The Rotunda Hospital Dublin

Annual Report 2020

THE ROTUNDA HOSPITAL DUBLIN

Caring for Generations
Since 1745

The Rotunda Hospital,
Parnell Square,
Dublin 1,
DO1 P5W9

Tel: 01 817 1700
www.rotunda.ie
@RotundaHospital

About the Rotunda

In 1745 Bartholomew Mosse, surgeon and man-midwife, founded the original Dublin Lying-In Hospital as a maternity training hospital, the first of its kind. The Rotunda Hospital is unique as an institution in that it has continued to provide an unbroken record of service to women and infants since its foundation. The Rotunda Hospital has been in operation at the Parnell Square campus for 264 years, with the main inpatient building remaining in continuous use since the doors first opened on December 8, 1757, making the Rotunda Hospital the longest serving maternity hospital in the world. The Rotunda remains an independent, voluntary organisation operating under Charter with a Board of Governors and the Mastership System responsible for clinical and operational management. Since the introduction of Hospital Groups in 2013, the Rotunda is the lead maternity centre for the RCSI Hospitals Group.

The ethos and core values of its founder are still at the heart of the Hospital and this is demonstrated through the care and dedication of the staff and the Board of Governors of the Hospital. Over time the Rotunda has evolved into a 198-bed teaching Hospital which provides specialist services in order to support women and their families at a local, regional and national level.

THE ROTUNDA HOSPITAL DUBLIN

CARING FOR GENERATIONS
SINCE 1745

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Introduction

Thank you

Prof. Fergal Malone, Master of the Rotunda Hospital

Introduction by the Master

There can be no doubt that 2020 was an exceptional year at the Rotunda. Commencing on January 1st with great plans to mark the 275th year of consecutive service as the longest running maternity hospital in the world, to a realisation on February 29th that a global pandemic of exceptional scale and impact was upon us, changed the Rotunda in a way that nobody could have imagined. However, experience gained through three centuries of service encompassing wars, famine and previous pandemics ensured that the Rotunda continued to provide the highest standards of care to our patients, with another year of exceptionally good clinical results.

THE PANDEMIC

The speed of onset and dissemination of the COVID-19 pandemic has been remarkable. While the first confirmed case of COVID-19 was diagnosed in Wuhan City, China on January 7, 2020, the first case was identified in Ireland only seven weeks later on February 29, with the World Health Organization declaring a global pandemic on March 11, 2020. However, since February 24, the Rotunda Executive Management Team had already commenced COVID-19 emergency contingency planning arrangements, and by March 9 had decided on major changes to clinical services at the hospital. These were designed to ensure the core function of providing safe antenatal and intrapartum care for mothers and neonatal care for babies was prioritised. This included an almost complete ban on visiting to the hospital, other than mothers' partners during birth or pregnancy loss, and a temporary cessation of elective gynaecology services. A "hospital-within-a-hospital" was constructed and was fully operational by March 24, thereby allowing full obstetric and neonatal services to be provided to COVID-19 infected patients as safely as possible in isolation. The first COVID-19 infected patient was diagnosed at the Rotunda on March 24, and the first infected staff member was confirmed on March 25. By the end of December 2020, a total of 121 COVID-19 infected patients had been identified at the Rotunda, with such a low number from the over 10,000 women using our services each year reflecting the excellent preventative health steps put in place by the hospital and precautions taken by pregnant women themselves. Thankfully all Rotunda patients who had become infected with COVID-19 recovered, with excellent maternal and perinatal outcomes in all cases.

In order to maximise hospital safety and efficiency, many other clinical functions were converted to virtual methods of provision, including virtual gestational diabetes clinics, virtual physiotherapy services, virtual perinatal mental health services, and virtual parent education/antenatal classes. Ultrasound assessments were time-limited, and strict social distancing, hand hygiene and personal protective equipment (PPE) protocols were implemented for everyone on our campus. These technology-enabled, virtual services were so successful, and received such positive feedback from patients, that many have been continued even as the pandemic recedes.

The Rotunda's clinical microbiology laboratory was one of the first in the country to implement a full, in-house COVID-19 testing service, with its already established GeneXpert system being fully operational for COVID-19 testing by March 24, 2020. This enabled the Rotunda to not only test its own staff and patients for COVID-19, with results being available in a matter of hours, but also allowed the Rotunda to provide COVID-19 testing for many other hospitals, including Connolly Hospital, Children's University Hospital at Temple Street, the National Maternity Hospital, the Royal Victoria Eye and Ear Hospital, and Cavan General Hospital. Additionally, the Rotunda's laboratory service provided COVID-19 testing for paramedics from the Dublin Fire Brigade,

for local General Practitioners, and for both staff and patients from local nursing homes.

Throughout the pandemic, the Executive Management Team endeavoured to maximise communication and dissemination of accurate information to all staff. Daily EMT updates, summarising updated patient and staff infection rates, occupational health supports, and changing recommendations for PPE use or infection control protocols were provided to all staff, utilising various electronic and social media platforms.

The response of Rotunda staff to the COVID-19 pandemic was nothing short of exceptional, and it was truly awe-inspiring to see the full extent of professionalism, volunteerism, and creative problem-solving exhibited by all members of staff. By the end of December 2020, a total of 81 Rotunda staff, from a total complement of 1,042 employees, had themselves become infected with COVID-19. Thankfully all COVID-19 infected Rotunda staff have also made a complete recovery.

On behalf of the Executive Management Team at the Rotunda, I would like to acknowledge each and every member of the hospital's staff who struggled during this extreme pandemic event and provided exceptional care to all of our patients with the best possible outcomes.

Particular thanks must be given to our Occupational Health Service, who worked tirelessly to keep all staff safe, as well the Clinical Microbiology Service, who implemented ever-changing clinical protocols so effectively.

The restrictions that have been in place since March were difficult for everyone, but none more so than for our patients and their families. The limitations of our current buildings were never more apparent to us than in 2020 as we strove to keep patients safe by ensuring that physical distancing and all necessary infection control measures in restricted spaces were implemented. We are proud of the fact that, in spite of these challenges and very real dangers, no life was lost in the Rotunda to COVID-19. This came at a high, and at times almost unbearably high, emotional cost in terms of the restrictions on mothers, their partners and their families, and the very different experiences they have had compared to our pre-COVID-19 norms.

I would like to take this opportunity to express our gratitude to all of the women who passed through the doors of the Rotunda in 2020 as the pandemic has unfolded and for how they worked with us as part of a team. Their graciousness, stoicism, courage and good humour has been extraordinary. Thank you to each and every one of you for what you have sacrificed to keep everyone safe.

CLINICAL ACTIVITY

A persistent demographic trend in Ireland over the last decade has been a steep drop in birth rates, with total births in Ireland declining 25% from its peak of 76,023 in 2009 to a current low of 56,836 in 2020. However, this significant birth rate decline has not been equally distributed throughout Ireland, with Rotunda births remaining relatively stable over the last decade. While there was a 4% decline in births nationally from 59,352 to 56,385 between 2019 and 2020, births at the Rotunda declined only 1% from 8,410 to 8,316 between 2019 and 2020.

By a considerable distance therefore, the Rotunda remains the busiest maternity hospital in Ireland, with one in six of all births nationally currently occurring at the Rotunda.

As well as overall birth numbers being significantly higher at the Rotunda, the Rotunda also has the highest proportion of nulliparous patients, with 45% of all deliveries at the Rotunda occurring to first time mothers, compared with 39% nationally. Nulliparous patients have a disproportionately higher rate of complications, prolonged labour and resource utilisation. These metrics need to be kept in mind therefore when resource allocation for maternity services is considered on a national basis by the HSE, and on a regional basis by the RCSI Hospitals Group. We are of the view that the Rotunda remains underfunded for its service demands and, if activity-based funding was being followed in the Irish health system, a considerably larger central allocation of funding would and should be provided to the Rotunda.

Despite this high clinical throughput, the quality of care provided at the Rotunda has been superb. 2020 has seen its lowest ever adjusted perinatal mortality rate at the Rotunda of 1.08 per 1,000 births, compared with a national rate of 1.7 per 1,000. Other features of care excellence at the Rotunda include a 70% breastfeeding initiation rate, compared with 62% nationally, as well as extremely low rates of major obstetric morbidity, with only one case of eclampsia, one case of uterine rupture and three cases of pulmonary embolism across the entire year. These morbidity rates are amongst the lowest in the country, and significantly lower than comparable international rates. Crucially, the Rotunda has now had its sixth year in a row without experiencing the ultimate tragedy of a maternal death.

Our clinical throughput data however also point to a number of areas of clinical focus for targeted quality improvement projects in 2021. The number of neonatal encephalopathy cases increased from 17 in 2019 to 25 in 2020, for a rate of 3 per 1,000 births, compared with 1.8 nationally. The rate of obstetric brachial plexus injury (OBPI), which is typically secondary to shoulder dystocia, increased from two cases in 2019 to 14 cases in 2020, for a rate of 1.7 per 1,000 births, compared with 1.0 nationally. Third and fourth degree perineal tears increased from 116 cases in 2019 to 124 cases in 2020, for a rate of 2.4% of all vaginal deliveries, compared with 1.8% nationally. Postpartum haemorrhage (PPH) rates of more than 1 litre at vaginal delivery increased from 222 cases in 2019 to 254 cases in 2020, for a rate of 5% of vaginal deliveries, compared with 4% nationally. A multidisciplinary Neonatal Encephalopathy Reduction Taskforce has already been established to interrogate this trend and to implement any necessary practice improvements. A targeted programme of small group shoulder dystocia clinical skills training is planned for the Labour and Delivery Suite, as is a plan for full implementation of the internationally-recognised PEACHES care bundle to further reduce perineal tears, as well as new interventions for PPH prophylaxis. It is hoped that significant improvements in these clinical care metrics will become apparent in 2021.

HOSPITAL INFRASTRUCTURE

For each of the last five years of my Mastership, I have articulated serious concerns regarding the suboptimal physical infrastructure of our Parnell Square campus.

While the staff of the Rotunda and the people of Dublin have tremendous affection for our historic campus, where we have been resident now since 1757, it has been clear for many years that it is not appropriate to continue to deliver 21st century healthcare from a 264 year old building.

Multiple infectious disease outbreaks, which have been associated with significant morbidity and mortality, have been confirmed as being related to overcrowding due to inadequate physical infrastructure. The massive clinical activity volume summarised in this 2020 Annual Report, as one of the busiest maternity hospitals in Europe, together with the variety of clinical risk metrics described here, emphasise the urgent requirement to upgrade the current Rotunda Hospital infrastructure. This urgent requirement has been confirmed by multiple independent inspections, including from the Health Information and Quality Authority (HIQA) and the HSE itself.

Much discussion and debate has occurred over at least the last 15 years on what to do to improve the infrastructure of the Dublin maternity hospitals. This included the publication in 2008 of the KPMG Independent Review of Maternity and Gynaecology Services in the Greater Dublin Area, which first called for the co-location of all three Dublin maternity hospitals with adult general hospitals, and specifically suggested that the Rotunda should co-locate with the Mater Misericordiae University Hospital.

Subsequently, with changes in the planned location of the new National Children's Hospital, in 2015 a Department of Health announcement suggested that the Rotunda should co-locate with Connolly Hospital in Blanchardstown. In response, during the first two years of my Mastership, we spent considerable Rotunda resources in commissioning a design team, led by Deloitte, to design a new maternity hospital on the Connolly campus, extending to 39,000m^2, with 230 beds, and a 2017 capital costing of at least €430 million. However, given the high cost relative to competing national capital demands, as well as the requirements for significant clinical service upgrades to Connolly Hospital to safely receive our maternity service, it soon became clear that this particular co-location choice would take at least 20 years to bring to fruition.

> Given the severe clinical risks which could affect at least 200,000 women over the next 20 years, it is not acceptable to maintain the current status quo to await the potential delivery of this particular co-location option.

More recently therefore, working in collaboration with HSE Estates, the HSE Acute Hospitals Division and the RCSI Hospitals Group, the Rotunda has now completed the required preparatory work for the construction of a five-storey, 6,000m^2, Critical Care Wing building on the west side of our current Parnell Square campus. By following the required Department of Public Expenditure and Reform (DPER) Public Spending Code, the Rotunda commissioned KPMG to complete a Strategic Assessment Report, which was delivered to the HSE in October 2020, which concluded:

"It is clear that a significant infrastructure investment is required on the Rotunda site to address the four areas of greatest risk, namely the Neonatal Intensive Care Unit, inpatient accommodation, the outpatients department and the Central Sterile Services Department."

This report has been accepted by the HSE and has brought the Critical Care Wing proposal through Gate 0 of DPER's Public Spending Code. Subsequently, KPMG was also commissioned to complete a Preliminary Business Case for this proposal, which was delivered to the HSE in November 2020, and concluded:

"The results of the Cost Benefit Analysis shows that the Critical Care Wing option has a positive benefit to cost ratio……provides the greatest range of benefits relative to costs…..and meets the key criteria set out in the options appraisal process."

This report has also now been accepted by the HSE and has brought the Critical Care Wing proposal through Gate 1 of DPER's Public Spending Code. The next stage of approval required to progress this crucial patient safety project is the appointment of a multidisciplinary Design Team, which will provide Detailed Project Design, Planning Permission documentation and a Final Business Case, thereby bringing the Critical Care Wing project through Gates 2 and 3 of DPER's Public Spending Code. It is anticipated that this Design Team will be commissioned and be in place by 2021.

While this process to develop a crucial Parnell Square campus infrastructure upgrade is slow, it is recognised that the expenditure of €80-€90 million of public funds on a new Critical Care Wing requires appropriate due diligence, which is being closely followed by the Rotunda in the expectation that this project will achieve its final approval to proceed to construction in 2022. The ongoing health and safety of several generations of Irish mothers and their babies, accounting for one in six births in Ireland, requires nothing less than the rapid completion of this infrastructure project. The Rotunda is deeply appreciative of the ongoing assistance of colleagues in the various HSE teams that are assisting in this vital project.

NOTABLE EVENTS

While life at the Rotunda in 2020 was dominated by the COVID-19 pandemic, as befits such a busy and forward-looking hospital, a constant stream of additional changes, achievements and events also occurred throughout the year.

In January, the Rotunda hosted the CEO of the HSE, Mr. Paul Reid, accompanied by the Chief Clinical Officer, Dr. Colm Henry, and the National Clinical Lead for Healthcare Associated Infection, Prof. Martin Cormican, to review the infrastructural challenges at the hospital and the plans for maintaining patient safety. In June, the Rotunda hosted Lord Mayor of Dublin, Tom Brabazon, who presented a scroll of appreciation to the staff of the Rotunda on behalf of the citizens of Dublin in recognition of the exemplary commitment and dedication of Rotunda staff during the COVID-19 pandemic.

At the 2020 Irish Healthcare Awards, the Rotunda was awarded "Outpatient Initiative of the Year" for the introduction of Ireland's first Manual Vacuum Aspiration (MVA) clinic for the management of early pregnancy loss. The Rotunda also won "Patient Education Project of the Year" in collaboration with the RCSI Department of Obstetrics and Gynaecology and the HRB Mother and Baby Clinical Trials Network for its "Real Talk with Real Mums" podcast series. A commendation was also received for "Non-Consultant Hospital Doctor Project of the Year" for the Rotunda's new Virtual Gynaecology Clinic.

In October 2020, the results of the National Maternity Experience Survey (NMES) were launched, with independent analysis of responses revealing that 86% of participants rated their overall experience at the Rotunda as being either "good" or "very good". A number of creative quality improvement initiatives have also been recognised through NMES, which will be implemented in 2021.

The Rotunda's ongoing commitment to patient and healthcare staff education, even in the setting of severe COVID-19 pandemic restrictions, was demonstrated by our Maternity Open Week being delivered to thousands of patients using virtual/on-line platforms from September 27 to October 3, 2020. We also delivered a hugely popular virtual/on-line GP education series to hundreds of our local General Practitioners in October 2020. We anticipate continuing with these virtual events for patients, General Practitioners and GP practice nurses throughout 2021. Similarly, the long-standing Rotunda Annual Service of Remembrance was held in a virtual format in November 2020.

2020 saw the recruitment of a large number of new consultants, each of whom bring significant new clinical skills to improve the service offering to our patients:

- Dr. Meaghan Cotter, Consultant Microbiologist
- Dr. Niamh Daly, Consultant Obstetrician Gynaecologist and RCSI Senior Lecturer
- Prof. Sean Daly, Consultant Obstetrician Gynaecologist and subspecialist in maternal-fetal medicine
- Dr. Thomas Drew, Consultant Anaesthesiologist
- Dr. Siggy Mullers, Consultant Obstetrician Gynaecologist and subspecialist in maternal-fetal medicine
- Dr. Kevin Pennycooke, Consultant Radiologist
- Dr. Keith Pilson, Consultant Pathologist
- Dr. Claire Thompson, Consultant Gynaecologic Oncologist

We also said goodbye to many friends and colleagues who retired after many years of dedicated service to the Rotunda in 2020, including Ms. Marian Brennan (Assistant Director of Midwifery for Infection Prevention and Control), Ms. Margaret Condron (Clinical Midwife Manager in Labour and Delivery Suite), Mr. Les Corbett (Health and Safety Manager), Dr. Ronan Gleeson (Consultant Obstetrician Gynaecologist), Ms. Maura Lavery (Clinical Midwife Manager in Lactation), and Ms. Ronnie O'Neill (Staff Midwife in Neonatal Intensive Care Unit). Tragically, we lost an esteemed member of our staff, Allyson Campion (nee Lawless), a Clinical Midwife Specialist in Obstetric Ultrasound, who passed away after a short illness leaving behind many heartbroken friends and colleagues at the Rotunda. Our sincerest condolences to her family who miss her greatly.

At a personal level, I remain deeply indebted and grateful to each of the 1,042 members of staff who make up the Rotunda family, and who together make the Rotunda one of the most exciting, rewarding and professionally

satisfying places of work in Ireland. I am privileged to work with a superb team of Consultant Obstetrician Gynaecologists, neonatologists, anaesthesiologists, pathologists and other medical specialists, as well as a talented group of dedicated non-consultant hospital doctors. I am particularly grateful to our Clinical Director, Prof. Michael Geary, and our Assistant Masters, Drs. Claire McCarthy, Clare O'Connor and Fiona Reidy, upon whom I rely significantly for assistance in managing the hospital effectively. I am also very appreciative of the dedicated group of volunteers who constitute the Rotunda Board of Governors for their constant support, advice and appropriate challenge, in particular, to Dr. Maria Wilson Browne, Chair of the Rotunda Board.

