

What is data quality?

Data quality refers to the tools and processes that result in the creation of accurate, complete and valid data that is required to support sound decision-making.

What is the Secondary Uses Service (SUS)?

The SUS is a single source of specified data sets to enable analysis and reporting of healthcare in the UK. SUS is run by NHS Digital and its reporting is based on data submitted by all provider trusts.

What is NHS Digital?

NHS Digital (formerly known as the Health and Social Care Information Centre) is the national provider of information, data and IT systems for commissioners, analysts and clinicians in health and social care.

What is an NHS Number?

Everyone registered with the NHS in England and Wales has their own NHS number, a unique 10-digit number that helps healthcare staff to find a patient's health records. The NHS number increasingly helps to identify the same patient between organisations and different areas of the country.



Gastroenterology service review

In 2015 we commenced a review into our gastroenterology service to ensure we provide the highest standards of care to the children, young people and families we look after. This review was of particular importance to us as we had seen a disappointing and sustained number of complaints about the service we offered.

The initial stage of the review was led by the Royal College of Paediatrics and Child Health (RCPCH), who we invited in 2015 to visit and independently assess the service to identify areas for improvement. The RCPCH's recommendations included improving communications with families, improving administration, and enhancing access to psychological support for families. We initiated a programme of work to address these recommendations.

In a small group of patients with, or suspected as having, a complex condition known as eosinophilic lower gastroenterology disease, or complex food allergies, the reviewers acknowledged that this was a rare and complex clinical area with a lack of national or international consensus on the best way to manage these patients. There are no agreed clinical guidelines for the treatment of these patients.

They recommended we review the care packages of a small group of patients suspected of having this complex condition. We also held a listening event in July 2017, to capture the views of our patients and their families in the review.

At the start of the review, we committed to commissioning a follow-up external review to make sure progress was being sustained to address the RCPCH's original recommendations. To that end, we invited the RCPCH to revisit the service in 2017. We are pleased that they recognised the journey the department has been on, and the progress that has been made since their first visit in 2015.

The reviewers were assured by very good senior clinical and operational leadership, significant improvements in the administration of patient communications, the organisation of clinics, and improved team working. We have also seen a fall in the number of issues and complaints raised, and we believe that patients see the tangible benefits of these improvements.

We are aware that there is still room for further improvement, and we have carefully considered the RCPCH's findings from their second visit, together with what we heard from the 2017 listening event. Patients and families who attended told us they wanted to see better communication and information that is easier to understand. The RCPCH echoed similar feedback. To that end, we are reviewing and improving the leaflets and web guides for patients and parents, to enhance their understanding of the service. We will also be focusing on improving the transition for patients as they move from paediatric to adult healthcare. We communicated these findings to the families involved in the review.

We also agreed with the RCPCH recommendations that we improve the ward environment. To that end, we have now moved all gastroenterology patients from the unsatisfactory environment in Rainforest Ward and will soon be relocating them to much better accommodation with new, modern facilities.

Priority clinical standards for seven-day hospital services

The seven-day services programme is designed to ensure patients that are admitted as an emergency receive high quality consistent care, whatever day they enter hospital.

GOSH does not have an accident and emergency department and therefore our 'emergency' workload relates to non-elective patients admitted directly from other hospitals into our critical care units. We have reviewed the implementation of the priority clinical standards for our unplanned critical care admissions. This has been through participation in the NHS England seven-day service audit, which is required twice a year. Our most recent audit was completed for eight admissions in October 2017. All cases met the standard for patients being seen by a consultant within 14 hours of arrival at GOSH. In order to further implement the priority clinical standards, the job planning process for ICU consultants is being reviewed to formalise arrangements for twice-daily ward rounds at weekends to take place. We will continue to participate in the seven-day services national audit for our unplanned intensive care admissions.



Sarah had a heart transplant as a very young baby and has been under the care of the cardiac transplant team at GOSH ever since. Earlier this year, she developed post-transplant lymphoproliferative disease and is being treated with chemotherapy on Giraffe Ward.

Part 2c:

Reporting against core indicators

NHS trusts are subject to national indicators that enable the Department of Health and Social Care (DHSC) and other institutions to compare and benchmark trusts against each other. Trusts are required to report against the indicators that are relevant to them. The table below shows the indicators that GOSH reports against on a quarterly basis to our Trust Board and also externally. The data is sourced from NHS Digital, unless stated otherwise. Where national data is available for comparison, it is included in the table.

What is the Department of Health and Social Care (DHSC)?

The DHSC is a department of the UK government with responsibility for government policy for England alone on health, social care and the NHS.