As in prior years, this Annual Report and indeed all of the administrative work underlying the Master's role, could not have been provided without the support of my two executive assistants, Mary O'Grady and Margaret Griffin. Finally, my role of Master and Chief Executive Officer was made infinitely easier by the skilled assistance and support of my colleagues on the Rotunda Executive Management Team, comprising Mr. Jim Hussey, Secretary/General Manager, Ms. Fiona Hanrahan, Director of Midwifery & Nursing, and Mr. Peter Foran, Director of Finance. The fact that the Rotunda has again cared for such high clinical throughput, in a safe and effective way, at a break-even budget is reflective of the skills and dedication of this Executive Management Team. We look forward to another successful year in 2021 as Ireland's maternity hospital of choice, providing outstanding care by exceptional people.

Professor Fergal Malone
Master of the Rotunda Hospital

> So thankful for all of the work that you do and are doing for us to bring our babies here safely, they are the hope we need in this scary time, thank you.

Introduction by the Chairperson

In 1745 Bartholomew Mosse, surgeon and man-midwife, founded the original Dublin Lying-In Hospital as a maternity training hospital, the first of its kind. The hospital moved to its current location in 1757 where it became known as "The New Lying-In Hospital". This is the hospital campus referred to today as "The Rotunda". The Rotunda is a unique institution in that it has continued to provide an unbroken record of service to women and babies since its foundation in 1745 and has occupied its present premises since 1757. The Rotunda is the oldest working maternity hospital in the world.

BOARD OF GOVERNORS AND GOVERNANCE

The Rotunda Hospital is governed by a Royal Charter which was granted on the 2nd December, 1756 for incorporating the Governors and Guardians of the Hospital. The Royal Charter of 1756 outlines the constitution and the roles and responsibilities of the Board of Governors of the hospital. As Guardians of the Rotunda Hospital the Board has a responsibility for promoting a collective vision for the hospital purpose, the vision, culture, values and behaviours it wishes to promote in conducting business.

The Board also has responsibility to provide leadership within a framework of prudent and effective controls which enable risk to be assessed and managed. In particular, it:

- Gives direction to the Executive Management Team
- Demonstrates ethical leadership
- Promotes behaviours consistent with the culture and values of the hospital
- Makes well informed and high-quality decisions based on clear information from the Executive Management Team
- Monitors the activity and effectiveness of management

The Board has overall responsibility for corporate and clinical governance, as well as for strategic developments. It met on 9 occasions during 2020. The Board is supported by a number of sub-committees, which report to and advise the Board. The Committees are primarily advisory with one committee, the General Purposes Committee, having a decision-making function:

BOARD COMMITTEES

1. General Purposes Committee
2. Risk Committee
3. Property Committee
4. Governance and Audit Committee
5. Finance Committee
6. Performance and Remuneration Committee

Due to COVID-19 challenges and adherence to HSE Safety Guidelines, the Board and its committees continued to meet regularly via Zoom from April for the remainder of the year. Reports on various aspects of the hospital and its services including compliance, governance, quality, risk management, financial management and asset management were still provided, and recommendations to the Board were considered.

The Board continued to pursue a policy of ensuring that the Board and Committees are replenished with a diversity of skill sets in order to meet increasing demands from Board requirements. Continued upskilling is provided with Board education days and induction training for new Governors.

The Board oversees Governors compliance with their statutory requirements under the Ethics in Public Office Act 1995 and the Standards in Public Office Act 2001. A bi-annual self-assessment is provided by all Governors, together with participation at the Annual Away/Education Day. During 2020 due to COVID-19 restrictions, both induction and educational session were also held virtually via Zoom.

In adhering to good governance for public bodies and to comply with a requirement of the Annual Compliance Statement, the Rotunda Board undertook an independent review of current governance arrangements and structures in 2020. This review was completed by BDO's Internal Audit team, and various actions and recommendation from this review will be completed in 2021.

I wish to acknowledge the immense contribution of all the Governors of the Board of the Rotunda Hospital. Their contribution and time truly represents the best of volunteerism in upholding the ethos of our founder Bartholomew Mosse.

CHALLENGES

THE COVID-19 PANDEMIC

The biggest challenge to face the Rotunda in 2020 was the COVID-19 pandemic. The virus put enormous stress and pressure, not just on the hospital, but the whole country. The staff of the Rotunda Hospital were outstanding in their commitment to their patients, service users and fellow staff in ensuring business continuity and that services were maintained safely for all. As a Board we will always be most grateful to them for their unfailing commitment to the Rotunda Hospital and its patients.

ROTUNDA CO-LOCATION AND INTERIM DEVELOPMENT ON THE EXISTING PARNELL SQUARE CAMPUS

The Board remains fully supportive and committed to the principle of co-location to an appropriately resourced Level 4 acute general hospital. There is now accepted recognition by all stakeholders that such a co-location will require a minimum timeframe of at least 15 years. This is an unacceptable risk which the Board cannot ignore in the short term, and therefore mandates us to develop an interim risk mitigation strategy.

The most substantial risk therefore for the Board is addressing infrastructure and spatial deficits associated with providing 21st century healthcare in a 1757 building. The spatial deficits pose an unacceptable level of infection outbreak risk which requires immediate action. The Board is fully supportive of the twin track strategy of the Executive in pursuing plans to invest and optimise infrastructure on the existing Parnell Square campus, while at the same time engaging with the longer-term co-location goal. All options have been comprehensively evaluated, costed and reported to all stakeholders including the Department of Health, HSE Estates, HSE Acute Hospitals Division, and the RCSI Hospitals Group.

STRATEGIC PLAN 2017 – 2021

The Five Year Strategic Plan, and its implementation, is the responsibility of the Board.

The Plan advances areas of specific clinical expertise by further developing Women's Health specialities. The Board provides direction and leadership in guiding the Plan's three overarching principles:

1. To advance areas of clinical expertise by further developing women's health specialties
2. To provide the best patient and staff experience as the maternity hospital of choice
3. To be the leader in women's and infant's health within the RCSI Hospitals Group

There has been considerable progress in multiple work streams within all three key principles:

- Gynaecological services and pre-conceptional / antenatal care
- Patient and customer service excellence programme, such as the Irish Medicines in Pregnancy Service, and the Birth Reflections Service
- Development of hospital infrastructure
- Leadership role within the RCSI Hospitals Group in development of maternity and gynaecological services

Work on the new Strategic Plan 2022-2026 has commenced with a Working Group of the Board to be established in the New Year to develop the strategy.

COMMUNICATION AND STAFF ENGAGEMENT

In March 2020, two weeks before the lockdown the Board had a social event in the Pillar room with staff. The aim of the social event was for the Board and Staff across all disciplines to engage with each other directly in an informal setting. As Chairman I would like to see this become an annual event in the future.

Unfortunately again due to the COVID-19 we could not hold another of our 'Annual Elevenses with the Governors' event with staff prior to the Charter Board meeting. As a Board we felt it was important to acknowledge in some small way our appreciation of our staff during a very difficult and traumatic year. A commemorative medal to acknowledge contributions from all staff during the global COVID-19 pandemic was commissioned. A small representative group of each discipline of the hospital gathered in the Dalrymple Theatre with medals presented. I would like to extend a sincere thank you to all who made it possible especially Claire Murphy, Yoichi Hoashi, and Kieran Slevin.

The Board's much valued Annual Baby Remembrance Service and onsite Quality Walk Rounds also fell victim to the COVID-19 pandemic and could not be held in 2020, although we are determined that these events will continue and happen in the future, with planning already underway for these events in 2021.

VOLUNTARY STATUS

The Rotunda is a Voluntary Hospital and this status has allowed the Rotunda to be independent and autonomous, creating a culture of innovation which has enabled us to be a leader in women's and maternity healthcare services. A Voluntary Hospital with an independent Board provides greater accountability, diversity, innovation and expedient decision making. The Board remains fully committed to the recommendations of the Independent Review Group (IRG) report, which was published in 2019, and is fully supportive of the Voluntary Healthcare Forum in pursuing these objectives.

FINANCE / HSE SERVICE LEVEL ARRANGEMENT

The Hospital approved its annual Service Arrangement with the HSE in March 2020. This was signed, but with the caveat of a letter of reservation which highlighted significant concerns with regard to underfunding of minor capital works, medical equipping, cumulative shortfalls in funding carried forward from prior years, and concerns with the national rollout of an integrated financial management system. Again the most significant impact on Hospital finances in 2020 was COVID-19. This required significant additional upfront expenditure incurred by the hospital in sourcing sufficient personal protective equipment (PPE), Infection Prevention and Control requirements, laboratory costs, and to commission and medically equip a designated 'Red Zone' for COVID-19 positive patients. There were also significant pay costs incurred due to additional resource requirements to provide contract tracing, different medical zones and to bridge significant staff absences due to COVID-19. Additionally, as PPE became a scarce commodity at the height of the pandemic, prices increased significantly, which added to financial strain.

The hospital had to front load this expenditure in the first and second quarters of 2020, which had major adverse impact and put significant strain on hospital cash flow. The hospital's Finance and Procurement Team worked diligently to ensure that all supplies were procured appropriately and ensured a sustainable supply of vital PPE and medical equipment in 2020. All COVID-19 related expenditure was collated and reported transparently to the RCSI Hospitals Group. The Finance Team worked collaboratively with the RCSI Hospitals Group and the HSE to ensure that all COVID-19 expenditure was funded by a supplementary budget adjustment in

2020, which enabled the hospital to achieve financial break-even in 2020. This was a considerable achievement considering the impact that COVID-19 had on the hospital's pay, non- pay costs and income.

BOARD / ANCILLARY FUNDING

The Board has utilised its own generated funds (Ancillary Funds) to address major infrastructural deficits and risks which are not being addressed by the HSE. These include:

- Operating theatre build to address theatre capacity constraints in a way that meets HIQA requirements
- Labour and Delivery Suite refurbishment which will provide more dignified and appropriate accommodation for mothers delivering babies
- Commissioning and equipping new operating theatres
- In addition, the Board continues to utilise its Ancillary Funds for services not funded through the Service Arrangement with the HSE and to progress strategic initiatives from the Strategic Plan 2017-2021
- Continued funding for pro bono IVF treatment for public patients
- Support and seed capital for initiatives from the Rotunda Strategic Plan 2017-2021, such as the Irish Medicines in Pregnancy Service and the Birth Reflections Service
- Supporting hospital-generated research projects
- Service planning funding

COLLABORATION WITH THE RCSI HOSPITALS GROUP / HSE / NWIHP

The third principle in the Rotunda's Strategic Plan is to be a leader in women's and infant's health within the RCSI Hospitals Group. The Rotunda has worked collaboratively with the RCSI Hospitals Group in developing quality initiates across maternity services in the region and in progressing Maternal Fetal Services in Drogheda and Cavan.

The Rotunda also works extensively with the National Women and Infants Healthcare Programme (NWIHP) and other programmes within the HSE in developing services to improve maternity and women's health services and standards in our catchment area.

ROYAL COLLEGE OF SURGEONS IN IRELAND (RCSI)

The Hospital continues to build on its existing relationships with its academic partner the Royal College of Surgeons in Ireland (RCSI). The Hospital works extensively with the RCSI in developing its research capabilities and has a very proactive Research Department which is supported by RCSI.

The Hospital continues to utilise the RCSI for its Leadership and Quality training modules, and the Board continues to sponsor staff availing of these programmes

BOARD OF GOVERNORS

CHAIR

I was elected to the role of Chair in November 2017 and have been supported in that role through the advice and counsel of the following Vice Presidents – Ms. Hilary Prentice, Dr. Melissa Webb, Dr. Mary Keenan and Mr. Ian Roberts. My appointment was subsequently extended by a further 2 years to September 2022.

GOVERNOR RETIREMENTS

Mr. Michael Wickham Moriarty joined the Rotunda as an external member of the Governance Audit Committee. He was an exceptional contributor to this committee and was asked to become a Governor and later a Vice President. Due to family commitments, he resigned from the Board in 2020, and it is hoped that in the future he may join the Board again. We wish him every success in his new adventure.

NEW GOVERNORS

The following new Governors were elected to the Board in 2020: Mr. David Browne, Mr. Barry Holmes, Ms. Margaret Philbin, and Cllr. Darcy Lonergan (ex officio Dublin City Council Representative). We continue to supplement Board Committees with the appointment of experienced and enthusiastic external members, which in 2020 included Ms. Mary Connolly as an external member to the Board's Risk Committee.

A NOTE OF APPRECIATION

I wish to extend grateful appreciation to the Governors of the Rotunda for their time, dedication, diligence and commitment to the Board including its Sub-Committees. The Governors of the Rotunda represent the best of what is volunteerism in that they give valuable time, experience and skills to ensure that the Rotunda Hospital continues to uphold the vision and ethos of its original founder. Additionally, I would also like to acknowledge the contribution and commitment of the external members of our Board Sub-Committees. Their expertise, skills and experience has significantly added value to the workings of the committees.

On behalf of the Board of Governors I want to also acknowledge and thank the Executive Management Team for their commitment and dedication to the Rotunda Hospital and its patients. Under their leadership the Rotunda continues to develop, innovate and be a leader in Irish healthcare services, but to also ensure that the primary focus is on providing a safe and quality service for all of our patients.

The Rotunda would not be the leading maternity hospital in Ireland if it was not for the dedication and commitment of its staff. The staff of the Rotunda represents the vision of the hospital, where the prevailing culture is 'patient centred' and always striving to ensure that every patient journey is a good experience. On behalf of the Board, I wish to thank all staff for their work for our patients in ensuring that we provide the most optimal, safe and quality service.

As Chairman of the Board, I am very conscious that this is not without challenge, with sub-optimal infrastructure and spatial restrictions, but as a Board we will work together with the Executive Management Team to ensure that these challenges are overcome.

Dr. Maria Wilson Browne
Chairman

Clinical Directors Office

CLINICAL DIRECTOR

Prof. Michael Geary, Consultant Obstetrician Gynaecologist.

OVERVIEW

The office of the Clinical Director (CD) at the Rotunda Hospital was set up in 2009 following the introduction of the role nationally as part of the 2008 Consultants Contract. The primary purpose is to support the Master with respect to managing the consultants and non–consultant hospital doctor (NCHD) staff in safe, effective and efficient delivery of care.

ACTIVITY

The Clinical Directors office role was supported by Ms. Olga Pearson in 2020. Active communication with the lead NCHD, Assistant Masters, and the NCHD Committee have been key to driving numerous clinical innovations by medical staff. Dr. Sarah Nicholson was the lead NCHD in 2020, with Dr. Claire McCarthy temporarily taking over the role during maternity leave.

CONTINUING PROFESSIONAL DEVELOPMENT

Attendance at continuing medical education events is a professional registration requirement and the office continues to facilitate this by certification of doctors' attendance at internal educational events. Facilitating mandatory training for medical staff and collating compliance reports are ongoing roles of the office.

HUMAN RESOURCE (HR) LIAISON

Medical manpower is a valuable resource funded by the hospital. The CD office provides a direct link with HR for the purpose of assistance and clarification with all elements and provisions of the Consultants Contract. Service planning manpower requirements and recruitment are also facilitated by the office, with regular employment control meetings being held.

TRAINING SITE ACCREDITATION

The Rotunda is a recognised training site for medical training in a number of disciplines. The Medical Council sets out these requirements for recognition. Regular internal assessment of the ability of the hospital to provide a quality training environment is conducted by the CD office. This is performed in conjunction with the specialty training leads. The hospital has been in compliance with all Medical Council Inspection recommendations, as stipulated since 2019. In terms of the European Working Time Directive (EWTD), the hospital has worked to implement controls on NCHD shift start times. During 2020 there was almost 100% compliance with this legislation, with only a small number of minor breaches from time-to-time.

MATERNITY NEONATAL CLINICAL MANAGEMENT SYSTEM (MN-CMS)

2020 was the third full year using the MN-CMS national electronic health care record, with all teams continuing to work very well using the system. The MN-CMS back-office team, along with the NCHD committee, continue to provide innovative assistance in the training of incoming staff, which is an onerous exercise that must be repeated every six months as large cohorts of new medical trainees in obstetrics and gynaecology, neonatology, anaesthesiology and pathology attend at the Rotunda.

Following the expansion of the MN-CMS system for gynaecology in September 2019, 2020 was the first full year in which the Rotunda functioned as a completely electronic hospital, one of only two hospitals in the entire country to achieve this goal.

SUCCESSES & ACHIEVEMENTS 2020

The Medical Executive Committee chaired by the Clinical Director, with Heads of Clinical Departments as well as Senior Management in attendance continued to meet throughout 2020. This has provided a valuable additional forum to the Hospital Medical Board for communication between Hospital management and senior medical staff.

Improvement in communication and handover was facilitated by the introduction of new consultant rotas and hospital policies. In particular, the introduction of a second consultant on-call at night has improved senior support to the hospital for on-call emergencies. This effectively confirms that a senior consultant obstetrician, as well as a senior consultant gynaecologist, are separately available on a 24-hour per day, 7-day per week basis at the Rotunda. It ensures that all aspects of emergency obstetrics and emergency gynaecology can be provided at all times, not only at the Rotunda itself, but also as a back-up to its affiliated adult general hospitals on the north side of Dublin. This is a unique model of care nationally, led by the Rotunda, as part of the RCSI Hospitals Group.

The electronic time management system (TMS) has been used to ensure successful compliance for NCHD's with the key provisions of EWTD legislation. In general, this has been working very well throughout 2020, with all NCHDs being paid appropriately for the actual hours that they work.

One of the biggest successes during 2020 was the hospital's ability to react quickly and safely to the COVID-19 pandemic. The first case of COVID-19 in Ireland was on 20th February 2020, with the Rotunda seeing its first cases in pregnancy in early March. The Executive Management Team, supported by the entire Rotunda staff, reacted in a very positive way in managing the pandemic. A large number of logistical changes were faced, in particular with the hospital was partitioning itself into a COVID and a non-COVID zone. In effect, a hospital within a hospital was constructed to ensure patient and staff safety. In addition to a large number of COVID-infected patients, a considerable number of staff were also infected by COVID-19, some of whom became very ill, requiring hospitalisation. We are extremely grateful to all of the staff who worked so hard during this unprecedented time, to maintain high quality care for our patients, to ensure safe outcomes, and finally for looking after and supporting each other.