Performance against DHSC quality indicators

Indicator	From local trust data			From national sources				GOSH considers that this data is as described for the following reasons:	GOSH intends to take the following actions to improve this score, and so the quality of its services, by:
	2017/18	2016/17	2015/16	Most recent results for Trust	Best results nationally	Worst results nationally	National average		
Domain 4: Ensuring that people have a positive experience of care									
				Source: NHS Staff Survey Time period: 2017 calendar year					
The percentage of staff employed by, or under contract to, the Trust during the reporting period who would recommend the Trust as a provider of care to their family or friends	87% (2017)	90% (2016)	88% (2015)	87%	93%	79%	89% (median score)	The survey is carried out under the auspices of the DHSC, using their analytical processes. GOSH is compared with other acute specialist trusts in England.	The introduction of a Trust-wide safety and reliability improvement project, and the development of a programme to ensure quality leadership of our staff, which includes reviewing how we support managers and staff to address harassment and bullying and a commitment to an Equality, Diversity and Inclusion strategy supported by new governance arrangements (see pages 64–65 of the GOSH Annual Report 2017/18 for more information).
Percentage of staff experiencing harassment, bullying or abuse from staff in last 12 months	29% (2017)	25% (2016)	25% (2015)	29%	18%	30%	23% (median score)		
Percentage of staff believing that the organisation provides equal opportunities for career progression or promotion	81% (2017)	85% (2016)	87% (2015)	81%	91%	80%	88% (median score)		

What is the median?

The median is an average that is derived by finding the middle point in a sorted range of values. Unlike the mean average, which is the total divided by the number of values, the median provides an average that is not skewed by 'outlier' data points.

Indicator	From local trust data			From national sources				GOSH considers that this data is as described for the following reasons:	GOSH intends to take the following actions to improve this score, and so the quality of its services, by:
	2017/18	2016/17	2015/16	Most recent results for Trust	Best results nationally	Worst results nationally	National average		
Domain 5: Treating and caring for people in a safe environment and protecting them from avoidable harm									
				Source: Public Health England Time period: 2016/17 financial year					
Counts of clostridium difficile (C.difficile) infection in patients aged two and over	11	1	7	1	0	46	30.2 (mean score)	The rates are from Public Health England. [†]	Continuing to test stool samples for the presence of C.difficile, investigate all positive cases, implement isolation precautions and monitor appropriateness of antimicrobial use across the organisation.
Rate of C.difficile in patients aged 2 and over (number of hospital acquired infections/100,000 bed days)	18.8	1.79	12.5^	1.2*	0	82.7	12.9 (mean score)		
<p>Note: C.difficile colonisation is common in children and, while severe disease may occur at any age, it is rare. At GOSH, we test for C.difficile toxin in all diarrhoeal stool that ‘conforms to the shape of the pot’ (minimal national standard), as well as other stool where diarrhoea, fever or blood in stool was reported; where a request is made for enteric viruses; and as part of the surveillance programme in children with congenital immunodeficiency and undergoing bone marrow transplants. On agreement with our commissioners, we investigate all positive detections and report to Public Health England those aged 2 and above with diarrhoea (or a history of diarrhoea) where no other cause is present or, if another possible cause is present, clinical opinion led to treatment as a possible case. We report on the Healthcare Acquired Infection database according to a locally agreed paediatric modification of the national definition, to enable year-on-year comparison in our specialist trust. Our approach means we find more positive samples compared with the number of cases that we report.</p> <p>* National report used estimated bed days at time of reporting.</p> <p>[†] www.gov.uk/government/statistics/clostridium-difficile-infection-annual-data</p> <p>[^] Previously published rate for 2015/16 was incorrectly calculated as 8.3 using all bed days. It has been corrected here to show bed days of patients aged two and over.</p>									
Indicator	From local trust data			GOSH considers that this data is as described for the following reasons:				GOSH intends to take the following actions to improve this score, and so the quality of its services, by:	
	2017/18	2016/17	2015/16						
Patient safety incidents reported to the National Reporting and Learning System (NRLS):									
Number of patient safety incidents	6,345	5,429	5,338	GOSH uses electronic incident reporting to promote robust reporting and analysis of incidents. It is expected that organisations with a good safety culture will see higher rates of incident reporting year-on-year, with the severity of incidents decreasing.				Initiatives such as Risk Action Groups, local training (human factors, RCA) and “Learning from...” events and posters improve the sharing of learning to reduce the risk of higher-graded incident recurrence. Initiatives are reported and monitored by the Patient Safety and Outcomes Committee.	
Rate of patient safety incidents (number/100 admissions)	10.90	12.40	12.50						
Number and percentage of patient safety incidents resulting in severe harm or death	12 (0.2%)	8 (0.1%)	11 (0.2%)						

Explanatory note on patient safety incidents resulting in severe harm or death

It is mandatory for NHS trusts in England to report all serious patient safety incidents to the CQC as part of the CQC registration process. GOSH also reports its patient safety incidents to the NRLS, which runs a national database designed to promote learning.

There is no nationally established and regulated approach to reporting and categorising patient safety incidents. Different trusts may choose to apply different approaches and guidance to reporting, categorisation and validation of patient safety incidents. The approach taken to determine the classification of each incident, such as those 'resulting in severe harm or death', will often rely on clinical judgement. This judgement may, acceptably, differ between professionals. In addition, the classification of the impact of an incident may be subject to a lengthy investigation, which could result in the classification being changed. This complexity makes it difficult to do a formal comparison.

What is a mean?

The mean is the average of a set of numbers. It is calculated by adding up all the values and then dividing the answer by the total number.

Part 3:

Other information

NHS Improvement uses a limited set of national mandated performance measures, described in its *Single Oversight Framework*, to assess the quality of governance at NHS foundation trusts.

Performance is measured on an aggregate (rather than specialty) basis and Trusts are required to meet the appropriate threshold each month. Consequently, any failure in one month is considered to be a quarterly failure. The table below sets out the relevant national performance measures used to assess the Trust's quality governance rating.

What is NHS Improvement?

NHS Improvement is responsible for overseeing foundation trusts and NHS trusts, as well as independent providers that provide NHS-funded care.

Performance against key healthcare targets 2017/18

Domain	Indicator	National threshold	GOSH performance for 2017/18 by quarter				2017/18 mean	Indicator met?
			Q1	Q2	Q3	Q4		
Effectiveness	All cancers: 31-day wait from decision to treat to first treatment***	96%	100%	100%	100%	100%	100%	Yes
Effectiveness	All cancers: 31-day wait for second or subsequent treatment, comprising:***							
	· surgery	94%	100%	100%	100%	100%	100%	Yes
	· anti-cancer drug treatments	98%	100%	100%	100%	100%	100%	Yes
Experience	Maximum time of 18 weeks from point of referral to treatment in aggregate – patients on an incomplete pathway*** **	92%	Apr: 90.31% May: 90.36% Jun: 89.26%	Jul: 89.84% Aug: 90.07% Sep: 89.67%	Oct: 90.59% Nov: 90.72% Dec: 90.75%	Jan: 92.96% Feb: 93.53% Mar: 92.91%	90.91%	Yes, for Q4 but not for Q1-3. Improvement work continues.
Experience	Certification against compliance with requirements regarding access to healthcare for people with a learning disability	Compliance against requirements*	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved

Additional indicators – performance against local improvement aims

In addition to the national mandated measures identified in the above tables, the Trust has implemented a range of local improvement programmes that focus on the quality priorities as described in Part 2a. The table below sets out the range of quality and safety measures that are reviewed at each Trust Board meeting. Statistical Process Control (SPC) charts are used to measure improvements in projects over time and to identify areas that require further investigation (see definition on page 17). All measures remain within expected statistical tolerance.

Domain	Indicator	GOSH performance for 2017/18 by quarter				2017/18 mean
		Q1	Q2	Q3	Q4	
Safety	Central Venous Line (CVL) related bloodstream infections (per 1,000 line days)	1.57	1.47	1.31	1.54	1.47
Effectiveness	Inpatient mortality rate (per 1,000 discharges) [†] (From data submitted to Hospital Episode Statistics (HES))	8.8	5.7	6.7	4.2	6.3
Experience	Friends and Family Test (FFT) – % of responses (inpatient)**	28.6%	23.1%	22.4%	24.1%	24.6%
Experience	FFT – % of respondents who recommend the Trust (inpatient)**	97.7%	97.3%	96.8%	96.4%	97.1%
Experience	Discharge summary completion time (within 24 hours)	87.8%	87.1%	88.1%	88.1%	87.7%
Effectiveness	Last minute* non-clinical hospital cancelled operations and breaches of 28-day standard***					
	· cancellations	137	119	176	105	537 (total)
	· breaches	14	7	27	24	72 (total)
Experience	Formal complaints investigated in line with the NHS complaints regulations***	29	21	14	22	86 (total)
Effectiveness	% of patients aged 0–15 readmitted to hospital within 28 days of discharge **	1.93%	1.99%	2.23%	1.23%	1.83%
Effectiveness	% of patients aged 16+ readmitted to hospital within 28 days of discharge **	0%	0%	0.81%	1.55%	0.54%

Performance against key healthcare targets 2016/17

Domain	Indicator	National threshold	GOSH performance for 2016/17 by quarter				2016/17 mean	Indicator met?
			Q1	Q2	Q3	Q4		
Effectiveness	All cancers: 31-day wait from decision to treat to first treatment***	96%	97.5%	97.9%	100%	100%	98.9%	Yes
Effectiveness	All cancers: 31-day wait for second or subsequent treatment, comprising:***							
	· surgery	94%	95%	100%	100%	100%	98.8%	Yes
	· anti-cancer drug treatments	98%	100%	100%	100%	100%	100%	Yes
Experience	Maximum time of 18 weeks from point of referral to treatment in aggregate – patients on an incomplete pathway***	92%	Following the identification in 2015/16 of challenges with delivery of the referral to treatment (RTT) standards, GOSH agreed with NHS England a pause in the reporting of its RTT figures until confidence in the data had been returned. The improvement work (reported last year) progressed and reporting resumed in February 2017.				Jan: 91.2% Feb: 91.6% Mar: 91.85%	No
Experience	Certification against compliance with requirements regarding access to healthcare for people with a learning disability	Compliance against requirements*	Achieved	Achieved	Achieved	Achieved	Achieved	Achieved

Additional indicators – performance against local improvement aims

In addition to the national mandated measures identified in the above tables, the Trust has implemented a range of local improvement programmes that focus on the quality priorities as described in Part 2a. The table below sets out the range of quality and safety measures that are reviewed at each Trust Board meeting. Statistical Process Control (SPC) charts are used to measure improvements in projects over time and to identify areas that require further investigation (see definition on page 17). All measures remain within expected statistical tolerance.