PLANS FOR 2021

The introduction of the electronic healthcare record MN-CMS will continue to be a challenge for the hospital as new medical staff unfamiliar with the system commence bi-annually. Of the 19 maternity units in Ireland only four units are using this system, with the Rotunda being one of only two becoming completely electronic in all clinical environments. The original expectation was that this electronic healthcare record should have been rolled out to all 19 maternity units in Ireland by the end of 2019. However, this plan has not come to pass. Given the large number of other Irish maternity units not being exposed to the MN-CMS system, this means that the Rotunda will need to continue training large numbers of new medical staff who are unfamiliar with the system for the time being. It is hoped that a national online training module will be facilitated in the near future, but again despite recommendations for this in the past, this has not been actioned yet.

The hospital has continued to recruit at consultant level across a number of specialities. We have been fortunate in having a strong field for all competitions during 2020. Some of the interviews during 2020 were conducted virtually, using Zoom, which proved to be very successful, particularly for candidates who were working abroad at the time.

The differential salary situation since 2012 for new entrant consultants remains a significant source of distress and sense of unfairness amongst senior medical trainees and new consultant appointees. There was an expectation that this matter would have been resolved by the HSE nationally during 2020, but sadly this did not occur. It is sincerely hoped that this matter will be resolved in 2021, in order to help attract the best quality candidates to the Rotunda in the future.

We would like to acknowledge and thank the contribution of Ms. Olga Pearson, the lead NCHD Sarah Nicholson, Dr. Claire McCarthy as locum lead NCHD, the Assistant Masters and all members of the NCHD Committee, whose dedication and innovation resulted in another successful year for the hospital.

Clinical Services

Maternity

“When the country locked down and the national advice was to stay at home and stay apart, our teams, every grade of staff, turned up and asked ‘what can I do’. It was truly humbling to see how quickly all teams reacted to the challenge of COVID 19. They had a single aim, which was to protect our patients, babies and each other from contracting this unknown virus. I look back at 2020 with enormous pride in what we achieved.”

Fiona Hanrahan,
Director of Midwifery & Nursing

Department of Midwifery and Nursing

HEAD OF DEPARTMENT

Ms. Fiona Hanrahan, Director of Midwifery & Nursing

SENIOR STAFF*

Ms. Patricia Williamson, Assistant Director of Midwifery & Nursing
Ms. Marie Keane, Assistant Director of Midwifery & Nursing
Ms. Catherine Halloran, Assistant Director of Midwifery & Nursing
Ms. Aideen Keenan, Assistant Director of Midwifery & Nursing
Ms. Janice MacFarlane, Assistant Director of Midwifery & Nursing
Ms. Geraldine Gannon, Assistant Director of Midwifery & Nursing
Ms. Annmarie Sliney, Assistant Director of Midwifery & Nursing
Ms. Mary Deering, Acting Assistant Director of Midwifery & Nursing, Practice Development Co-ordinator
Ms. Marian Brennan, Assistant Director of Midwifery & Nursing, Infection Prevention and Control
Ms. Mary Whelan, Assistant Director of Midwifery & Nursing, Clinical Audit

*Supported by 489 committed midwives, nurses and student midwives

SERVICE OVERVIEW

As the new year of 2020 dawned, no one could have predicted the world-changing events that would unfold at a frighteningly rapid pace. In late December 2019 and into early January 2020, the international news was reporting a new contagious respiratory virus detected in China. By February 2020, the virus was named as COVID-19 and on March 11, the WHO declared the outbreak as a global pandemic. The virus reached Ireland in late February and within three weeks there were cases detected in all counties.

Recognising the need to respond to the inevitable arrival of COVID-19 to the doors of the Rotunda Hospital, the EMT mobilised a team of experts from all disciplines to ensure a measured and consistent approach to planning for the pandemic. By mid-February we had established protocols and pathways for all possible presentations of COVID-19 by patients and staff.

Maternity services are unique within healthcare as our patients are entirely timebound; antenatal care cannot be cancelled or delayed and every patient has a due date, birth is inevitable. Responding to the pandemic required all our services to be flexible, creative and adaptable to ensure that care remained safe and of a high quality despite the requirements imposed upon us to contain the spread of COVID-19.

It is very difficult to articulate the incredible response of our staff. Without exception, they stepped forward with ideas and suggestions to assist with our management of the pandemic. For every ask, the answer was 'what can I do'. Due to the team effort involved, we established a patient telephone COVID-19 helpline, staffed by midwives. The helpline enabled us to provide up-to-date guidance and advice to our patients at a time when the public health advice was changing almost daily. We were very quickly in a position to offer on-site testing for COVID-19 for both patients and staff. Being in a position to test and report positive patient cases gave us the best opportunity to manage their care in the most appropriate setting. We established a COVID-19 Red Zone, a 'hospital within the hospital', to enable us to care for COVID-19 affected patients in the safest way possible. Once the area for the COVID-19 Red Zone was identified and agreed, the teams from midwifery, technical services, clinical engineering, materials, portering and household worked tirelessly over a single weekend to ensure we had a fully functioning, bespoke, antenatal, intrapartum and postnatal inpatient area dedicated to the care of patients who tested positive for COVID-19 and whose admission could not be deferred or delayed. This included a fully kitted out delivery room with all medical gases including a high-spec delivery bed and neonatal resuscitation area.

We quickly realised the importance of rapidly identifying and diagnosing staff affected by COVID-19. It was crucial to ensure that the contact tracing of infected staff happened rapidly. We set up a 'drive through' testing area for staff and patients and, thanks to the tireless work of our Infection Prevention and Control Team and medical scientists, we were able to test and provide results in less than 24 hours. Our Occupational Health Team, with the assistance of staff from other disciplines, established a team of contact tracers. This team worked seven days a week, at the height of the pandemic, to ensure that we minimised the spread of COVID-19 amongst healthcare staff.

I want to convey and record my personal gratitude to our teams of midwives, nurses, students and our wonderful maternity care assistants. There is no doubt that without their commitment, care and resilience, we would have struggled to provide continuous safe care to our mothers and babies.

I want to take this opportunity to reflect upon and acknowledge the challenge faced by our patients who attended here to have their babies during those early months of the pandemic. It must have been so frightening to be admitted to a hospital at a time when everyone was ordered to 'stay at home'; to have a baby at a time when a deadly virus was circulating and about which so little was known. These women faced coming to appointments alone as we had to stop all visiting as part of our safety response to the pandemic. All of our face-to-face/group antenatal education classes stopped abruptly. We worked quickly to establish the provision of online antenatal education resources utilising the power of social media channels such as YouTube.

While women were always permitted to have a partner with them for their birth, there was no postnatal visiting for a short period of time at the height of the pandemic. I want to pay homage to these women who cooperated with us during these safety restrictions, who were cared for by staff wearing PPE, and who were impacted by the reduction in person-to-person contact while with us as inpatients. There were many lessons learned by us during the early months of the pandemic that allowed us to change how we safely delivered care as the months progressed and we settled into the new normal of how care is delivered during a pandemic. On a more positive note, the end of 2020 saw us planning for the provision of COVID-19 vaccination for frontline healthcare workers and so for a brighter prospect for all for 2021.

Looking forward to 2021, we will build on the learning taken from our response to COVID-19. Many of the changes, made in response to an unprecedented public health emergency will be evaluated and embedded into longer term clinical practices. We will look to expand telemedicine, maternal day care, community midwifery and virtual parent craft services to better enable women to manage their care needs safely outside the hospital setting.

ALLYSON CAMPION (LAWLESS) RIP

On January 18, 2020, our colleague and friend, Clinical Midwife Specialist (CMS) Allyson Campion (Lawless) very sadly and prematurely passed away. Allyson worked at the Rotunda for five years commencing as a staff midwife in ultrasound in 2014. Allyson was promoted to Clinical Midwife Manager 2 in May 2017 and, after achieving an MSc, to Clinical Midwife Specialist (CMS) in October 2017. Allyson was an exemplary member of the team in ultrasound and will be sadly missed by all of her colleagues. Allyson is survived by her husband Derek, daughter Eve and her parents and siblings. May her gentle soul rest in peace.

RETIREMENTS

2020 saw some very notable retirements of midwifery and nursing staff with long service at the Rotunda. We wish the following staff a long, happy and healthy retirement:

- Maura Lavery retired from her post as Clinical Midwife Specialist in Lactation in February 2020 after 35 years of service
- Marian Brennan retired from her post as Assistant Director of Midwifery & Nursing in Infection Prevention and Control in December 2020 after 28 years of service
- Veronica (Ronnie) O'Neill retired from her post as senior staff nurse in the NICU in August 2020 after 23 years of service

COMMUNITY MIDWIFERY SERVICES 2020

During 2020 the Community Midwifery Team (CMT) continued to offer midwifery-led care, choice and continuity to normal-risk pregnant women living in Dublin City North as well as North County Dublin. We continued to develop our services to meet the needs of women who attend for care. We provide nine antenatal clinics in the outlying community and one clinic in the Rotunda to facilitate women living in the inner-city area.

TABLE 1: ROTUNDA COMMUNITY MIDWIFERY TEAM CLINICS

Balbriggan Clinic	Monday	2pm–5pm
Blanchardstown Roselawn Clinic	Monday	5pm–8pm
Darndale Bell Clinic	Tuesday	10am–12pm
Coolock Clinic	Tuesday	5pm–8pm
Finglas Clinic	Wednesday	2pm–5pm
Swords Clinic	Wednesday	5pm–8pm
Ballymun Clinic	Thursday	2pm–5pm
Corduff Clinic	Thursday	2pm–5pm
Cabra Clinic	Friday	9am–12pm
Rotunda Clinic	Friday	3:30pm–6:30pm

The CMT adapted and changed during COVID-19 according to public health advice and guidelines. Throughout 2020 the CMT continued to provide community and home-based antenatal and postnatal care to women and their families.

The following changes to antenatal care provided by CMT in response to COVID-19 included:

- COVID-19 triage taking place in clinics (initially by an MCA now done by midwives in clinic)
- Appropriate PPE worn in clinics
- Women advised to wear a mask, gel their hands and to attend the clinic on their own and at their allocated time
- Women advised by text not to attend clinic if symptomatic, a close contact or if they have returned from another country
- Women advised to contact Rotunda's COVID-19 helpline if symptomatic or a close contact
- Booking visits were partially completed by telephone, followed by a short visit to the woman's home to do blood pressure, obtain urine samples and book bloods

The following changes to postnatal care provided by CMT in response to COVID-19 included:

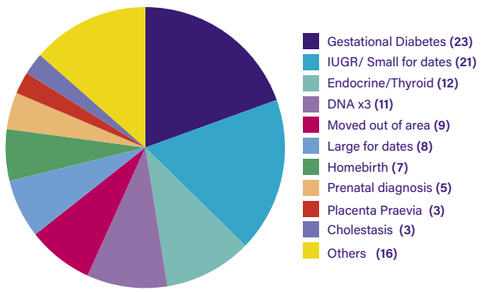
- Home postnatal visits completed in two parts:
  - PART 1 is a telephone visit performed outside the house to assess well-being and any concerns, and to assess the risk of COVID-19 in the household
  - PART 2 is the physical part of the visit. The midwife wearing PPE visits inside the home of the mother and baby for any physical assessments and care, including baby weight, newborn blood spot, perineal/wound inspection and breastfeeding assistance. This part is, where possible, time limited to reduce exposure for the staff. Only the mother and baby are present during the physical part of the visit

- PPE to be worn according to zone visits. The CMT midwives provide home postnatal care for all COVID-19 patients including women discharged home from the COVID-19 Red Zone
- During initial lockdown, increased midwifery staff were allocated to the CMT to facilitate more postnatal visits to reduce the requirement for women to remain in hospital as inpatients. The CMT also provided care for postnatal women outside our normal catchment area, including from South and West Dublin. Private and semi-private patients were also accommodated if they wished to avail of early discharge home with the CMT
- A care pathway was created for discharging women who were diagnosed as COVID-19 positive
- An information leaflet was also created by the CMT for women who were COVID-19 positive, regarding the care of themselves and their newborn following discharge home

In 2020, a total of 7,530 antenatal appointments were provided for women in our outlying clinics including 66 home visits. A total of 55 women were booked at home for community midwifery care and the remaining women were referred from adult outpatient department to the service. Antenatal care was carried out in our community-based clinics

The ongoing care of 118 women was transferred back to hospital-based services during the antenatal period. The most common reasons for such transfer back are represented in the chart below:

FIGURE 1: CARE TRANSFERRED BACK TO HOSPITAL CARE (N=118)



Other reasons for transfer of care back to the Hospital included pre-eclampsia, polyhydramnios, nephrostomy placement during pregnancy, following a diagnosis of COVID-19, abnormal liver function, antepartum haemorrhage, tachycardia, previous fetal growth restriction, previous preterm delivery and epilepsy. Of note, 23 women were deemed unsuitable for CMT-based care following ultrasound evidence of uterine fibroids.

NEXT BIRTH AFTER CAESAREAN (NBAC) SERVICE

A total of 173 NBAC support visits were allocated at 18 weeks gestation. The majority of these took place via telemedicine due to COVID-19. At this visit the CMT midwife discusses the options for next birth after caesarean. Women are provided with information and resources on the benefits and risks of vaginal birth after caesarean (VBAC) compared with elective repeat caesarean delivery. These patients receive community-based antenatal care with the CMT. If patients opt for an elective repeat caesarean, a special 36-week appointment is provided with consultant obstetrician Dr. Sam Coulter Smith to discuss their decision and plan the date of their elective caesarean. Patients then return to CMT care until their date for caesarean. If opting for a VBAC, patients stay with CMT until 39 weeks, where their care is transferred and managed by Dr. Coulter Smith for the remainder of their pregnancy and delivery.

PARENT EDUCATION

Providing patient education continues to be an important role for the Community Midwifery Team in empowering and informing women in their pregnancy. Due to the impact of COVID-19, antenatal classes were moved to an online platform throughout 2020. Women could avail of online questions and answer sessions with midwives and other health professionals. An online virtual open week ran on social media and videos were shared of the midwifery manager of the Community Midwifery Team answering questions that were submitted, in advance, to the team about their services. The CMT provided online hypnobirthing classes which facilitated women to continue these classes online. This hypnobirthing service consists of 4 classes run over 4 weeks.

EARLY TRANSFER HOME (ETH)

All women who attended the CMT antenatal clinics are offered early transfer home (ETH) following delivery. Women continued to be offered early transfer home (ETH) between 6-48 hours post delivery throughout 2020. A total of 3,133 women availed of this service, offering care to both mother and baby in their home for up to seven days postnatally. Mother and newborn are then discharged to the care of their GP. There was an increase of 664 ETH episodes from 2019.

This increase in ETH numbers was largely related to the CMT response to the COVID-19 pandemic; meeting the need to keep the census of inpatients in the hospital as low as possible by facilitating early discharges. During March, April and May of 2020, the CMT extended the provision of ETH to all areas of Dublin, north and south of the Liffey, and to the areas of Louth, Meath and Kildare. The CMT provided a total of 7,308 postnatal visits with each woman receiving an average of 2–3 visits in her home.

ADULT OUTPATIENTS DEPARTMENT (AOPD) MIDWIFERY-MANAGED SERVICES

BOOKING VISITS

A total of 140 booking visits are available each week for public patients, or 28 new booking visits per day. A total of 46% of all booking visits are suitable and referred to midwifery-managed services – either within the general outpatients department or the CMT.

MIDWIFE-PROVIDED ANTENATAL CARE

During 2020, a total of 3,202 appointments were completed in the midwifery-provided clinic. These clinics are provided from Monday to Thursday, with an average of 15 appointments per clinic. The most common reasons for transfer to obstetrician-provided clinics are:

- Hypothyroidism
- Diagnosis of gestational diabetes
- Patient request
- Small for dates/large for dates
- Doctors deciding not to refer back to the midwife clinic post review
- BMI > 32kg/m^2

ADDITIONAL ANTENATAL CLINICS

During 2020, a total of 1,029 appointments for Anti-D were issued, with an average of five patients per clinic. A total of 2,694 glucose tolerance test appointments were completed. A special weekly COVID-19 antenatal clinic saw an average of six appointments per clinic. A total of 68 patient appointments were provided in the COVID-19 Red Zone clinic, together with a total of 47 patient appointments provided to COVID-19 Yellow or Orange Zone clinics.

COVID-19 CHANGES TO THE OUTPATIENT DEPARTMENT (OPD)

1. Booking visit history completed via telemedicine. The patient attends for a midwife/doctor review and ultrasound
2. The OPD antenatal clinic is distributed throughout mornings and afternoons to space out appointments to allow for safer distancing
3. The FREDA (Fetal rhesus D) clinic was paused to reduce footfall and recommenced August 2020
4. Glucose tolerance testing was reduced from 3 blood tests to 2 blood tests, decreasing the length of appointment by 1 hour
5. Specialist/high-risk clinics were reduced and telemedicine incorporated
6. A COVID-19 screening clinic commenced for our current patients
7. Yellow/Orange/Red Zone clinic commenced in April 2020
8. The Gynaecology OPD was reduced and telemedicine commenced
9. Antenatal and breastfeeding classes were changed to virtual classes, utilising platforms such as Zoom
10. Postnatal glucose tolerance tests were initially cancelled and recommenced in August 2020
11. The breakfast club clinic now includes a telemedicine option, with all women now using glucometers to monitor their blood sugars
12. All women who fail to keep an appointment (DNA) now receive a telephone call from a midwife to reassure, assess and reschedule appointment

In 2021, it is hoped to increase the number of women suitable for the supported care pathway by implementation of the midwife-led hypothyroidism pathway and to review BMI criteria.

MATERNAL DAY ASSESSMENT UNIT (DAU)

2020 proved to be a very challenging year for the DAU, with the unit having to make sudden and unprecedented changes to the provision of care for women as a result of the COVID-19 pandemic. We introduced the use of telemedicine for patients who were deemed suitable, which helped to alleviate the increased number of presentations, minimise the spread of infection and foster patient–clinician relationships. This allowed patients to remain at home and receive the same level, and in many cases enhanced, care from their healthcare professionals.