Domain	Indicator	GOSH performance for 2016/17 by quarter				2016/17 mean
		Q1	Q2	Q3	Q4	
Safety	CVL related bloodstream infections (per 1,000 line days)	1.7	1.8	1.7	1.4	1.65
Effectiveness	Inpatient mortality rate (per 1,000 discharges) [†] (From data submitted to HES)	4.2	5.6	7.0	5.7	5.6
Experience	FFT – % of responses (inpatient)**	25.4%	17.7%	26.0%	26.2%	23.8%
Experience	FFT – % of respondents who recommend the Trust (inpatient)**	98.2%	98.1%	98.1%	97.6%	98%
Experience	Discharge summary completion time (within 24 hours)	87.4%	88.7%	86.6%	89.9%	88.2%
Effectiveness	Last minute [†] non-clinical hospital cancelled operations and breaches of 28-day standard***					
	· cancellations	197	191	157	180	725 (total)
	· breaches	32	32	23	25	112 (total)
Experience	Formal complaints investigated in line with the NHS complaints regulations***	33	22	26	18	99 (total)
Effectiveness	% of patients aged 0–15 readmitted to hospital within 28 days of discharge **	1.73%	1.67%	1.86%	1.39%	1.66%
Effectiveness	% of patients aged 16+ readmitted to hospital within 28 days of discharge **	1.35%	1.60%	0.68%	3.91%	1.80%

* Target based on meeting the needs of people with a learning disability, from recommendations set out in *Healthcare for All* (Department of Health, 2008). Quarterly performance is from information submitted to NHS Improvement.

[†] 'Last minute' is defined as: on the day the patient was due to arrive, after the patient has arrived in hospital, or on the day of the operation or surgery.

[‡] Does not include day cases.

** Source: NHS England

*** Source: NHS Digital

** Source: HES

^{††} Throughout the past three years, we have focused on improving the quality of our waiting list data, establishing robust processes to manage elective care waits and ensuring that assurance processes are in place to provide early warning of any future issues. The main focus in 2017/18 was to reduce the waiting times for all our patients, providing prompt treatment and achieving the defined national requirements as an organisation. We worked on improving the waiting times associated with referral to treatment, in line with the hospital's agreed recovery trajectory with NHS England. We achieved the 92% standard for the first time since returning to reporting in January 2018, with a performance position of 92.96%. This was a testament to the work completed by the clinical and operational teams. Following completion of the audit of our *Quality Report 2017/18*, a number of data quality issues were identified related to the small sample undertaken. Four of the errors were identified as high priority, with the remainder flagged as medium priority. Although disappointed with the number of errors identified, GOSH was reassured to see that all but two of the errors related to staff interaction and interpretation of the RTT rules and processes, rather than systemic process issues (which were addressed during previous improvement work). Some related to understanding of RTT rules and their application, while many others related to the storing of documentation to confirm the dates applied to the RTT pathway. As such it is the opinion of the Trust that this is not reflective of the quality of data used to manage elective care or that used to report against the national referral to treatment standards. The small sample was selected from pathways at the 17 week stage of their treatment pathway, with these pathways tracked back through the position reported in previous months. Current validation processes ensure that all pathways are reviewed at 18 weeks in full. The majority of these data entry errors were identified and validated at this point. We demonstrated the correction of all data entry errors to the Auditors as part of the agreed audit process. A number of actions are already underway that will address these issues, including the roll out of a refreshed RTT (and cancer) training package to ensure staff are fully aware of the rules as well as their application across GOSH. Many of these issues were the result of our patient administration system not being compliant with the RTT rules and therefore tracking and managing of patient pathways has to be completed outside the system with limited visibility of pathway status. This specific issue will be addressed with the implementation of the new electronic patient record (Epic) and the Trust is currently working to configure the RTT rules, providing a fully integrated tracking system for staff to use. Focused work continues to be completed to improve the quality of our data across all pathways and the risk continues to be managed through the Trust Kitemarking methodology. Although the number of errors were more than the organisation expected, GOSH notes the context of other Foundation Trusts and their performance against this indicator. It is clear this is a significant challenge to the wider NHS also. GOSH will continue to work to improve the quality of its data across all areas as it progresses towards Epic go-live in April 2019, building on the sound work that has been completed to date.

Annex 1:

Statements from external stakeholders

Statement from NHS England (London), Specialised Commissioning Team

NHS England would like to thank Great Ormond Street Hospital NHS Foundation Trust (GOSH) for the opportunity to review and provide a response to the *Quality Report 2017/18*. We continue to work together to consider improvements in the quality of care and accessibility of services for those children whose healthcare needs are managed by GOSH. NHS England continually review feedback from: patients and families, clinical quality review meetings and other external sources including the Care Quality Commission, Health Education England (North Central and East London), and Public Health England to inform decisions about where improvements can be delivered. Notable examples of positive achievements this year include sustained improvements to referral to treatment times and Transition planning supported by CQUIN transformation funding.

NHS England recognise the considerable work undertaken by the Trust to improve Paediatric Early Warning Scores and the implementation of new IT systems to provide a stronger evidence base to data and reporting. NHS England acknowledges the areas of achievement reported this year which includes compliance with the seven day standards.

NHS England recognises the efforts made by the Trust in relation to infection prevention and control including work on anti-microbial stewardship, recognition and treatment of sepsis, and line care.

There are a number of areas where work to facilitate the improvements outlined in the *Quality Report* are underway.

- Improving the quality and safety of care for inpatient neonates and small infants.
- Developing Trust-wide access to outcomes data through the Clinical Outcomes Hub.
- Implementing the Outpatient Transformation Project.

Following the publication of the Trust's CQC Report in April 2018 we recognise the achievements of the Trust and look forward to working with and supporting the Trust in areas for development, our intention being to ensure through collaborative working that continuous improvement for patients are delivered in 2018/19. We note the Trust has also responded to the CQC's Well Led Report, published in February and we are actively working with the Trust on the implementation of the actions needed to deliver improvements. We note the recent appointment of two permanent Trust Executives: quality posts of a Director of Nursing and a Medical Director. Given the very challenging year the Trust has had with a number of difficult and complex cases that have been in the national spotlight, we welcome the benefits that new senior experienced clinical leadership will bring to both staff and patients and look forward to continuing to build an effective working partnership with the Trust.

Statement from Healthwatch Camden

Healthwatch Camden is pleased to see that some areas of improvement in the Trust have progressed. The better food was noted by one of our volunteers who visited. Framing transition as 'Growing Up Gaining Independence' seems a helpful approach.

We have not been able to take as much part in GOSH's stakeholder engagement this year as we would like, our own priorities have focused us elsewhere this year. Nonetheless, we are always pleased to stay in touch with the Trust and to learn about your work to improve patient experience. We are not able to comment on the clinical quality and safety priorities.

Statement from Camden Health and Adult Social Care Scrutiny Committee

The Camden Health and Adult Social Care Scrutiny Committee regrets that due to the local elections and the new committee not meeting until July 2018, it was unable to review and comment on the GOSH *Quality Report* this year. It looks forward to resuming this voluntary role for the 2018/19 *Quality Report*.

Feedback from Members' Council governors

Comments from Public Governor, south London and surrounding area

Doesn't time fly? It seems barely credible that it was a year ago I was commenting on the 2016/17 annual *Quality Report* and now here we are another year has gone. The 2017/18 report clearly identifies the emphasis GOSH places on Quality against the predetermined criteria of Safety, Clinical Effectiveness and Experience and presents this in a readily accessible format with clear definition of terms used, clear diagrams, tables and graphs. Reading the report, you get a real sense of the huge range of services and research GOSH provides and undertakes on a daily basis at the heart of which are the 'Always Values' and the ethos 'The child first and always'.

Having commented in last year's report that "it would be helpful in each year's report if a brief reference could be made to progress or developments occurring in each of the previous year's priorities", it is particularly pleasing that, to an extent, this has been acted upon. Two of the priorities from last year; improving sepsis awareness and the transition from paediatric to adult healthcare services also feature in this year's report whilst actions promised in the Listening Event in November 2016 to improve the quality of food have been taken. Given how quickly a child or young person can deteriorate it would have been useful to know whether the 'safety huddle' highlighted as one of the safety priorities in 2015/16 is now fully embedded in each ward's practice and part of the junior doctors' induction and Trust-wide induction.

Being the parent of a child born unexpectedly nine weeks early, I am delighted at the focus in the safety section on neonates and small infants. Becoming a parent can be a fraught experience without the added worry of not knowing whether your child is also suffering from a serious and / or rare condition or jaundice and if so knowing treatment has commenced as soon as possible. A simple bloodspot test can provide that reassurance so knowing GOSH has harnessed technology to develop an automated prompt system that alerts nursing leads that a baby on their ward is eligible for screening is very welcome. Similarly, ensuring that a neonate is properly hydrated and receiving the correct fluid and electrolyte therapy is essential but not easy. The multi-disciplinary approach to developing a Trust guideline for management of neonatal intravenous fluids is commendable and provides the basis for the continual raising of awareness of this important subject.

Technology is such a key part of medicine today and whilst I'd suggest it can never take the place of 'gut' feel, the work that has gone into the development of the Clinical Outcomes Hub is formidable. The emphasis on making data available to clinical teams in ways they found most useful and not adopting a 'one size fits all' approach encourages buy in from clinicians

and provides a means for feedback from patients and parents which improves the currency and accuracy of data, facilitates trend analysis and improves treatment and clinical outcomes. A virtuous circle.

The decision to cancel an operation is not taken lightly. The impact on a patient, family, staff and waste of resources is significant. At a time when demand continues to outstrip resources and the resources themselves are being reduced, the fact that the number of elective operations cancelled for bed capacity reasons has halved in the past year through system redesign is great news. The commitment to continue this work to improve patient access and flow in 2018/19 makes sense.

Turning to the current year, GOSH has continued its commitment to listen to patients, families and staff by using various mechanisms to assist in determining which Quality Improvement projects should be undertaken. The choices relating to improving safety and experience when venous access is needed as part of care management, improving the early recognition of the deteriorating child and young person, and continuing the work on improving the transition to adult services build upon similar initiatives, work and technology undertaken in previous years. I look forward to reading about progress made on these in the next annual *Quality Report*.

My thanks to all at GOSH who continue to look after our children and young people, push the boundaries of research, treatment and technology and take those hard decisions. There is much in this annual *Quality Report* to be proud of as well as clear pointers for future priorities and where improvements can be made.