We also supported the pre-admission process for elective caesarean deliveries and inductions of labour by facilitating the swabbing of patients for COVID-19.

Some services were transferred back to their source speciality towards the end of the year, such as diabetes, while other services were accommodated by the DAU to improve the flow of patients through the hospital and thereby enhance the patient experience. These new services included administration of Anti D Immunoglobulin after a sensitising event and preparing women for elective surgery.

During 2020 the midwives in the DAU commenced outpatient induction of labour with a slow-release prostaglandin vaginal insert (Propess®) for normal-risk pregnant women, further reducing the need for admission and enabling patients to remain at home for the first twenty-four hours of the induction process.

The midwifery staff embarked on further education programmes including a Master's in Quality and Safety in Healthcare Management, Midwife Prescribing and a Postgraduate Diploma in Wound Management and Tissue Viability.

We are very grateful to the Day Assessment Unit staff for their continued support in striving to improve standards and care for women and their families.

TABLE 2: MATERNAL DAY CARE UNIT

	2018	2019	2020
Antenatal or postnatal hypertension	1,421	2,152	1,317
Fetal cardiotocograph monitoring	1,228	961	850
Obstetric cholestasis	338	476	428
Blood sugar monitoring/education for diabetes	337	367	128
Intrauterine growth restriction	138	146	277
Antenatal corticosteroid administration	124	131	143
Hyperemesis	101	215	213
Preterm premature rupture of membranes	74	92	193
External cephalic version	59	88	98
Iron infusion	31	52	64
Word catheter management of Bartholin's cyst	15	11	25
Intravenous immunoglobulin administration	3	4	9
Induction of labour			71
Miscellaneous	276	591	890

This report is based on primary diagnosis. Patients may have multiple interventions; for example, the induction of labour would involve a CTG. These would not be captured in the above table as they are not primary diagnoses. Telemedicine was implemented in 2020, this information is not captured in the above table.

LACTATION SERVICE

BREASTFEEDING INITIATION RATES

Breastfeeding initiation rates at the Rotunda Hospital remained high at 69% throughout 2020. Following the retirement of Maura Lavery in February 2020, Geraldine Gordon was appointed CMS in Lactation in March, which coincided with the arrival of COVID-19 and the country going into lockdown two weeks later.

BREASTFEEDING SUPPORT

With the arrival of COVID-19 restrictions within the Rotunda Hospital, patterns of care saw some immediate changes.

The Rotunda Communications Team worked collaboratively with the Lactation Team in the recording of short information videos delivering information from our Breastfeeding Preparation Workshops. These videos were posted online, together with a range of information on the resources available. This proved to be a very beneficial resource for women and staff alike, as the information provided a useful educational tool which was also used by other maternity units. Subsequently, a virtual Zoom class was developed, allowing women to opt into a question and answer forum with the lactation clinical midwife specialists, after viewing online videos. This helped to overcome the lack of face-to-face interaction in the classroom setting. These virtual workshops were facilitated twice weekly throughout most of 2020.

The lactation team provided additional support at ward level, to assist staff in the delivery of breastfeeding support, to as many mothers as possible before discharge. Short educational updates were provided at ward level, to assist staff with the management of breastfeeding challenges presenting in their day-to-day workload. This helped to identify mothers with potential problems and develop care plans to enable them to manage their situation more readily at home.

The lactation CMS offered enhanced support to mothers on postnatal wards with infants in the Neonatal Intensive Care Unit (NICU). This brought about a change in practice where the lactation specialists introduced the earlier use of breastfeeding pumps, to provide extra breast stimulation to compliment the early efforts of hand expression. This involved an education drive for all postnatal staff.

Breastfeeding reviews and additional supportive advice was offered by telephone for mothers who were identified with unresolved issues going home, or who chose to call the lactation service for additional telephone support. The lactation specialists were available on call to meet mothers and babies attending the hospital for essential follow-up appointments where there were underlying breastfeeding issues. One-to-one outpatient postnatal support was also offered to mothers where more support was needed. MN-CMS referrals for lactation through the electronic healthcare system went live in November 2020.

BREASTFEEDING EDUCATION

During 2020 two midwifery staff received sponsorship to undertake IBCLC training. A total of 29 in-service breastfeeding education sessions were held, including 6 education sessions for maternity care assistants (MCA).

There were five formal breastfeeding education refresher courses held through the Centre for Midwifery Education. The content of these courses was completely revised and facilitated by the lactation specialists from the three Dublin maternity hospitals.

Student midwives were facilitated with elective placements in the lactation service as they were unable to travel outside the facility due to COVID-19.

One of the lactation specialists was funded by the Hospital to partake in a professional diploma in clinical leadership in RCSI. Together with the Clinical Midwife Manager 3 for Community Midwifery Services, the lactation specialists joined the DNCC feeding committee, to roll out the National Healthy Childhood Programme and improve breastfeeding initiation and duration by working collaboratively in protecting, promoting and supporting breastfeeding.

Lactation specialists and volunteer mothers were interviewed to highlight changes and experiences for dissemination through our social media platforms during International and National Breastfeeding Weeks.

All new mothers in the hospital received treat bags to highlight the value of breast milk ('Liquid Gold') and gift packs supplied by our fantastic Rotunda Knitters.

PRACTICE DEVELOPMENT UNIT (PDU)

The Practice Development Unit co-ordinates and supports all activities relating to professional midwifery/nursing standards and practice throughout the hospital. In addition, it supports and assists with the education of undergraduate and postgraduate student midwives. Facilitation of the many courses and workshops is through various interdisciplinary teams in conjunction with working groups and committees in partnership with key members of the midwifery/nursing staff from all clinical areas. Having a highly educated midwifery and nursing workforce, responsive to the delivery of current healthcare models is a prerequisite to achieving excellent patient outcomes.

To fulfil the service needs of education programmes, secondary to the COVID-19 pandemic for staff, required evaluation of the methods within the restrictions. In collaboration with the Director of Midwifery & Nursing and the course co-ordinators, change was implemented to meet the mandatory training requirements of staff. This was accomplished through the use of virtual communication tools and pre-recorded training specific to the various programmes and through the piloting of the education programmes. This has enhanced attendance through online learning and the use of breakout rooms. Many staff particularly like to be able to attend training in the comfort of their homes negating the need for travel and childcare.

The Rotunda Hospital has been fortunate in being able to access exceptional support through our HSE partner in NMPDU to enable postgraduate funding opportunities. Our clinical skills facilitators have implemented an enhanced induction/orientation phase which enhances new midwifery/nursing staff adjustment to working in the Rotunda. This facilitates an easier transition to mentoring by experienced midwives and nurses. A total of 55 staff, including new starters and internal rotations, were supported in their transition to working in the Rotunda. Once staff are initiated into their new roles, they are encouraged to enhance their professional development through further educational pursuits. Opportunities for training and educational advancement are aligned with the Hospital Strategic Plan and risk assessed according to operational needs.

In 2020, 15 staff participated in master's programmes in an assortment of care aspects.

Multidisciplinary in-house training was provided in Basic Life Support, Manual Handling, Neonatal Resuscitation, RHOET Emergency Skills and Drills, all of which were enabled with the assistance of HSeLanD/other e-learning and face-to-face clinical and education skills. Additional education programmes were delivered through blended learning, pre-recorded learning and virtual systems. Staff attended the Centre for Midwifery Education in collaboration with the Rotunda staff in the provision of other programmes. These various opportunities have allowed Midwives and Nurses to positively impact on the patient and staff experience.

2020 also facilitated the clinical placements of 82 undergraduate and 22 postgraduate student midwives, 96 general students from DCU, 10 students from Mental Health, 8 from Children's and General Integrated Programme, 3 from RCSI Postgraduate Diploma in Neonatal Nursing and 6 public health nurses. Extensive and constant assistance was provided to ensure the clinical environments were appropriate to their needs.

External student numbers were significantly reduced due to the postponement of clinical placements from March 2020 as a result of COVID-19.

OCCUPATIONAL MEDICINE SERVICE

2020 proved to be a very challenging year for Occupational Health due to the COVID-19 pandemic. Critical services were maintained where possible but the focus shifted from March 2020 to managing staff with potential COVID-19 symptoms and those identified as close contacts. We were helped by several teams involved in swabbing, contact tracing and occupational health management. Extra administration resources were employed and a new CNM2 position interviewed successfully, the candidate will commence in 2021. Services varied from 12 hour shifts to 7 days a week depending on requirements. In total, 685 COVID-19 swabs were performed for staff by the end of 2020. A total of 81 staff were found to be COVID-19 positive during 2020.

A total of 227 consultations were provided throughout 2020. These included a range of occupational health nursing activities included 835 influenza vaccines administered, achieving an 82% hospital vaccination rate. A total of 37 needle-stick injuries and four occupational splash injuries were managed. The service also included weekly nursing clinics, induction medicals and the processing of pre-employment questionnaires for all new staff as well as for new midwifery and medical students.

“Thank you so much for all your hard work, your kind words and all your humanity.”

“One of the nicest moments for me as a mother was the first time I got to hold my daughter skin to skin. It’s incredibly special, and the NICU staff were amazing at encouraging parents to do it.”

Emergency and Assessment Service

HEAD OF SERVICE
Dr. Meena Ramphul, Consultant Obstetrician Gynaecologist

STAFF*
Ms. Fiona Walsh, Clinical Midwife Manager 3
Ms. Bernadette Gregg, Registered Advanced Midwife Practitioner (AMP)
Ms. Debra England, Registered Advanced Midwife Practitioner

* Supported by a team of midwife managers and staff midwives from the Delivery Suite who rotate through the Emergency and Assessment Service

SERVICE OVERVIEW
The Emergency and Assessment Unit (EAU) is a unique setting in the Rotunda, which provides antenatal, intrapartum, postpartum, gynaecologic, and neonatal services 24 hours per day. 2020 was a particularly busy year at the Rotunda EAU, with all staff working extremely hard through difficult times to maintain the highest standards of care. Staffing is provided by two full-time registered advanced midwife practitioners (AMP), together with clinical midwife managers, staff midwives, maternity care assistants as well as obstetric and neonatal senior house officers on a 24 hour basis, with the support of senior registrars. Patients can self present or be referred by their GP or Public Health Nurse, or via an in-house referral pathway. Patients are triaged using an adapted version of the "Manchester Triage System", enabling the midwives to assign clinical priority and determine the urgency of their needs. The AMP or doctor-on-call reviews the patient and a diagnosis can be made. The service uses clearly defined referral pathways and ongoing staff training, which allow continued delivery of a dedicated service that manages patients in a safe, timely and supportive manner.

CLINICAL ACTIVITY

TABLE 1: EMERGENCY ASSESSMENT UNIT (EAU) ACTIVITY

	2018	2019	2020	2019 vs 2020 Variance
Obstetrics	23,808	23,834	21,963	-8%
Gynaecology	1,370	1,482	1,183	-20%
Paediatrics	354	416	320	-23%
TOTAL	**25,532**	**25,732**	**23,466**	**-9%**

In 2020, a total of 35% of obstetric attendances at the EAU resulted in admission, while 12% of gynaecologic attendances were admitted, and 10% of neonatal/paediatric attendances were admitted to the Rotunda.

SUCCESSES & ACHIEVEMENTS 2020
A number of staff became Registered Midwife Prescribers, giving autonomy to the role of the midwife. A number of midwives have also completed a range of Masters programmes. These advances have helped maintain provision of the highest possible quality and safe care for patients during the COVID-19 pandemic.

CHALLENGES 2020
As with all services at the Rotunda, the biggest challenge in 2020 was the impact of the COVID-19 pandemic on clinical services. Despite the restrictions mandated by COVID-19 infection prevention and control protocols, clinical outcomes were excellent, thereby minimising adverse outcomes.

With only 5 assessment cubicles, space limitations remain an issue as any woman with symptoms consistent with COVID-19 needed isolation while awaiting swab results.

Visiting policies were changed and partner attendance was occasionally limited which in turn impacted on women's experience, sometimes resulting in a perception of being unsupported.

Midwifery staffing retention and recruitment remains a challenge for the EAU.

With the refurbishment of the Delivery Suite and temporary room closures, there has been an increase in the number of women labouring and delivering in the EAU, which poses a significant risk as it is not possible to provide the same level of clinical supervision.

PLANS FOR 2021
- To promote and facilitate the expansion of the role of the midwife and advanced midwife practitioners
- To facilitate more clinical audits and cooperative learning to improve the provision of safe effective care in the department
- Introduce a formatted plan for emergency skills and drills sessions for all staff

Early Pregnancy Assessment Service

HEAD OF SERVICE
Dr. Sharon Cooley, Consultant Obstetrician Gynaecologist

STAFF
Dr. Jennifer Hogan, Consultant Obstetrician Gynaecologist
Dr. Deidre Hayes Ryan, RCPI Aspire Fellow
Ms. Suzanna Byrne, CMM3 Outpatients and Early Pregnancy Assessment Unit
Ms. Claire Cassidy, Early Pregnancy Unit Administrator

SERVICE OVERVIEW
The Early Pregnancy Assessment Service (EPAU) plays a key role in the management of complicated pregnancies up until 12 weeks' gestation, with case referrals from the Emergency Room and external sources. Through our dedicated early pregnancy reassurance clinic, we provide an ultrasound service for women who have had prior molar pregnancy, ectopic pregnancy, or who have had two consecutive early pregnancy losses, as well as maintaining close links with the Bereavement and Social Work Services.

Women with prior poor obstetric outcomes are offered an early booking visit or a reassurance scan in order to facilitate early access to antenatal care and allied personnel.

The service goal is to provide a dedicated, patient-centered service that supports and facilitates safe efficient compassionate care.

CLINICAL ACTIVITY

TABLE 1. CLINICAL ACTIVITY

Activity	2018	2019	2020
Repeat EPAU scans	1,633	1,327	1,237
Serial Beta hCG testing	724	698	873
Referred for booking visit	815	814	1366
Pregnancy of uncertain viability	231	334	663
Miscarriage	1,176	932	1,046
Surgical management of miscarriage	310 (26%)	251 (27%)	105 (24%)
Expectant or medical management of miscarriage	866 (74%)	681 (73%)	327 (76%)
Features suggestive of molar pregnancy	5	7	18
Pregnancy of unknown location	242	106	338
Ectopic pregnancy	46	30	39
Methotrexate therapy for ectopic	132	40	72
Patients admitted from the EPAU	56	39	59
Reassurance ultrasound	448	392	390
Total number of patients seen	3,459	3,845	3,527

SUCCESSES & ACHIEVEMENTS 2020
ENHANCING PATIENT CARE
In 2020, we appointed Dr. Deirdre Hayes Ryan as a post-CSCST Royal College of Physicians in Ireland ASPIRE Fellow. This post was awarded to our unit following a competitive application process.

Since her arrival, Dr. Hayes Ryan spearheaded a number of new initiatives, including establishing Ireland's first Manual Vacuum Aspiration (MVA) clinic. This offers women more holistic care options for the management of pregnancy loss, with this achievement being awarded the Irish Healthcare Awards' Outpatient Initiative of the Year.

We also introduced mifepristone priming prior to starting misoprostol for the medical management of miscarriage as a Quality Improvement Initiative in 2020. The implementation of mifepristone resulted in the increased effectiveness of primary medical treatment from 54% in 2019 to 85% in 2020. Simultaneously, there was a reduction in the number of women requiring blood transfusion for early pregnancy loss (15% to 0%), emergency out-of-hours review (15% to 8%) and emergency surgical intervention (6% to 2%) in the seven days after medical management.

The number of patients attending our Early Pregnancy Assessment Service dropped slightly in 2020 from 3,845 to 3,527, which may in part be attributable to the COVID-19 pandemic but also to increased efficiency in the medical management of pregnancy loss, negating the need for serial scans. The requirement for repeat ultrasound scans dropped slightly from 1,327 to 1,237, while the number of women requiring serial Beta-hCG assessment increased from 698 to 873. This may reflect the establishment of a dedicated serum monitoring clinic in 2019 and better ascertainment of these cases.

There was an increase in the number of cases of pregnancy of uncertain viability in 2020 from 334 to 663. In addition, the number of cases with a pregnancy of unknown location also increased from 106 to 338. This reflects the complexity of cases coming through the unit, and despite these increases, the rate of medical management of pregnancy loss still increased in 2020 from 73% to 76%, with the number of women requesting or requiring surgical evacuation falling from 27% to 24%. This change was particularly important due to ongoing concerns around aerolisation of the COVID-19 virus during intubation and extubation with general anaesthesia.

The number of women receiving methotrexate for the medical management of ectopic pregnancy increased from 40 in 2019 to 72 in 2020. The largest contributor to this was the increase in cases of pregnancy of unknown location despite serial ultrasounds.

SERVICE DEVELOPMENTS

- Introduction of a structured multi-modality teaching programme in early pregnancy for non-consultant hospital doctors. The programme consisted of a mix of theoretical didactic teaching in group tutorials, practical ultrasound performance measured through the direct observation of ultrasound performance, and the application of knowledge through case-based discussions using ultrasounds and cases performed by the participants. Weekly group tutorials included group teaching and case-based discussions with assessments over a five-month period. This resulted in increased confidence, clinical acumen and proficiency in the management of early pregnancy loss and is a programme we hope to repeat in 2021

- Introduction of the Quarterly Sonographer teaching sessions in early pregnancy, gynaecology and fetal medicine to facilitate teaching and communication between specialists

CHALLENGES 2020

- Limited infrastructure remained a significant challenge in 2020. This was particularly problematic with the onset of the COVID-19 pandemic and the necessity to limit some partner attendance for scans due to infection concerns

- We still await the creation of a Clinical Midwifery Manager role in early pregnancy loss which would have numerous benefits for patients attending the service

- There is still a need for unrestricted access for early pregnancy scans, even in the absence of bleeding or pain in pregnancy, due to the clearly expressed preferences of patients for routine access to such a service

PLANS FOR 2021

The service plans for 2021 include:

- Improvement in the physical infrastructure of the unit, together with new pathways for partners to join patients for scans, particularly as the COVID-19 pandemic persists

- Agreement with the Executive Management Team for the ongoing appointment of an Early Pregnancy Fellow to continue the initiatives within the unit and assist in teaching.