Comments from Public governor, north London and surrounding area:

The extensive work carried out by the Trust to improve the services it provides to neonates and the great emphasis it has placed on training staff to ensure that patients can get the very best specialised care is truly laudable. As the sister of a former patient in the neonatal department, the developments in response to the clinical audit of neonatal care are incredibly heartening to read about. It is reassuring to see that the Trust has taken the audit results very seriously and has responded with tangibility. The standardisation of neonatal care and the availability of demographic information and prompting has increased the percentage of babies receiving a bloodspot test within the required time from 93% to 98% – a commendable result. In addition, the comprehensive staff training and availability of new resources has led to an increase in the percentage of neonates managed in line with the NICE guidelines for jaundice from 62% to 80%. This is very encouraging, and I look forward to the launch of the new electronic solution this summer which will be instrumental in the effective treatment of neonatal jaundice. The Trust acknowledges

that more can be done to raise awareness of the importance of neonatal fluid management, which I anticipate will be followed through. Holistically, it has been a very rewarding and exciting year for the Trust, and one that has seen significant advancements in the medical and care services provided by GOSH, ensuring that it continues to be a formidable force in the clinical world.

There have been significant developments in the provision of sepsis treatment in light of last year's advancements. The introduction of the Sepsis 6 app has proven incredibly successful in ensuring that staff are able to fulfil the Sepsis 6 protocol and administer treatment within an hour. The introduction of the sepsis list and the algorithm which manifests on the ePSAG board has led to a much more efficient approach in the treatment of sepsis and one that both staff and patients have benefited greatly from. This has been supported by raising public awareness of sepsis, the introduction of first-line antibiotics to all wards and comprehensive training of staff, including facilitated simulation training. The delivery of a CQUIN focused on sepsis and antibiotic use and its ongoing provision will ensure a quality focused result, thus fulfilling the quality priorities as highlighted in the first section of the report. The result of these developments is that the percentage of sepsis treatment carried out within an hour at GOSH currently stands at 72%. This is significantly higher than the international average of 47% and is a further testament to the clinical excellence that GOSH exhibits on an international scale.

The measures taken to develop and update the Clinical Outcomes Hub has given staff confidence that their services are being administered efficiently, whilst allowing them to track progress. The PROMs system is an effective way for staff to receive direct feedback from patients and their families and allows them to incorporate this into future services, further driving improvement. It is reassuring to read about the planned developments for bespoke dashboards and the availability of more SSI data, which will allow for sustained development in this area.

The updating of electronic systems in reference to patient access data and management have led to greater efficiency and the availability of more current information for use as the basis of making informed clinical decisions. Consequently, the number of same-day elective operation cancellations has fallen from 6 to 2 per week which is very encouraging. The introduction this year of the Operational Hub is anticipated to increase patient capacity and extend the Trust's services to more children - a testament to the Trust's dedication to 'The child first and always'.

The implementation of the GUGI programme will enable young people to gain the skills necessary to ensure that their transition to adult services takes place smoothly. The emphasis GOSH places on ensuring that its young people are able to cope in a changing clinical environment even after they have left GOSH is evidence of

the Trust's tailored and patient-centric approach which makes it truly outstanding. I look forward to reading about the Transition Improvement Project in next year's *Quality Report*.

The Trust has established the areas for improvement in its catering. I have full confidence that the Trust will respond swiftly to this - particularly the ability to provide ingredient information promptly, which is especially important for children with allergies. However, the Trust's endeavour to improve the nutritional value and variety of its food is greatly appreciated.

The Trust's quality priorities for the next year are well presented through the safety, clinical effectiveness and experience framework. Improvements in the services provided to children needing venous access are welcomed, particularly in children with anxiety where this can taint their hospital experience. Early recognition of symptoms signalling deterioration and the introduction of PEWS is fundamental to risk reduction and to ensure maximisation of successful outcomes. It is reassuring to see transition to adult services as a priority for the following year too, demonstrating the Trust's commitment to its 'Always' ethos. I look forward to the next annual *Quality Report*, which will detail developments in the aforementioned areas.

Overall, it is excellent to see that these developments are being well received by staff, patients and the public, and that they are being incorporated into the Trust's framework seamlessly. The rapid pace of development in the past year - with particular emphasis on the redesign of technological systems, which has paved the way for a more modernised clinical approach, has been astonishing. On behalf of the governors, I'd like to thank everybody involved in the daily administration of the Trust and for working tirelessly to deliver on its pledges. The result is felt by the many children that are given a chance at life, and the families that have been given a solution to their suffering.

Annex 2:

Statements of assurance

External assurance statement

Independent auditor's report to the Council of Governors of Great Ormond Street Hospital for Children NHS Foundation Trust on the *Quality Report*

We have been engaged by the council of governors of Great Ormond Street Hospital for Children NHS Foundation Trust to perform an independent assurance engagement in respect of Great Ormond Street Hospital for Children NHS Foundation Trust's *Quality Report* for the year ended 31 March 2018 (the '*Quality Report*') and certain performance indicators contained therein.