- Links with the HSE My Child initiative to develop their early pregnancy education for patients

- Generation of an MN-CMS Hospital Discharge document for general practitioners regarding pregnancy outcome

- Development of an Advanced Nurse Practitioner role for the unit in line with early pregnancy developments in other countries

- Integration of the Early Pregnancy and Termination of Pregnancy services going forward to allow maximum utilisation of resources

Recurrent Pregnancy Loss Service

HEAD OF SERVICE

Dr. Karen Flood, Consultant Obstetrician Gynaecologist

STAFF

Ms. Patricia Fletcher, Midwife
Dr. Suzanne Smyth, Obstetric and Gynaecologic Registrar
Dr. Bernard Kennedy, Obstetric and Gynaecologic Registrar
Dr. Ruth Roseingrave, Obstetric and Gynaecologic Registrar
Dr. Sarah Nicholson, Obstetric and Gynaecologic Registrar

SERVICE OVERVIEW

The Recurrent Pregnancy Loss Service was developed to provide thorough, standardised investigation and follow-up of couples with three or more consecutive first trimester miscarriages or two consecutive late miscarriages. The staff endeavour to deliver evidence-based care, limiting our investigations and interventions to those recognised by international best-practice guidelines.

As part of the service, early reassurance scans are also performed for these patients up to their 'booking visit.' The psychological impact of pregnancy following multiple previous losses requires clinical continuity to optimise support and expert care.

All patients with histological confirmation of gestational trophoblastic disease (GTD) following a miscarriage also attend this clinic for counselling and close serum βhCG monitoring with rapid access for review if complications occur.

CLINICAL ACTIVITY

TABLE 1: CLINICAL ACTIVITY

Clinical Activity	2016	2017	2018	2019	2020
Total number of visits	744	918	845	715	867
New visits	111	170	151	156	120
Return visits	633	748	694	559	747
Livebirth rate %	70	69	80	78	76
GTD preg-nancies followed	27	25	24	39	21

SUCCESSES & ACHIEVEMENTS 2020

ENHANCING PATIENT CARE

Successful development of 'paperless' approach to the service with the use of the MN-CMS electronic healthcare record, exclusively for recording patient history and investigation details.

Of the 122 patients with a background history of recurrent miscarriage who attended for early pregnancy ultrasound monitoring and support, 93 (76%) achieved successful or ongoing pregnancies, which is consistent with international best practice.

CHALLENGES 2020

The main challenge this year was to preserve and optimise the service during the COVID-19 pandemic. This was achieved with a telemedicine / virtual approach for first visits and follow-up appointments (107 consultations in total). This allowed us to continue the provision of early reassurance scans while adhering to infection prevention and control guidance.

PLANS FOR 2021

- Continued delivery of a high standard service despite the ongoing health service challenges during a global pandemic

- Multiple service audits are planned this year

Fetal Medicine Service

HEAD OF SERVICE

Dr. Carole Barry, Consultant Obstetrician Gynaecologist

STAFF

Prof. Fergal Malone, Consultant Obstetrician Gynaecologist
Prof. Fionnuala Breathnach, Consultant Obstetrician Gynaecologist
Dr. Sharon Cooley, Consultant Obstetrician Gynaecologist
Dr. Jennifer Donnelly, Consultant Obstetrician Gynaecologist
Dr. Karen Flood, Consultant Obstetrician Gynaecologist
Prof. Michael Geary, Consultant Obstetrician
Dr. Etaoin Kent, Consultant Obstetrician Gynaecologist
Dr. Ann McHugh, Maternal Fetal Medicine Fellow
Dr. Catherine Finnegan, Clinical Tutor
Dr. Suzanne Smith, Clinical Tutor
Dr. Sarah Nicholson, Clinical Tutor
Ms. Fionnuala Nugent, Midwife Manager
Ms. Jane Dalrymple, Fetal Medicine Midwife
Ms. Nollaig Kelliher, Fetal Medicine Midwife
Ms. Joan O'Beirnes, Fetal Medicine Midwife
Ms. Laura McBride, Sonographer/Fetal Medicine Midwife
Ms. Avril O'Connor, Sonographer/Fetal Medicine Midwife
Ms. Suzanne Gillen, Midwife Sonographer
Ms. Aisling Graham, Midwife Sonographer
Ms Gloria Guiteras-Petibo, Midwife Sonographer
Ms. Deirdre Nolan, Midwife Sonographer
Ms. Gemma Owens, Midwife Sonographer
Ms. Irene Twomey, Midwife Sonographer
Ms Roberta Saullo, Midwife Sonograper
Ms. Mabel Bogerabatyo, Radiographer
Ms. Fiona Cody, Radiographer
Ms. Linda Hughes, Radiographer
Ms. Louise O'Dwyer, Medical Social Worker
Ms. Suzanne Larkin, Administration
Ms. Mary Maguire, Administration
Ms. Anita O'Reilly, Administration

SERVICE OVERVIEW

The Fetal Medicine Service at the Rotunda Hospital provides scheduled obstetric ultrasound services, early pregnancy support, prenatal diagnosis and fetal treatment programmes. All Rotunda patients, at the time of their initial hospital booking visit, had a formal early pregnancy dating scan. In addition, all patients had a fetal anatomic survey at 20-22 weeks' gestation. Serial obstetric ultrasound examinations were provided for patients receiving ongoing care at various high-risk obstetric and medical clinical services. Additionally, the Fetal Medicine Service provided a significant emergency ultrasound service for a variety of obstetric complications at local level and at national level in the Fetal Medicine Clinics.

The COVID-19 pandemic presented many challenges to the Fetal Medicine Service in 2020. Use of personal protective equipment, social distancing measures, restricted partner attendance and limited scan time to 15 minutes were introduced as necessary safety precautions.

CLINICAL ACTIVITY

The table below includes a 5-year comparison of the number of assessments performed:

TABLE 1: CLINICAL ACTIVITY

Clinical Activity	2016	2017	2018	2019	2020
Initial booking ultrasound ex-aminations	1,998	6,054*	6,401*	6,351*	6,776*
Fetal anatomic survey (20-22 weeks)	8,581	8,296	9,016	8,710	8,524
Fetal growth assessments	9,734	11,067	14,843	14,961	14,822
Fetal echocardio-gram	304	379	289	278	260
Other	798				
Subtotal	**21,415**	**25,796**	**30,549**	**30,300**	**30,382**
Gynaecology ultrasounds	1,822	918**	541**	481**	578
Total Ultrasounds	**23,237**	**26,714**	**31,090**	**30,781**	**30,960**

*Late bookers had anatomy or growth scans performed as part of their initial booking ultrasound examination
**Gynaecology ultrasound service outsourced due to resource limitations

PRENATAL SCREENING & DIAGNOSIS SERVICES

Prenatal screening and diagnosis of fetal abnormalities are essential parts of the Fetal Medicine Service; nationally, the Rotunda Hospital is the busiest provider of these services and facilitates patients from all maternity units in Ireland. In 2020, 1,784 new patients attended, with 4,663 individual assessments for Prenatal Screening and Diagnosis services being performed.

TABLE 2: PRENATAL SCREENING TESTS

Screening Tests	2016	2017	2018	2019	2020
Non-Invasive Pre-natal Testing (Cell Free Fetal DNA)	925	1,160	1,337	1,406	1,683
Combined First Tri-mester Screening	302	169	43	20	0
Total	**1,227**	**1,329**	**1,380**	**1,426**	**1,683**

Screening for fetal aneuploidy with non-invasive prenatal testing (NIPT) was performed in 1,683 cases. NIPT has now completed replaced nuchal translucency– (NT) based screening, due to the earlier gestational age of performance, its higher sensitivity, and lower false positive rate. Nineteen cases (1.1%) were screen positive for Trisomies 21, 18, 13 or triploidy. In 11 cases, subsequent invasive testing confirmed the screening results. In 8 cases invasive testing was declined: 5 had additional abnormal ultrasound findings that informed further clinical management, 1 had no abnormal ultrasound findings and postnatal karyotype evaluation was normal, and two had termination of pregnancy for another indication.

Table 3 below shows a 5-year comparison of invasive diagnostic procedures performed:

TABLE 3: INVASIVE PRENATAL DIAGNOSTIC TESTS

Invasive Procedures	2016	2017	2018	2019	2020
Amniocentesis	97	99	110	107	145
Chorionic Villus Sampling	63	94	90	71	90
Total	**160**	**193**	**200**	**178**	**235**

Of the 235 diagnostic procedures performed, there were 86 abnormal results, representing 36.5% of invasive tests.

TABLE 4: FETAL CHROMOSOMAL ABNORMALITIES DIAGNOSED PRENATALLY

Abnormality	CVS	Amnio	Total
Trisomy 21	22	10	32
Trisomy 18	8	6	14
Trisomy 13	5	4	9
45X	4	0	4
Triploidy	3	4	7
Other	7	13	20
Total	**49**	**37**	**86**

MAJOR FETAL STRUCTURAL ABNORMALITY

In addition to the above confirmed fetal chromosomal abnormalities, there were an additional 171 cases of major structural fetal abnormalities detected. Table 5 represents a 5-year comparison of these major structural abnormalities:

TABLE 5: FETAL STRUCTURAL ABNORMALITIES DIAGNOSED PRENATALLY

	2016	2017	2018	2019	2020
Cardiovascular	36	56	34	41	43
Head & Neck	25	21	25	19	41
Renal	48	50	33	47	29
Abdominal	12	13	19	20	26
Skeletal	12	26	19	22	19
Thoracic	4	5	10	12	9
CNS	26	20	11	17	2
Other	1	6	3	2	2
Total	**164**	**197**	**154**	**180**	**171**

Eighteen invasive procedures other than amniocentesis or CVS were performed. These included five intrauterine fetal transfusions and thirteen fetoscopic laser ablations.

DUBLIN FETAL SURGERY GROUP

Since 2010, the fetal surgical teams at the National Maternity Hospital, Dublin, and the Rotunda Hospital Dublin have collaborated jointly for the management of all cases of twin-to-twin transfusion syndrome referred to either centre. This has resulted in a single team approach to all such cases, regardless of which of the two hospital locations at which such patients are seen. During 2020, a total of 21 cases of severe twin-to-twin transfusion syndrome (TTTS) were managed by the Dublin Fetal Surgery Group by means of fetoscopic laser ablation of placental vessels. Amongst these 21 pregnancies, 11 resulted in the survival of both fetuses and 7 resulted in the survival of one fetus, overall 29/42 babies (69%) survived. By the end of 2020, the group had treated 228 pregnancies with laser surgery for severe TTTS, with at least one survivor occurring in 81% of cases (186/228). These results are consistent with the results at the major international centres providing this advanced fetal therapy. This approach to a complex but relatively rare, fetal problem is an excellent example of a joint collaborative management strategy that successfully optimises care for these patients.

FETAL CARDIAC SERVICE

The Fetal Cardiac Service at the Rotunda is a national referral service provided by Prof. Fionnuala Breathnach, Consultant Obstetrician and subspecialist in Maternal Fetal Medicine and by Dr. Orla Franklin, Consultant Paediatric Cardiologist at Children's Health Ireland at Crumlin. In 2020, the Fetal Medicine Service performed 260 targeted fetal echocardiograms in addition to the standard fetal cardiac examination (4-chamber view and outflow tracts) that is integral to the fetal anatomy scan offered to all women at the Rotunda at 20–22 weeks' gestation. Rationalisation of the prenatal screening programme for congenital heart disease was necessitated by the COVID-19 pandemic. For a six-month period during which time ultrasound examinations were rationalised and each examination time-limited to 15 minutes, a number of targeted fetal screening echocardiograms were cancelled. For those patients who had risk factors for congenital heart disease, mid-trimester anatomy images and clips were carefully examined by Prof. Breathnach, and patients only called for detailed fetal echocardiogram in the event that the standard anatomy views did not successfully confirm normality.

A total of 90% of cases referred to the joint Fetal Cardiology Service had a confirmed cardiac abnormality. Women who attend the Fetal Cardiology Service are supported by the Rotunda Fetal Medicine Midwife team and the Paediatric Cardiac Liaison service at Children's Health Ireland at Crumlin.

During the COVID-19 pandemic, cardiac nurse specialists at Children's Health Ireland at Crumlin replaced their standard prenatal in-person visit at the Crumlin Cardiac centre for parents whose pregnancies have been complicated by congenital heart disease, with telephone consultations, which proved immensely valuable.

A total of 16 fetuses were identified with duct-dependent cardiac abnormalities. This is the group that is recognised to benefit most

from prenatal detection, which allows for pre-delivery planning for immediate neonatal cardiac care. In spite of the substantial constraints on scanning services during 2020, no baby was born at the Rotunda who had a duct-dependent cardiac abnormality that was not detected prenatally. This stellar detection rate reflects the calibre and expertise of the fetal sonographers at the Rotunda Hospital.

RESEARCH

Ms. Fiona Cody, Research Sonographer, and Prof. Breathnach continued a study exploring the potential for Artificial Intelligence-assisted examination of the fetal heart: '5D Fetal Echocardiography: A Feasibility Study evaluating Operator- and Subject-specific Prerequisite Factors for successful volume acquisition.'

Dr. Ann McHugh was awarded a Doctorate of Philosophy by the Faculty of Health Sciences at RCSI in October 2020 for her thesis 'Can sonographic assessment of pulmonary vascular reactivity following maternal hyperoxygenation predict neonatal pulmonary hypertension?' under the supervision of Prof. Fionnuala Breathnach, Prof. Afif El Khuffash and Dr. Orla Franklin.

TABLE 6: FETAL CARDIAC ABNORMALITIES DIAGNOSED PRENATALLY

	2016	2017	2018	2019	2020
HLHD	6	9	3	5*	5
HRHD	5	7	4	2	3
Complete AVSD	2	5	3	4	2
VSD	12	15	18	4	11
Tetralogy of Fal-lot/ DORV	3	7	5	9**	8
TGA	5	5	6	6	6***
Coarctation / interrupted arch/ double arch	2	6	2	6	5
Truncus Arterio-sus	1	0	1	0	0
Isolated right-sided aortic arch	1	0	2	2	4
Ebstein's anomaly	0	1	0	1	0
Systemic vein anomalies	4	1	0	0	1
Arrhythmia	3	2	5	2	3
Cardiac tumours	0	0	1	0	1
Aortic stenosis	0	0	1	1	1
Isolated tricuspid dysplasia	0	0	0	1	0
TAPVD	0	0	0	1	0
TOTAL	**44**	**58**	**52**	**45**	**50**

(HLHD) hypoplastic left heart disease; (HRHD) hypoplastic right heart disease; (AVSD) atrioventricular septal defect; (VSD) ventricular septal defect; (DORV) double outlet right ventricle; (TGA) transposition of the great arteries; (TAPVD) total anomalous pulmonary venous drainage
*Includes single ventricle atrial isomerism in two cases
** Includes two cases of DORV, four were duct dependent
***Includes one case of congenitally corrected TGA

PLACENTA ACCRETA SPECTRUM SERVICE

The Placenta Accreta Spectrum Service incorporates a joint obstetric, medical, surgical, midwifery and allied health professional expertise across the Rotunda Hospital, the National Maternity Hospital, Mater Misericordiae University Hospital and Saint Vincent's University Hospital. The aim is to ensure a multidisciplinary approach to management of patients and their families affected by placenta accreta spectrum (PAS) and caesarean scar pregnancies in order to optimise outcomes for women affected by these rare and challenging conditions. All patients have detailed placental examination by fetal medicine specialists which may include 3D examination of the placental-bladder interface. MRI imaging is also performed.

A multidisciplinary PAS meeting is held on the first Monday of each month via a virtual secure platform. The meeting is attended by specialists and trainees across all hospital sites. In 2020 an average of five (range 2–10) patients were discussed at each MDT. A total of 15 patients with PAS were delivered. Four were operated on in the Rotunda, two in the Mater Hospital, 6 in the National Maternity Hospital, 1 in St Vincent's Hospital and 2 at other hospitals. This included 11 caesarean hysterectomies and 4 uterine conservation procedures.

The median gestational age at delivery was 34 3/7 weeks (range 29 6/7 to 37 1/7 weeks). One third of cases required emergency delivery (n=5) with two of these cases requiring emergency delivery in regional hospitals. The average estimated blood loss (EBL) was 2,000mls (range 660mls – 5,800mls). Cases that underwent elective delivery had an average EBL of 1,650mls compared with 2,660mls for those cases in an emergency setting. Eight patients (53%) did not require a blood transfusion. Six patients with caesarean scar pregnancy were managed through the MDT.

Dr. Claire Thompson, Consultant Gynaecologic Oncologist joined the service in 2020, based at both the Rotunda and the Mater Misericordiae University Hospitals.

MULTIPLE PREGNANCY SERVICE

A total of 47 multiple gestation pregnancies were referred for management due to select high-risk circumstances. This included 31 sets of monochorionic diamniotic (MCDA) twins, 15 of which were confirmed as having twin-to-twin transfusion syndrome (TTTS). Three sets of monoamniotic twins and 11 cases of dichorionic twins were managed for discordant growth or structural fetal malformations. One set of triplets was managed for discordant fetal growth and there was 1 case of conjoined twins.

SUCCESSES & ACHIEVEMENTS 2020

- Two new Voluson E8 ultrasound machines were purchased
- Appointment of additional midwife sonographer and consultant radiologist

CHALLENGES 2020

- Staff retention remains a challenge given that national demand for skilled sonographers has increased
- COVID-19 brought many challenges with social distancing limitations, curtailed scan times and restriction of partners attending scans

PLANS FOR 2021

- Scheduled booking scans for semi-private patients to be performed by sonographers
- Continued upgrading of all ultrasound equipment

Bereavement Support and Chaplaincy Services

STAFF

Ms. Trish Butler, CMM2
Ms. Emma MacBride, CMM1
Ms. Ann Charlton, Hospital Chaplain
Ms. Clare Naughton, Medical Social Worker
Ms. Aisling Rooney, Administrative Assistant

SERVICE OVERVIEW

The Rotunda Hospital acknowledges that the loss of a baby during pregnancy or following delivery is one of the most painful experiences imaginable in any parent's life. With this in mind the Rotunda Hospital offers a range of services provided by the Bereavement Team and through the Bereavement, Recurrent Pregnancy Loss, and Fetal Medicine Services to afford bereaved parents the necessary support to meet their individual needs.

The Bereavement Team which includes two bereavement midwives, chaplain, dedicated medical social worker and part time administrative support continued to provide sensitive, individualised and compassionate care to these families, and adapted to meet all the challenges presented early in 2020 by the COVID-19 pandemic.