This report, including the conclusion, has been prepared solely for the council of governors of Great Ormond Street Hospital for Children NHS Foundation Trust as a body, to assist the council of governors in reporting Great Ormond Street Hospital for Children NHS Foundation Trust's quality agenda, performance and activities. We permit the disclosure of this report within the *Annual Report* for the year ended 31 March 2018, to enable the council of governors to demonstrate they have discharged their governance responsibilities by commissioning an independent assurance report in connection with the indicators. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the council of governors as a body and Great Ormond Street Hospital for Children NHS Foundation Trust for our work on this report, except where terms are expressly agreed and with our prior consent in writing.

Scope and subject matter

The indicators for the year ended 31 March 2018 subject to limited assurance consist of the national priority indicators as mandated by NHS Improvement:

- Percentage of incomplete pathways within 18 weeks for patients on incomplete pathways at the end of the reporting period; and
- Maximum waiting time of 31 days from urgent GP referral to first treatment for all cancers.

We refer to these national priority indicators collectively as the 'indicators'.

Respective responsibilities of the directors and auditors

The directors are responsible for the content and the preparation of the *Quality Report* in accordance with the criteria set out in the 'NHS foundation trust annual reporting manual' issued by NHS Improvement.

Our responsibility is to form a conclusion, based on limited assurance procedures, on whether anything has come to our attention that causes us to believe that:

- The *Quality Report* is not prepared in all material respects in line with the criteria set out in the 'NHS foundation trust annual reporting manual' and supporting guidance;

- The *Quality Report* is not consistent in all material respects with the sources specified in section 2.1 of the NHS Improvement 2017/18 'Detailed guidance for external assurance on quality reports'; and
- The indicators in the *Quality Report* identified as having been the subject of limited assurance in the *Quality Report* are not reasonably stated in all material respects in accordance with the 'NHS foundation trust annual reporting manual' and the six dimensions of data quality set out in the 'Detailed guidance for external assurance on quality reports'.

We read the *Quality Report* and consider whether it addresses the content requirements of the 'NHS foundation trust annual reporting manual' and supporting guidance, and consider the implications for our report if we become aware of any material omissions.

We read the other information contained in the *Quality Report* and consider whether it is materially inconsistent with:

- Board minutes for the period April 2017 to 31 March 2018;
- Papers relating to quality reported to the board over the period April 2017 to 31 March 2018;
- Feedback from Commissioners, dated May 2018;
- Feedback from governors, dated May 2018;
- Feedback from local Healthwatch organisations, dated May 2018;
- Feedback from Overview and Scrutiny Committee, dated May 2018;
- The trust's complaints report published under regulation 18 of the Local Authority Social Services and NHS Complaints Regulations 2009, dated May 2018;
- The latest national patient survey, dated August 2016;
- The latest national staff survey, dated March 2018;
- Care Quality Commission inspection report, dated 06/04/2018;
- The Head of Internal Audit's annual opinion over the Trust's control environment, dated May 2018; and
- Any other information included in our review.

We consider the implications for our report if we become aware of any apparent misstatements or material inconsistencies with those documents (collectively the 'documents'). Our responsibilities do not extend to any other information.

We are in compliance with the applicable independence and competency requirements of the Institute of Chartered Accountants in England and Wales (ICAEW) Code of Ethics. Our team comprised assurance practitioners and relevant subject matter experts.

Assurance work performed

We conducted this limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) – 'Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board ('ISAE 3000'). Our limited assurance procedures included:

- Evaluating the design and implementation of the key processes and controls for managing and reporting the indicators;
- Making enquiries of management;
- Testing key management controls;
- Limited testing, on a selective basis, of the data used to calculate the indicator back to supporting documentation;
- Comparing the content requirements of the 'NHS foundation trust annual reporting manual' to the categories reported in the *Quality Report*; and reading the documents.

A limited assurance engagement is smaller in scope than a reasonable assurance engagement. The nature, timing and extent of procedures for gathering sufficient appropriate evidence are deliberately limited relative to a reasonable assurance engagement.

Limitations

Non-financial performance information is subject to more inherent limitations than financial information, given the characteristics of the subject matter and the methods used for determining such information.

The absence of a significant body of established practice on which to draw allows for the selection of different, but acceptable measurement techniques which can result in materially different measurements and can affect comparability. The precision of different measurement techniques may also vary. Furthermore, the nature and methods used to determine such information, as well as the measurement criteria and the precision of these criteria, may change over time. It is important to read the *Quality Report* in the context of the criteria set out in the 'NHS foundation trust annual reporting manual'.

The scope of our assurance work has not included testing of indicators other than the two selected mandated indicators, or consideration of quality governance.

Basis for Qualified Conclusion

Percentage of incomplete pathways within 18 weeks for patients on incomplete pathways at the end of the reporting period

The "percentage of incomplete pathways within 18 weeks for patients on incomplete pathways at the end of the reporting period" indicator requires that the NHS Foundation Trust accurately record the start and end dates of each patient's treatment pathway, in accordance with detailed requirements set out in the national guidance. This is calculated as an average based on the percentage of incomplete pathways which are incomplete at each month end, where the patient has been waiting less than the 18 week target. Our procedures included testing a risk based sample of 27 items, and so the error rates identified from that sample should not be directly extrapolated to the population as a whole.