Education sessions were suspended early in the year due to the ongoing COVID-19 pandemic, however members of the team collaborated with the Centre for Midwifery Education and created an online suite of bereavement education sessions.

The work of the hospital is greatly assisted by the chaplains and ministers who are available to offer support to patients and staff alike. A particular word of thanks goes to the Dominican community from St. Saviour's Church in Dominic Street for their dedicated pastoral support to parents and babies which is very much appreciated.

ANNUAL SERVICE OF REMEMBRANCE

Unfortunately due to COVID-19 restrictions the hospital was unable to host the Annual Service of Remembrance. All bereaved parents whose baby died in the previous year received a bespoke card and bookmark in lieu of the usual invitation to the service.

The Bereavement Team with the support of the Communications Department of the Rotunda Hospital created an online reflection piece. This went live on the day the Remembrance Service was due to take place and is available on the Rotunda Hospital social media platforms. This was viewed over 6,000 times.

BOOKS OF REMEMBRANCE

The Books of Remembrance remained available for viewing and reflection for family members by appointment throughout the pandemic.

Maternal Medicine Service

HEAD OF SERVICE

Dr. Jennifer Donnelly, Consultant Obstetrician/ Maternal Fetal Medicine, Rotunda and MMUH

STAFF

Dr. Etaoin Kent, Consultant Obstetrician /Maternal Fetal Medicine Rotunda Hospital and OLOLH Drogheda.
Dr. Nicola Maher, Consultant Obstetrician Gynaecologist, Rotunda Hospital
Dr. Mary Bowen, Consultant Anaesthesiologist, Rotunda Hospital and MMUH
Prof. Ann Brannigan, Consultant Colorectal Surgeon, MMUH
Dr. Tony Geoghegan, Consultant Radiologist, MMUH
Prof. Leo Lawler, Consultant Interventional Radiologist, MMUH
Dr. Colm Magee, Consultant Nephrologist. Rotunda Hospital and Beaumont Hospital
Prof. Conán McCaul, Consultant Anaesthesiologist, Rotunda Hospital and MMUH
Dr. Barry Kelleher, Consultant Gastroenterologist, Rotunda Hospital and MMUH
Prof. Fionnuala Ní Áinle, Consultant Haematologist, Rotunda Hospital. MMUH
Dr. Patrick Thornton, Consultant Anaesthetist. Rotunda Hospital, MMUH
Prof. Kevin Walsh, Consultant Congenital Cardiologist MMUH
Dr. Damien Kenny, Consultant Congenital Cardiologist MMUH
Dr. Claire McCarthy, Post-CSCST Fellow in Maternal Medicine
Dr. Khadeeja Alnasser, International Labour Ward Fellow
Dr. Feras Al Kharous, International Labour Ward Fellow
Ms. Cathy O'Neill, Staff Midwife
Ms. Caroline Snowe, Staff Midwife

SERVICE OVERVIEW

The Maternal Medicine Service of the Rotunda comprises of a number of different specialities who provide overlapping care for women with medical conditions throughout pregnancy and in the postpartum period. Not all specialists who provide expertise are based in the Rotunda and we are grateful for their ongoing support and input.

The report for endocrine, infectious diseases and epilepsy are found elsewhere in the Annual Report.

CLINICAL ACTIVITY

MATERNAL MEDICINE CLINIC

The Maternal Medicine Clinic was established in 2017 and the numbers continue to increase. There were 1,127 patient encounters at the Maternal Medicine Clinic, including virtual consultations which were introduced following the onset of the COVID-19 pandemic.

TABLE 1: REASONS FOR ATTENDANCE

Neurology	**61**
Miscellaneous	15
Multiple sclerosis	9
Stroke/Transient ischaemic attack	7
Structural CNS	6
Epilepsy	5
Benign intracranial hypertension	5
CNS tumour	5
Cerebral palsy	4
Cauda equina	3
Neurofibromatosis	2
Rheumatology	**58**
Rheumatoid arthritis	17
Systemic lupus erythematosus	9
Seronegative arthritis	7
Ehlers danlos syndrome	5
Ankylosing spondylitis	5
Sjogren's syndrome	4
Other	3
Mixed connective tissue disease	2
Psoriatic arthritis	2
Behçhet's syndrome	1
Raynaud's disease	1
Crest syndrome	1
Fibromyalgia	1
Haematology	**49**
Current or previous VTE	15
Antiphospholipid syndrome	9
Bleeding disorder	9
Platelet disorder	7
Other	6
Factor V leiden mutation	3
Gastroenterology	**48**
Crohn's disease	22
Ulcerative colitis	16
Hepatology	6
Others	3
Lynch syndrome	1

TABLE 1: REASONS FOR ATTENDANCE (CONTINUED)

Oncology (Current or previous)	**19**
Breast	7
Leukaemia	4
Lymphoma	2
Other	2
Thyroid	2
Gastrointestinal	1
Melanoma	1
Respiratory	**18**
Asthma	7
Sarcoidosis	7
Antitrypsin deficiency	2
Pneumothorax	1
Cystic Fibrosis	1
Severe Maternal Morbidity	**15**
PAS	4
Surgical follow-up	4
Previous abruption	2
Other	2
Appendicitis	2
Pelvic collection	1
Renal	**10**
Hypertension	3
Proteinuria	2
Alport syndrome	1
Renal transplant	1
Polycystic kidney disease	1
Haemolytic uraemic syndrome	1
Nephrostomy	1
Genetics	**7**
Pre-pregnancy counselling	4
Maternal Turner syndrome	2
Familial adenomatous polyposis Gene	1
Metabolic	**6**
Phenylketonuria (PKU)	2
Maple syrup urine disease	2
Classical homocystinuria	1
Long-chain 3-hydroxyacyl-CoA dehydrogenase (LCHAD)	1

TABLE 1: REASONS FOR ATTENDANCE (CONTINUED)

Complex Obstetric History	**3**
Miscellaneous	**3**
Perineal follow up	1
Previous abruption	1
Post ERPC - debrief	1
Musculoskeletal	**3**
Osteopenia	1
Osteomyelitis	1
Achondroplasia	1
Endocrine	**2**
Infectious Disease	**2**
COVID-19	2
Fetal Medicine	**1**
Immunology	**1**
Mastocytosis	1

VTE – venous thromboembolism

MATERNAL MEDICINE MDT (MMMDT)

The MMMDT is held every six to eight weeks in the MMUH and provides a platform for multidisciplinary input into the management of women with complex backgrounds. 136 women were discussed at the Maternal Medicine MDT in 2020 which represents a one third increase compared to the previous year.

CARDIAC OBSTETRIC CLINIC:

There were 571 patient encounters at the Cardiac Obstetric Clinic.

TABLE 2: CARDIAC DIAGNOSES MANAGED DURING PREGNANCY

Arrhythmia	58
Non-cardiac cases	22
Valvular heart	17
Reviewed and discharged	17
Aortic disease	12
Family history	11
Endocarditis / Myocarditis	8
Cardiomyopathy	7
Congenital heart disease	3
Coronary artery	1
TOTAL	**156**

CARDIAC MDT

The Cardiac MDT is held every six to eight weeks. It provides a forum for multidisciplinary discussion and delivery planning for women with complex congenital heart disease and other complex cardiac conditions. 121 women were discussed at the Cardiac Obstetric MDT held in the MMUH and virtually in 2020.

SUCCESSES & ACHIEVEMENTS 2020

- Our team was involved in writing and development of National Guideline for Management of COVID-19 in pregnancy as well as educational update on COVID to RCPI webinar
- As part of our work in the Irish Medicines in Pregnancy we contributed to the HSE guidance on Pharmacological Management of Patients Hospitalised with COVID-19 and the Mater Hospital protocol for treatment of pregnant people with COVID-19
- During the first lockdown in May 2020, along with NMH, we performed a point prevalence study of COVID-19 in the pregnant population
- In January 2020, we jointly hosted a national study day for cardiology, O&G, nurses, midwives, pharmacists and other professionals on cardiac disease in pregnancy
- Appointment of dedicated RCPI post CSCST Maternal Medicine Fellow. Dr. Claire McCarthy took up the post CSCST Fellow in Maternal Medicine
- The Maternal Medicine Service is a national referral centre for pregnancy women with complex congenital cardiac disease and transplants
- The service hosts and RCPI International Clinical Fellow in Maternal Medicine
- We continued to engage with other maternal medicine teams across Dublin through quarterly educational meetings
- The pre-conceptional counselling service has been expanded with relevant patients being seen both in the Rotunda and MMUH

PLANS FOR 2021

- Further progression of the proposal for the development of the Irish Medicines in Pregnancy Service in conjunction with the Pharmacy Department
- Development of a midwifery role to provide supportive, holistic care for women during pregnancy
- Developing links with rheumatology services and the establishment of a dedicated joint pre-pregnancy and obstetric clinic
- Submission of a proposal for joint site Consultant Radiologist between MMUH and the Rotunda

Teenage Pregnancy Service

HEAD OF SERVICE

Dr. Geraldine Connolly, Consultant Obstetrician Gynaecologist

STAFF

Ms. Deborah Browne, Clinical Midwife Specialist

SERVICE OVERVIEW

Antenatal care is provided to all teenage pregnant mothers up to age nineteen in the Rotunda Hospital's Teenage Pregnancy Service. Vulnerable patients, such as teenage multiparous girls, those with special needs or risk-prone in social situations, may also attend the clinic as they may benefit from continuity of care and the specialised approach provided by this service.

CLINICAL ACTIVITY

Table 1 shows the number of patients managed at the service over the last five years.

TABLE 1: CLINICAL ACTIVITY

Year	No. of Patients
2016	129
2017	90
2018	129
2019	126
2020	136

In 2020, 49% of attendees at the service were Irish. Roma patients accounted for 32% of the total attending the service and 10% were Irish travellers.

Twelve teenagers transferred care to another facility. Two transferred to the Fetal Medicine Service, one with significant IUGR, and one with a cystic hygroma and confirmed Turner syndrome.

One patient from a Roma background delivered at home with no medical or midwifery input due to fear of COVID-19 infection in the hospital.

TABLE 2: PREGNANCY OUTCOMES 2020

Pregnancy Outcomes	Number	%
Spontaneous vaginal delivery	79	65%
Operative vaginal delivery	21	17%
Caesarean delivery (elective)	5	4%
Caesarean delivery (emergency)	16	13%
Total Delivered in Rotunda	**121**	**100%**

The overall caesarean delivery rate in the teenage population was 17%, which is consistent with prior years' experience. There were no cases of stillbirth, and one case of elective pregnancy termination in the setting of severe cystic hygroma with Turner syndrome.

SUCCESSES & ACHIEVEMENTS 2020

It remains reassuring to see a low caesarean section rate in this young population. The excellent attendance rate for routine antenatal care visits during the COVID-19 pandemic was also notable, with 71% of patients accessing supports from the Medical Social Work Service. Our Clinical Midwife Specialist became qualified in examination of the newborn, thereby providing continuity of care in the postnatal ward.

CHALLENGES 2020

The cancellation of some in-person postnatal clinics due to COVID-19 caused some challenges to continuity of care for this group of patients. Additionally, poor attendance at virtual antenatal classes was also noted. The service was also challenged by a number of complex cases with significant mental health issues, including one patient being admitted to a secure unit, subject to a High Court order. Three homeless patients also required additional service supports. A number of late hospital registrations were noted in patients with very poor English, with an increased requirement for translation services.

PLANS FOR 2021

Our Clinical Midwife Specialist will commence training in midwife prescribing. Increased dietician input will be required for this vulnerable poorly nourished population, with ferritin levels to be checked routinely at booking.

Combined Obstetric Endocrine Service

HEADS OF SERVICE

Dr. Maria Kennelly, Consultant Obstetrician Gynaecologist
Prof. Fionnuala Breathnach, Consultant Obstetrician Gynaecologist
Dr. Maria Byrne, Consultant Endocrinologist

STAFF

Ms. Jackie Edwards, Clinical Midwife Manager
Ms. Aileen Flemming, Clinical Midwife Manager
Ms. Rebecca Lanuze, Midwife
Ms. Alexandra Cunningham, Senior Dietician
Ms. Hilary Devine, Senior Dietician
Dr. Nicholas Kay Jay, Specialist Registrar Endocrinology
Dr. Catherine Finnegan, Clinical Research Fellow
Dr. Suzanne Smyth, Clinical Research Fellow

SERVICE OVERVIEW

The Combined Obstetric Endocrine Service continues to provide focused multidisciplinary, single-site care for women with diabetes mellitus (DM) at the Rotunda Hospital. Information relating to patient characteristics, demographics and additional co-morbidities are represented in Table 1. The year 2020 saw a decrease in the number of type 2 DM patients attending the service compared with last year, however, the number of type 1 diabetic patients has remained consistent. Whilst uncomplicated gestational diabetes patients that are managed by diet alone remain under the supervison of the routine antenatal clinics, those that require insulin remain in the Combined Obstetric Endocrine Service and represent a large majority of numbers and workload attending the clinic.

With respect to the pre-gestational diabetic population, the incidence of hypertensive disorders, especially preeclampsia, is in keeping with international data. Unfortunately, there was one neonatal death in the type 2 DM cohort. This occurred due to multiple fetal anomalies which consisted of bilateral congenital diaphragmatic hernias and a muscular ventricular septal defect.

The caesarean delivery rate in both type 1 and type 2 DM remains high (over 60%) and may be reflective of the higher intervention rate to avoid postdate pregnancies, as well as other co-morbidities that prevent awaiting spontaneous onset of labour. A history of having a prior caesarean delivery combined with obesity is also high in this group, thus contributing to higher caesarean delivery rates overall.

CLINICAL ACTIVITY

2020 was the busiest year for the Combined Obstetric Endocrine Service to date. The service has seen a 9% overall increase in patients attending the service, with the GDM cohort comprising the majority. Similar to 2019, the number of women diagnosed with gestational diabetes increased by 11% in 2020.

In addition, 211 patients attended for thyroid dysfunction and other endocrinopathies, which is a slight decrease on 2019 figures.

TABLE 1: CLINICAL ACTIVITY OVERVIEW – DIABETES MELLITUS

	2016	2017	2018	2019	2020
Type 1	32	37	26	29	32
Type 2	22	24	25	55	24
GDM Diet	753	756	674	856	1,040
GDM -Metformin					52
GDM- Insulin	222	218	289	325	223
TOTAL	**1,029**	**1,035**	**1,014**	**1,265**	**1,371**

TABLE 2: PRE-GESTATIONAL DIABETES – MATERNAL CHARACTERISTICS

	TYPE 1	TYPE II
N	31	24
Mean Age (years)	30	38.5
Mean duration of Diabetes (years)	9.8	3.8
DM Complications: (Expressed in ongoing viable pregnancies)		
Chronic HTN	2/24 (8%)	1/19 (5%)
Retinopathy	9/24 (38%)	2/19 (11%)
Nephropathy	2/24 (8%)	0/19 (0%)
Neuropathy	1/24 (4%)	0/19 (0%)
Preeclampsia	6/24 (25%)	2/19 (11%)
Mean (SD_ gestational age at booking (weeks)	5.9(+/- 1.7)	8.5(+/- 4.4)
Mean HBA1C booking/IFCC mmol/L	58.5	51.3
Mean HBA1C delivery/IFCC mmol/L	43.2	39.0
Mean Fructosamine at booking (umol/L)	347	238
Mean Fructosamine at delivery (umol/L)	300	199

TABLE 3: PREGESTATIONAL DIABETES – PERINATAL OUTCOMES*

	TYPE 1	TYPE II
N	32	24
Spontaneous fetal loss < 24 weeks	4/32 (13%)	5 (21%)
Delivered elsewhere	4/32 (13%)	0/24 (0%)
N	28	19
Preterm delivery 24+0 to 36+6 weeks	6/28 (21%)	4/19 (21%)
Liveborn	28/28 (100%)	19/19 (100%)
Stillbirth	0/28 (0%)	0/19 (0%)
Neonatal death	0/28 (0%)	1/19 (5%)
Caesarean delivery	20/28 (71%)	12/19 (63%)
Mean Gestational age at delivery (weeks)	37.3	38
Mean (SD) birthweight (g)	3125 (+/-808)	3245(+/- 866)
Macrosomia ≥ 95th centile for gestational age	5/28 (18%)	3/19 (16%)
Shoulder dystocia	1/27 (4%	0/19 (0%)

*Expressed from ongoing viable pregnancies delivered at the Rotunda

TABLE 4: GESTATIONAL DIABETES – PERINATAL OUTCOMES*

	DIET CONTROLLED	INSULIN	METFORMIN
N	1040	223	52
Mean age	34.4	36	33.5
Delivered elsewhere	0/1,040 (0%)	0/223 (0%)	0/52 (0%)
Stillbirth	2/1,040 (0.2%)	1/223 (0.4%)	0/52 (0%)
Caesarean delivery	464 /1,040 (45%)	132/223 (59%)	13/52 (24%)
Mean (SD) Gestational age at delivery (weeks)	39.2 +/-1.7	38.3 +/- 1.2	38.2 +/- 1.4
Mean (SD) birthweight (g)	3,496 +/- 492	3,490 +/- 500	
Preeclampsia	23/1,040 (2%)	6/223 (3%)	0/52 (0%)
Shoulder dystocia	15/1,040 (1%)	1/223 (0.4%)	0/52 (0%)

*Expressed from ongoing viable pregnancies delivered at the Rotunda

SUCCESSES & ACHIEVEMENTS 2020

ENHANCING PATIENT CARE

With the COVID-19 pandemic dominating the majority of 2020, rationalization of hospital visits for this large cohort of patients to ensure patient and staff safety was urgently required. This resulted in the development of an innovative remote monitoring system for the GDM cohort, which is midwifery provided and supervised by Prof. Fionnuala Breathnach and Dr. Suzanne Smyth. This has allowed the team to promote and encourage the use of metformin as an additional treatment option for the GDM group, resulting in less women requiring insulin therapy. Only 17% of patients with GDM in 2020 required insulin compared to 28% in 2019. This has resulted in greater staff and patient satisfaction.

INNOVATION

The RCSI Research team, led by Prof. Fionnuala Breathnach, continued its Horizon 2020–funded work in developing innovative solutions for self-management of gestational diabetes and a remote surveillance system, using big data solutions. The industrial partners for this project are Huawei® and Nissatech®, with the overarching 'Big Medilytics' project involving 12 pilot project workstreams across Europe. The artificial intelligence approach to gestational diabetes care was recognised as being particularly valuable during the COVID-19 pandemic.

EDUCATION & TRAINING

The diabetes midwives continued to provide lectures and clinical skill workshops to undergraduate and postgraduate student midwives within the hospital environment and in Trinity College Dublin, contributing to the biannual Tri–hospital Diabetes Study Day for staff of the three Dublin maternity hospitals.

Dr. Catherine Finnegan continued her PhD thesis work on the IRELAnD Study (Investigating the Role of Early Low-dose Aspirin in Diabetes), a HRB-funded clinical trial that is now recruiting in five hospitals across the country. Dr. Suzanne Smyth continued her PhD thesis on the development of artificial intelligence solutions for GDM care.

CHALLENGES 2020

As with all other aspects of healthcare both locally and internationally, the COVID-19 pandemic posed significant staff, infrastructural and service difficulties throughout the year in this very high-risk cohort.

The incidence of gestational diabetes at the Rotunda has seen a steady increase, with this year confirming the highest incidence since 2015. This has put a significant strain on midwifery and allied health support resources.

New technology by way of sensor-augmented pumps and continuous glucose monitors are becoming more popular for patients, but are labour intensive by way of data output and monitoring for specialised midwives in an ever-expanding population.

High patient BMI remains a significant risk factor in this cohort, with greater extremes of adiposity being seen in this population. This poses many challenges in terms of fetal surveillance, and obstetric interventions resulting in greater maternal and fetal morbidity.

PLANS FOR 2021

The Combined Obstetric Endocrine Service aims to continue education and training of midwives in the remote monitoring of the GDM population.

It is hoped that additional appointments of allied health professionals (dieticians, social work and administrative staff) will further enhance the team in an ever-expanding population.

> Thank you to all the wonderful staff in the Rotunda who cared for me and my baby over the course of my stay in February and March this year, especially to Genevieve on the Gynae Ward - most spectacular and caring woman I've ever met! Could not recommend the Rotunda enough!

> Big thank you to all the staff in the hospital, you're all amazing. I had the best of care throughout both pregnancies and deliveries. The aftercare in the ward was brilliant.

Infectious Diseases Service

HEAD OF SERVICE

Dr. Maeve Eogan, Consultant Obstetrician Gynaecologist

STAFF

Dr. Jack Lambert, Consultant in Infectious Diseases
Dr. Wendy Ferguson, ID Associate Specialist Paediatrician
Dr. Barry Kelleher, Consultant in GI/Hepatology
Ms. Mairead Lawless, ID Liaison Midwife
Mr. Justin Gleeson, Drug Liaison Midwife
Ms. Susan Finn, Medical Social Worker

SERVICE OVERVIEW

This service looks after the specific needs of pregnant women who have or are at risk of blood and sexually transmitted bacterial and viral infections. This exposure may occur through drug use, unprotected sex or any contact with infected blood or body fluid. The clinic collaborates closely with allied agencies and specialties (including addiction services and inclusion health).

CLINICAL ACTIVITY

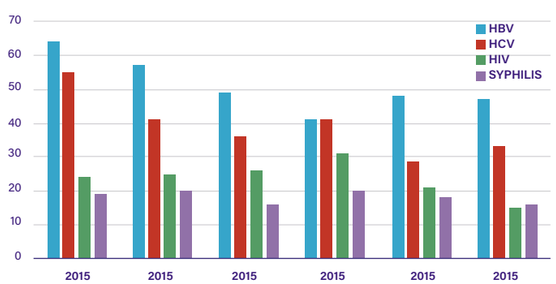
INFECTIONS IN PREGNANCY

In 2020, 157 women attended for antenatal care at the Infectious Disease clinic. Of these:

- 47 (43%) women were positive for Hepatitis B surface antigen, representing a decrease of 2% compared to 2019 (Fig. 1)
- 33 (30%) women were positive for Hepatitis C antibody, an increase of 14% compared to 2019
- 15 (13%) were positive for HIV infection, a decrease of 29% compared to 2019
- 16 (14%) women had positive Treponemal serology, a decrease of 11% compared to 2019. Two women were co-infected with HIV/Hepatitis C and Hepatitis B/Syphilis

In addition to the figures presented above, a number of women attend the clinic during the course of their antenatal journey for diagnosis and treatment of HPV, HSV, Chlamydia, Gonorrhoea and Mycoplasma Genitalium.

FIGURE 1: CLINICAL ACTIVITY



The numbers in the tables below refer to the numbers of births in the year, and therefore may be different from the number of patients booking during the year with each infectious disease.

TABLE 1: DELIVERIES TO HBV-POSITIVE MOTHERS 2020

Total Mothers Delivered <500g (incl. miscarriage)	**0**
Total Mothers Delivered >500g	**37**
Live infants	37
Miscarriage	0
Stillbirths	0
Infants < 37 weeks gestation	4
Infants ≥37 weeks gestation	33
Infants delivered by C-section	13
HBV-positive infants	0*
Maternal Data (n=37)	
Median Age (years)	33
Newly Diagnosed this pregnancy	7

*Final serology not yet available for all infants

TABLE 2: DELIVERIES TO HCV-POSITIVE MOTHERS 2020

Total Mothers Delivered <500g (incl. miscarriage)	**0**
Total Mothers Delivered >500g	**23**
Live infants	23
Miscarriage	0
Stillbirths	2
Infants <37 weeks gestation	6
Infants ≥37 weeks gestation	17
Infants delivered by C-section	10
HCV-positive infants	0*
Maternal Data (n=39)	
Median Age (years)	34
Newly Diagnosed this pregnancy	5

*Final serology not yet available for all infants

TABLE 3: DELIVERIES TO HIV-POSITIVE MOTHERS 2020

Total Mothers Delivered <500g (incl. miscarriage)	**0**
Total Mothers Delivered >500g	**12**
Live infants	13 (1 set twins)
Miscarriage	0
Stillbirths	0
Infants < 37 weeks gestation	3
Infants ≥ 37 weeks gestation	10
Infants delivered by C-section	5
HIV-positive infants	0
Maternal Data (n=12)	
Median age	31
Newly diagnosed this pregnancy	1

TABLE 4: DELIVERIES TO SYPHILIS POSITIVE MOTHERS 2020

Total Mothers Delivered <500g (incl. miscarriage)	**0**
Total Mothers Delivered >500g	**18**
Live infants	18
Miscarriage	0
Stillbirths	0
Infants < 37 weeks gestation	2
Infants ≥37 weeks gestation	16
Infants delivered by C-section	10
Syphilis positive infants	0
Maternal Data (n=18)	
Median age	30
Newly diagnosed this pregnancy	11

DRUG LIAISON MIDWIFE (DLM) SERVICE

During 2020, 98 women were referred to the DLM service, including 37 women who had a history of opiate addiction and were engaged in a Methadone Maintenance Programme.

TABLE 5: DELIVERIES TO MOTHERS UNDER DLM SERVICE

	2020	2019
Total mothers delivered > 500g	56	56
Mothers on prescribed methadone programmes	30	33
HCV-positive mothers*	13*	17
HIV-positive mothers	1	0
Live infants	55	54
Stillbirths	1	3
Infants < 37 weeks gestation	13	13
Infants ≥37 weeks gestation	43	44
Infants delivered by C-section	18	17
NICU admissions for NAS**	21	11

*2 women developed HCV during pregnancy (negative at booking, positive in 3rd trimester) – endorsing the suggested guideline to re-screen in the third trimester if ongoing risk persists.
**NAS – Neonatal abstinence syndrome

INFECTIOUS DISEASE MEDICAL SOCIAL WORK

The medical social worker for the Infectious Disease clinic provides emotional and practical support to women attending the specialist clinic. The social worker liaised closely with the Drug Liaison Midwife, the Infectious Disease Midwife and the consultants to provide a comprehensive service for patients. Where required, the medical social worker referred patients to Tusla, Child and Family Agency and other community services to ensure patients and their babies had appropriate supports in place. In 2020, 51 women were referred to Tusla, Child and Family Agency.

The Medical Social Worker works in partnership with parents, Tusla and other relevant agencies over a number of months to ensure a baby's safe discharge. Only in exceptional cases, should children be separated from their parents after all alternative means of protecting them have been exhausted. The following actions were the outcome of Tusla social work involvement:

- 33 Discharge Safety Planning Meetings
- 28 Child Protection Case Conferences
- 10 babies placed in foster care under an Interim Care Order
- 1 baby placed in family care placement under a voluntary care order
- 7 babies placed in care under a private family care placement
- 9 mothers required to return under the supervision of a non-drug-using relative or agency for a period of time until stability was assured
- 9 mothers admitted to a mother and baby unit/parent assessment unit arranged by TUSLA

PAEDIATRIC INFECTIOUS DISEASE CLINIC

Infants of mothers with positive serology were provided with follow-up appointments for the Rotunda paediatric infectious disease clinic. The clinic is delivered by Dr. Ferguson who is affiliated with the Rainbow Team: the national service for paediatric infectious diseases. In 2020 a total of 280 infants and children attended the paediatric infectious disease clinic for monitoring and outcome.

SUCCESSES & ACHIEVEMENTS 2020

EDUCATION & TRAINING

Members of the Infectious Disease Team continue to be actively involved in undergraduate, postgraduate and hospital education programmes. The ID Liaison Midwife provides in-service education sessions for all clinical staff. She also lectures on infectious diseases in pregnancy to the TCD undergraduate and postgraduate midwifery students annually.

The Drug Liaison Midwife has delivered lectures on substance misuse in pregnancy to both undergraduate and postgraduate midwifery students in TCD, as well as to students on the Master's Programme in Addiction Studies at the Dublin Business Institute and to those on the Graduate Diploma in Public Health Nursing at University College Dublin.

The British Association for Sexual Health and HIV (BASHH)–accredited Sexually Transmitted Infection Foundation (STIF) Course (STIF Core) continues to be held in Dublin, with Dr. Lambert acting as course director, and Dr. Eogan providing teaching on management of rape and sexual assault. The courses took place (online) in March and October 2020 and provided multidisciplinary training in the knowledge and skills required for the prevention and holistic management of STIs.

Dr. Ferguson provides regular lectures to NCHDs in house and also lectures at the microbiology SPR study days and the Diploma in Primary Care Paediatrics.

Many of these educational activities pivoted to online platforms over 2020, in response to the challenges of the COVID-19 pandemic.

ENHANCING PATIENT CARE

Despite the impact of the pandemic, 2020 saw the implementation of two significant initiatives to enhance patient care, namely the pilot on-site pertussis and influenza vaccination clinics for patients attending the Infectious Diseases Service, as well as the provision of a postnatal GP service and contraception in conjunction with colleagues in Safetynet. There has been a good uptake of both services.

As well as continuing to provide responsive patient-focussed care to pregnant women and their babies, there are several research projects ongoing in the Infectious Diseases Service. Many of these are collaborations with other disciplines at the Rotunda Hospital and also with the Infectious Diseases and Hepatology teams at the Mater Misericordiae University Hospital.

A number of members of the team have collaborated to enhance maternal and neonatal care in the context of perinatal infection – Dr. Ferguson was the paediatric Infectious Diseases representative on the national COVID-19 in Pregnancy Guideline Development Group.

The Infectious Diseases team also carry out clinical audit, comparing practice against local, national and international guidelines to support continued high performance and positive patient outcomes.

CHALLENGES 2020

The number of women attending the Infectious Disease clinic with HBV, HIV and syphilis decreased in 2020. A slight increase in the numbers presenting with HCV was noted however. It is also interesting to note that the number of women being diagnosed with infectious diseases for the first time in pregnancy is reducing – more women are now aware of their diagnoses prior to pregnancy which provides opportunities to optimise pre-pregnancy health. However, we still do not provide routine screening for HCV at antenatal booking, something we would aspire to reverse in the coming years, particularly due to the availability of effective hepatitis C treatment which can be instituted postpartum.

Furthermore, the service and allied agencies need to adapt and respond to evolving patterns of addiction. While there are excellent inpatient stabilisation services for pregnant women with opiate and benzodiazepine addiction, it is a challenge to provide similar settings for women with alcohol addiction.

PLANS FOR 2021

In 2021 we plan to expand our vaccination collaboration with Safetynet, to deliver on-site, funded long-acting reversible contraception (LARC) within the DOVE clinic. We are also exploring routes to enhance vaccination uptake and to expand our vaccination clinic to other clinics within the hospital.

Epilepsy Service

HEAD OF SERVICE

Dr. Nicola Maher, Consultant Obstetrician Gynaecologist

STAFF

Ms. Sinead Murphy, Advanced Nurse Practitioner

SERVICE OVERVIEW

This service provides care for women with epilepsy throughout pregnancy. The aim of this service is to support pregnant women with epilepsy, ensuring that they are provided with information in relation to the safety profiles of medication and seizure risk reduction measures throughout pregnancy and in the immediate postpartum period. The invaluable expertise provided by Sinead Murphy ANP in epilepsy is core to this clinic. The service can also help facilitate urgent neurology review where required. Preconception care and counselling is also offered.

Offering women reassurance and support to enable shared and informed decision-making is key to the Service's success. Antenatal care is offered in the joint obstetric/ANP clinic for the duration the patient's pregnancy.

CLINICAL ACTIVITY

A total of 105 women attended the Epilepsy Service in 2020, which was a significant increase from the 87 patients seen in 2019. The majority of these women had a diagnosis of active epilepsy and were taking antiseizure medication. Sixteen women gave a history of childhood epilepsy and were screened for active epilepsy being given information about risk reduction measures for seizure recurrence peripartum. A smaller number of women were seen with a history of drug abuse–related seizures. Two women were seen who had a diagnosis of non-epileptic attack disorder. In addition, six women were seen for pre-conceptional advice.

Women with a diagnosis of epilepsy were seen frequently throughout their pregnancy and at least once per trimester by the advanced nurse practitioner, Sinead Murphy. Twenty-three of these patients experienced an increase in seizure frequency in pregnancy and required increased doses of medication. The vast majority of patients remained seizure free during their pregnancy. One pregnancy was complicated by severe intrauterine growth restriction (IUGR) and required delivery at 26 weeks' gestation. However, other significant risk factors for IUGR were present in that case and it was not felt that her epilepsy diagnosis or treatment was a contributory factor to this preterm birth. One infant was noted to have a congenital anomaly post delivery, requiring surgical intervention. This event was notified to the Health Products Regulatory Association (HPRA).

Three patients experienced seizures for the first time in pregnancy and were commenced on anti-seizure medications. One of these patients had a diagnosis of a meningioma in pregnancy, which was resected. She experienced seizures during her postoperative recovery and was commenced on antiseizure medication.

Nine women who attended the clinic with a diagnosis of epilepsy declined advice to start or recommence antiseizure medication throughout their pregnancy despite recommendations to do so. Urgent appointments with neurology for these patients were also arranged.

SUCCESSES & ACHIEVEMENTS 2020

Care was provided without any significant epilepsy-related morbidity during 2020. No patients who booked for care were taking sodium valproate (Epilim) which is a credit to the extensive efforts which have been applied to the pregnancy prevention programme for this medication.

In October 2020, the first online Virtual GP Study Evening was held at the Rotunda. Over 100 GPs registered for the event, with Dr. Nicola Maher and Sinead Murphy providing an educational session about the management of epilepsy in pregnancy. The evening was very well received and feedback from GPs who attended in relation to this presentation was excellent.

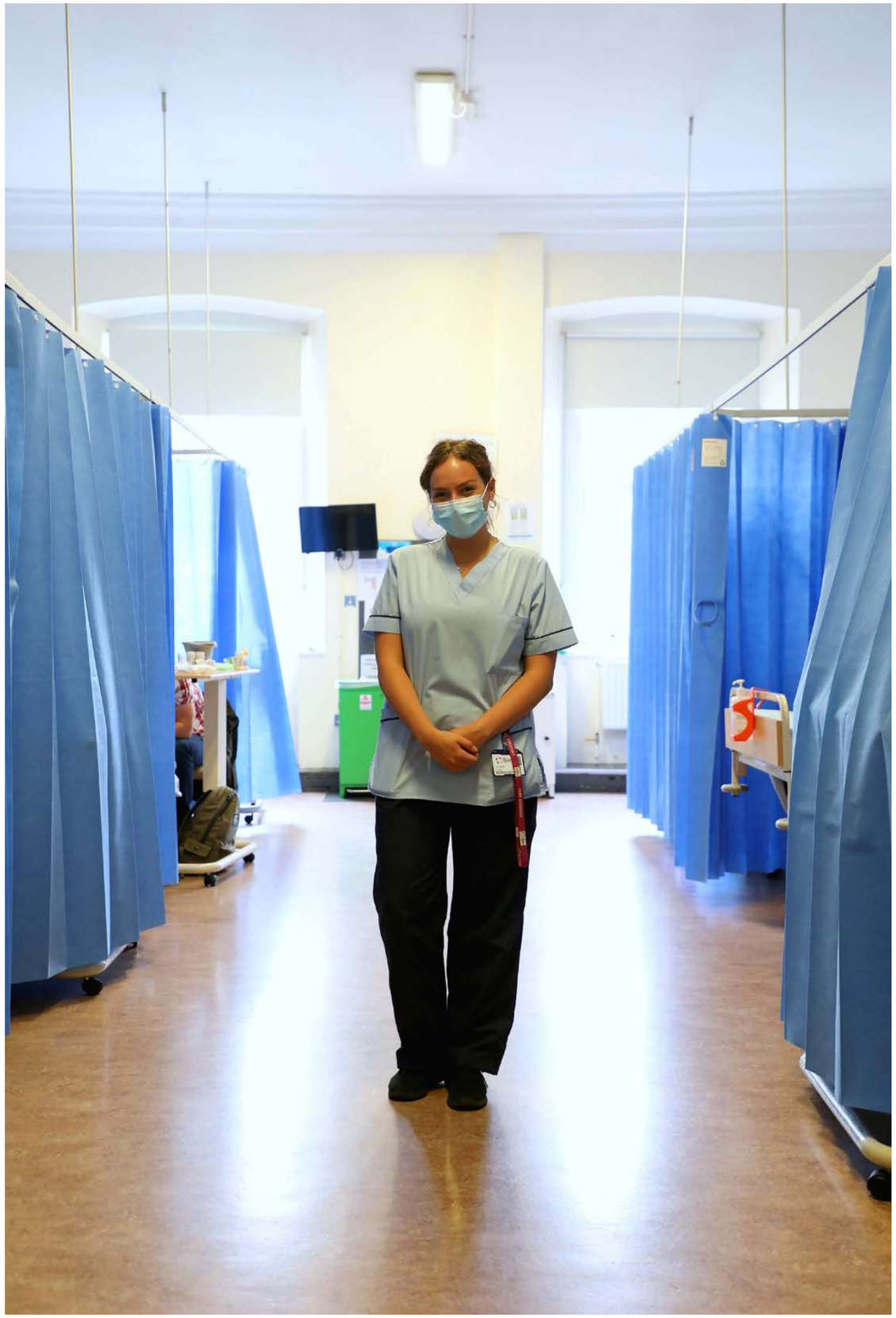
CHALLENGES 2020

The COVID-19 pandemic, and the consequent social restrictions that followed, significantly impacted outpatient appointment scheduling across many specialities, including the Epilepsy Service. While many aspects of antenatal care require face-to-face consultation and examination, the management of epilepsy per se lends itself well to a virtual telemedicine approach. Our Advanced Nurse Practitioner arranged telemedicine clinics for most patients during the early stages of the pandemic. As time progressed, this has evolved such that all new patients now receive a face-to-face consultation while follow-up appointments are predominantly via telemedicine. Patients continue to attend face-to-face appointments for antenatal care and any complex patients or additional concerns in relation to epilepsy can also be addressed then.