As set out in the *Quality Report* 2016/17, the Trust identified a number of issues in prior years in respect of the referral to treatment within 18 weeks for patients on incomplete pathways indicator. The Trust has taken steps to address these issues and recommenced reporting of the indicator in the final quarter of

2016/17. Whilst progress has been made on the Trust's process for managing and reporting RTT pathways, our testing in 2017/18 has identified a number of findings.

From a sample of 27, we identified the following:

- We identified 2 samples whereby the patient should not have been included for RTT reporting as per RTT guidance, and therefore we could not be assured as to the validity of pathways included in the dataset provided for testing.
- We identified 2 samples whereby the patient was missing from several months reported data as a clock stop had been recorded in error meaning breaches had been under reported by the Trust.
- We identified 3 samples whereby pathways were recorded as active but should have been stopped. These did not impact the number of breaches reported but did mean the number of active patients was overstated.
- We identified 2 samples where the pathway was not included on the month end position due to processing. The issue relates to RTT processing whereby it assumes that if an elective patient is booked for a 'treatment procedure' and has been admitted and discharged, that the treatment has taken place and therefore the clock stops. If coding subsequently indicates the planned procedure was not carried out, the patient pathway is automatically returned to the incomplete return. For both these errors, this happened post month end.
- We identified 6 samples where there was insufficient audit trail to validate the samples.

As a result of the issues identified, we have concluded that there are errors in the calculation of the "percentage of incomplete pathways within 18 weeks for patients on incomplete pathways at the end of the reporting period" indicator for the year ended 31 March 2018. We are unable to quantify the effect of these errors on the reported indicator. The "Performance against key healthcare targets" section on page 49 of the NHS Foundation Trust's *Quality Report* details the actions that the NHS Foundation Trust is taking to resolve the issues identified in its processes.

Qualified Conclusion

Based on the results of our procedures, except for the matters set out in the basis for qualified conclusion section of our report, nothing has come to our attention that causes us to believe that, for the year ended 31 March 2018:

- The *Quality Report* is not prepared in all material respects in line with the criteria set out in the 'NHS foundation trust annual reporting manual';
- The *Quality Report* is not consistent in all material respects with the sources specified in NHS Improvement 2017/18 'Detailed guidance for external assurance on quality reports'; and
- The indicators in the *Quality Report* subject to limited assurance have not been reasonably stated in all material respects in accordance with the 'NHS foundation trust annual reporting manual' and supporting guidance.



Deloitte LLP

Chartered Accountants
St Albans

23 May 2018

Statement of directors' responsibilities for the *Quality Report*

The directors are required under the Health Act 2009 and the National Health Service (Quality Accounts) Regulations to prepare Quality Accounts for each financial year.

NHS Improvement has issued guidance to NHS foundation trust boards on the form and content of annual quality reports (which incorporate the above legal requirements) and on the arrangements that NHS foundation trust boards should put in place to support the data quality for the preparation of the *Quality Report*.

In preparing the *Quality Report*, directors are required to take steps to satisfy themselves that:

- The content of the *Quality Report* meets the requirements set out in the *NHS Foundation Trust Annual Reporting Manual 2017/18* and supporting guidance.
- The content of the *Quality Report* is not inconsistent with internal and external sources of information including:
 - Board minutes and papers for the period April 2017 to May 2018
 - Papers relating to Quality reported to the board over the period April 2017 to May 2018
 - Feedback from commissioners dated 11 May 2018
 - Feedback from governors dated 24 and 25 April 2018
 - Feedback from local Healthwatch organisation dated 10 May 2018
 - Feedback from Overview and Scrutiny Committee dated 26 April 2018
 - The Trust's complaints report published under regulation 18 of the Local Authority Social Services and NHS Complaints Regulations 2009, dated 27 April 2018
 - National Paediatric Outpatient Survey 2016
 - Children and Young People's Inpatient and Day Case Survey 2016
 - The national NHS Staff Survey 2017
 - The Head of Internal Audit's annual opinion of the Trust's control environment dated 23 May 2018
 - CQC inspection report dated 6 April 2018

- The *Quality Report* presents a balanced picture of the NHS Foundation Trust's performance over the period covered.
- The performance information reported in the *Quality Report* is reliable and accurate.
- There are proper internal controls over the collection and reporting of the measures of performance included in the *Quality Report*, and these controls are subject to review to confirm that they are working effectively in practice.
- The data underpinning the measures of performance reported in the *Quality Report* is robust and reliable, conforms to specified data quality standards and prescribed definitions, is subject to appropriate scrutiny and review.
- The *Quality Report* has been prepared in accordance with NHS Improvement's annual reporting guidance (which incorporates the Quality Accounts regulations) as well as the standards to support data quality for the preparation of the *Quality Report*.

The directors confirm to the best of their knowledge and belief they have complied with the above requirements in preparing the *Quality Report*.

By order of the board



23 May 2018

Chairman



23 May 2018

Chief Executive

Great Ormond Street Hospital for Children NHS Foundation Trust

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Designed and produced by Great Ormond Street Hospital
Marketing and Communications.

Thank you to everyone who was interviewed for, or gave
permission for their picture to be used in, this report, as well
as the many members of Great Ormond Street Hospital staff
who helped during its production.

The *Annual Report and Accounts* is available to view at
www.gosh.nhs.uk.

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