PLANS FOR 2021

The addition of a consultant neurologist to the multidisciplinary team at the Rotunda would be of huge benefit to the women attending the service and would facilitate on-site review of those women with complex epilepsy, often requiring multiple medications, and also those who have other underlying neurologic conditions. An application for such a joint consultant neurologist appointment between the Rotunda and the Mater Misericordiae University Hospital is being progressed.

Re-instatement and updating of the national Epilepsy in Pregnancy Register would be of significant benefit in providing ongoing patient guidance. In particular, this would allow further data to be evaluated in relation to new medication use in pregnancy, where current counselling and information options for patients are sometimes limited. The Irish Medicines in Pregnancy Service at the Rotunda would be eager to collaborate with neurology and obstetrics in reviewing this register.



> Well done and thanks to the Rotunda for looking after our daughter and our beautiful new grandson so very well in these unique circumstances.

Perinatal Mental Health Service

HEAD OF SERVICE

Prof. John Sheehan, Consultant Psychiatrist

STAFF

Dr. Richard Duffy, Consultant Psychiatrist
Ms. Ursula Nagle, Advanced Midwife Practitioner in Perinatal Mental Health
Dr. Jillian Doyle, Senior Clinical Psychologist
Ms Stefanie Fobo, Senior Mental Health Social Worker
Ms. Louise Rafferty, CMM2 Perinatal Mental Health
Ms. Jeanne Masterson, Clinical Midwife Specialist in Perinatal Mental Health
Ms. Julia Daly, Clinical Nurse Specialist in Perinatal Mental Health
Ms. Leanne O'Neill, Clinical Nurse Specialist in Perinatal Mental Health
Dr. Sean Naughton, Senior Registrar in Psychiatry
Ms. Eithne O'Leary, Assistant Administrator

SERVICE OVERVIEW

The Specialist Perinatal Mental Health Service (SPMHS) provides mental healthcare for people attending the Rotunda from their booking visit until one year after delivery. In addition, preconception counselling is provided for individuals with complex needs. Treatment and support are delivered for a wide range of difficulties including anxiety, depression, obsessional thinking, mania, and psychotic illness. The service also follows up with individuals who screen positive for depression following delivery. The service works in collaboration with GPs, community mental health teams and voluntary organisations and has a strong emphasis on prevention and early intervention. The service also provides telephone advice to community mental health teams and GPs. Additional multidisciplinary responses were provided this year to address the significant mental health challenges brought about by the COVID-19 pandemic.

CLINICAL ACTIVITY

During 2020, all mental health disciplines experienced a significant increase in workload. The COVID-19 pandemic greatly impacted the mental health of women attending the service. This included 1,337 psychiatry appointments, 1,629 midwife practitioner appointments, 1,077 clinical nurse specialist appointments, 367 psychologist appointments, and 273 social worker appointments. These included both new and return appointments. In total, there were 4,683 appointments offered to women attending the Rotunda in 2020 from the SPMHS.

SUCCESSES & ACHIEVEMENTS 2020

Having significantly expanded in 2019, the new SPMHS Team has started to drive innovations and develop specialist services. With the support of the Rotunda Communications Team, the SPMHS have expanded an online presence in an attempt to meet the needs of the COVID-19 pandemic.

Once it became apparent that it would not be possible to conduct group sessions, the team developed online / virtual groups to support pregnant patients and new parents. The service developed a postnatal support group called "Me to Mom" for women with postnatal anxiety and depression. This was developed with colleagues in St. Helena's Family Resource Centre and was facilitated by Julia Daly and Louise Rafferty. A "Fear of Birth" and "Emotional Wellbeing during Pregnancy" group were also developed and are now running on a regular basis.

Ms. Nagle completed her AMP training. In collaboration with Dr. Sean Naughton, she began a perinatal trauma clinic for women with psychological trauma following birth. Extensive data was collected in relation to this clinic and the SPMHS Team are in the process of publishing these findings in collaboration with City University London.

Ms. Fobo pioneered comprehensive pre-birth planning meetings in an attempt to develop a comprehensive pre-birth plan to meet the psychological needs of women with severe mental illness.

EDUCATION AND TRAINING

Our team continues to be involved in teaching in Dundalk Institute of Technology's Perinatal Mental Health Diploma and has provided teaching at multiple academic meetings for psychiatrists throughout the country. Ms. Masterson has continued to collaborate with service users and advocacy groups to enhance the services the team provide to members of the travelling community. To this end the team have developed videos in collaboration with service users to provide psychoeducation.

RESEARCH

Ms. Nagle commenced a longitudinal retrospective study of self-reported prevalence of traumatic birth within the Rotunda Hospital. Research will continue in the area of birth trauma into 2021 and future publications are expected. Much of this research was delayed due to the COVID-19 pandemic. Dr. Duffy was involved in a collaboration with community mental health services in Mayo. This publication highlighted the need for more detailed consideration of perinatal mental health in psychiatric inpatient settings. We also audited the referrals to our service and demonstrated that our wait-times were well within the HSE guidelines, which has also prompted us to enhance our communication with individuals attending our service.

CHALLENGES 2020

The challenges in 2020 related to attempting to innovate in the uncertain context of the COVID-19 pandemic. The limited physical infrastructure of the Rotunda also restricts the efficient working and expansion of the Perinatal Mental Health Team.

PLANS FOR 2021

The SPMHS is keen to develop our service and provide specialist expert care. Staff continue to undertake formal training in a variety of specialities. The team hope to be the first service in the country to include an occupational therapist in 2021, which will increase the need for additional accommodation. This may be partly addressed with additional community-based services and projects.

The team are very keen to maintain and enhance the ties with the Mental Health Midwives working in RCSI Hospitals Group hospitals in Drogheda and Cavan.

The SPMHS team hope to continue to develop the trauma focused service but also hope that our emphasis on trauma informed care can influence the wider hospital.

The service wishes to continue to enhance an online / virtual presence and hope to deliver more interventions in a group-based setting so that the team can provide a service to more individuals.

Labour and Delivery

HEAD OF SERVICE

Dr. Etaoin Kent, Consultant Obstetrician Gynaecologist

STAFF

Ms. Fiona Walsh, Clinical Midwife Manager

SERVICE OVERVIEW

2020 was another very busy year on the Labour and Delivery Suite at the Rotunda, with 8,316 babies delivered to 8,147 mothers. Although this was a slight decrease on the number of deliveries in 2019, 2020 brought the significant added challenge of delivering high-quality care to these women during the COVID-19 pandemic. In conjunction with the ongoing building works as part of the Labour and Delivery Suite upgrade, this made 2020 an exceptionally demanding year for all Rotunda staff. Despite these challenges, very high standards were maintained with the adjusted perinatal mortality rate remaining low and overall excellent outcomes for mothers and babies.

The emergence of the COVID-19 pandemic in early 2020 necessitated a swift response to ensure the ability to safely care for infected mothers around the time of labour and delivery. Dedicated rooms in the Delivery Suite were equipped for such cases, and at the height of the pandemic a separate 'hospital-within-a-hospital' COVID Ward was constructed on the Prenatal Ward which included a distinct COVID Delivery Suite, enabling COVID-positive women to be cared for in the antenatal, intrapartum and postnatal periods within one restricted access zone. Pathways for care were developed to ensure the smooth transition from initial hospital access through the Emergency and Assessment Unit through the Labour and Delivery Suite, Operating Theatres and the Neonatal Intensive Care Unit as needed. Targeted training was provided to all staff through regular drills and teaching sessions which maximised infection prevention and control practices. This 'hospital-within-a-hospital', supported by a separate team of healthcare professionals, was implemented within a matter of days of the pandemic becoming evident. This rapid co-ordinated response to the pandemic ensured that women continued to receive the highest possible standard of care, while maintaining safe working conditions for all staff.

A new patient safety initiative that commenced in 2020 was the introduction of a multi-disciplinary 'staff huddle' at 08.30am each day to take a hospital-wide overview of activity levels, bed capacity and staffing levels both in the Labour and Delivery Suite itself and throughout the hospital. This has been extremely useful in streamlining the flow of patients from the Prenatal Ward (in particular those undergoing induction of labour), through the Labour and Delivery Suite and onwards to the postnatal wards. Initially piloted on three days per week, this huddle has now been extended to 7 days a week once its usefulness was established.

The headline Labour and Delivery performance figures for 2020, (with 2019 figures for comparison), were:

- Induction of Labour 38% (35% in 2019)
- Spontaneous Vaginal Delivery 47% (49% in 2019)
- Operative Vaginal Delivery 16% (16% in 2019)
- Caesarean Delivery 37% (35% in 2019)

INDUCTION OF LABOUR

2020 saw an increase in induction of labour, both in absolute terms and as a proportion of overall deliveries (Table 1). A total of 3,076 women underwent induction of labour, representing 38% of all deliveries. This compares with 2,464 inductions (29% of all deliveries) in 2016, with the rate of induction increasing annually since then. The use of induction was particularly noticeable amongst nulliparous women, 47% of whom underwent induction in 2020, compared with 36% in 2016. It appears as if the results of international studies demonstrating improved outcomes associated with routine induction at 39 weeks' gestation has had an impact, both in terms of patients' choices and obstetric care providers' advice in this regard. The proportion of multiparous patients delivered via induction has also increased, but to a lesser degree, from 24% of deliveries in 2016 to 30% in 2020.

The most common indications for induction of labour were fetal, maternal, spontaneous rupture of membranes, or post-dates (Table 2). There were no significant changes in the relative contribution of each category of indication for induction in 2020.

The safe and effective care of women undergoing induction of labour has been made more challenging by the ongoing building works on the Labour and Delivery Suite, particularly with their impact on unit capacity. In an effort to address this, we significantly expanded our use of home inductions during 2020. Previously a limited number of women undergoing induction of labour for post-dates with an otherwise uncomplicated pregnancy could commence their induction with prostaglandin administration in the hospital and then going home, returning after 24 hours to continue the induction process. In 2020, we expanded this to include all women undergoing induction of labour where there was no fetal or maternal risk factor necessitating continuous inpatient surveillance. This change has been extremely well received by women and their partners and there have been no safety concerns identified with this management strategy. In particular, during the COVID-19 pandemic, the opportunity of having much of the earlier phase of induction performed in the comfort and safety of their own homes really resonated with patients. We hope to continue to develop such family-centric care pathways for labour management in the future.

OPERATIVE VAGINAL DELIVERY

The rate of Operative Vaginal Delivery remains unchanged at a consistent 16% of deliveries for the past five years. The relative proportion of vacuum to forceps deliveries remains approximately 60%:40%, although 2020 did see a very slight increase in the use of sequential instruments. This prompted a comprehensive review of all such sequential operative delivery cases to identify any modifiable trends or risk factors.

Consultant presence on the Labour and Delivery Suite has improved over the past three years, with a dedicated consultant physically present on the unit each day from 08.00am until 04.00pm. This enhances training opportunities by providing direct consultant supervision for the registrars and senior house officers and thereby minimising the risk of adverse outcomes associated in particular with operative vaginal delivery.

Another quality improvement project in 2020 saw the implementation of a single-dose administration of prophylactic intravenous antibiotics for women undergoing operative vaginal delivery. The ANODE trial published in the Lancet in 2019, showed reduced rates of infection following operative vaginal delivery in women receiving prophylactic intravenous antibiotics, and it is gratifying to see such a rapid implementation of this simple but effective quality improvement step.

CAESAREAN DELIVERY

Having remained relatively stable at approximately 34%-35% for the preceding four years, 2020 saw an increase in the overall caesarean delivery rate to 37%. This increase was almost equally divided between planned and emergency caesarean deliveries.

There were several significant contributors to this noted increase in the overall caesarean delivery rate. Firstly, the overall number of patients undergoing induction of labour has increased from 35% to 38% between 2019 and 2020, while five years ago this induction rate was just 29%. Focussing solely on the nulliparous cohort of women, 47% underwent induction of labour. As the rate of caesarean delivery may be higher in both nulliparous and multiparous women undergoing induction, this may have contributed to the overall increase in the caesarean delivery rate at the Rotunda.

In addition, there has been a noticeable increase in the number of patients opting for delivery by caesarean section based solely on maternal request, with no underlying medical indication. The number of nulliparous women choosing caesarean delivery almost doubled between 2019 and 2020, with 140 nulliparous women making this choice in 2020. The effect of the COVID-19 pandemic may have contributed to this increase, as many women made individual maternity care choices based on their perception of hospital occupancy risks.

The rate of repeat caesarean deliveries remains high, with 85% of patients with a prior caesarean section undergoing repeat caesarean delivery, which is identical to the 2019 figure. A previous caesarean delivery was the indication for almost one third (32%) of all caesarean sections performed during 2020. The innovative Rotunda Next Birth after Caesarean Service (NBAC) provides bespoke supported care plans to a cohort of normal-risk women with a history of one prior caesarean section in order to encourage consideration of vaginal delivery after caesarean (VBAC) in appropriately selected cases. Higher rates of VBAC are seen in this group of women managed through the NBAC service, emphasising the importance of dedicated review and counselling to encourage optimal care choices. A quality improvement project has commenced to review the management of women with one prior caesarean section who do not fit the current criteria for attending this service, with the goal being to hopefully expand the positive impact of the NBAC service throughout the Rotunda population. A more streamlined approach to the care of such patients, with earlier review by the joint midwifery–obstetric team, together with targeted counselling regarding the risks and benefits of VBAC, will hopefully lead to an increase in the proportion of women attempting a trial of labour in appropriate circumstances.

There continues to be an upward trend in the proportion of preterm babies being delivered by caesarean section, with a caesarean delivery rate of 51% in this cohort in 2020 as compared with 43% in 2019. This reflects the overall trend to optimising obstetric intervention and provision of intensive neonatal care at ever-earlier gestational ages.

DELIVERY SUITE BUILDING PROJECT

2020 saw the commencement of an extensive refurbishment and expansion of the entire Labour and Delivery Suite. Due to complete in late 2021, this project will involve a complete refurbishment of the existing nine labour and delivery rooms. We are reintroducing a pool into one of the delivery rooms which will offer women the opportunity to labour in the water, an exciting development improving the care options available to women for managing the earlier stage of labour.

In addition to upgrading the existing delivery rooms, an additional two rooms are being built, with the five-bedded annex previously used for patients in early labour being replaced by two fully functional labour and delivery rooms. This increase to 11 labour and delivery rooms will significantly improve the throughput in the unit and is essential to deal with the expected increasing numbers of deliveries in coming years.

A significant upgrade is taking place to the Operating Theatre on the Labour and Delivery Suite. This area is being extended to create a fully functional Operating Theatre with the requisite anaesthetic areas, scrub room and store rooms. This will enable all emergency procedures from the Labour and Delivery Suite to take place here,

without having to move patients to the main operating theatres on a different floor.

A dedicated staff meeting and education room is being built which will be used for morning and evening handover, with AV equipment to access the MN-CMS electronic healthcare record and the FetalLink CTG monitoring system. In addition to this, this space will provide an office space for the consultant of the day to work in. Since 2017 we have a dedicated consultant assigned to the Labour and Delivery Suite each day ,with no commitments elsewhere in the hospital. This has been invaluable for maintaining very high standards of oversight and training. This meeting area will also facilitate small group teaching for doctors and midwives each day.

TABLE 1: INDUCTION OF LABOUR

Year	2016	2017	2018	2019	2020
Total number of inductions	2,464	2,509	2,610	2,893	3,076
Induction rate expressed from total deliveries	29%	31%	36%	35%	38%
Number of caesarean deliveries following induction	568	570	584	630	745
Caesarean delivery rate following induction	23%	23%	22%	22%	24%

TABLE 2: INDICATIONS FOR INDUCTION

	2019		2020	
Reasons	**Total**	**%**	**Total**	**%**
Fetal	828	29%	870	28%
Maternal	758	26%	796	26%
No medical indication	25	1%	39	1%
Preeclampsia/hypertension	195	7%	204	7%
Post-dates	436	15%	488	16%
Prolonged rupture of membranes	651	23%	633	21%
Other	0	0%	46	1%

TABLE 3: TRENDS IN INDUCTION 2016–2020

	2016	2017	2018	2019	2020
Nulliparous women	1,250 (36%)	1,398 (39%)	1,410 (39%)	1,635 (45%)	1,727 (47%)
Multiparous women	1,214 (24%)	1,111 (24%)	1,200 (25%)	1,258 (27%)	1,349 (30%)

TABLE 4: CAESAREAN DELIVERY

	2018	2019	2020
Total caesarean deliveries	2,820	2,884	3,033
Incidence versus total mothers delivered > 500g	34%	35%	37%
Primary caesarean section	57%	57%	61%
Repeat caesarean section	43%	43%	39%
Classical caesarean section	19	4	3
Tubal ligation at caesarean section	166	189	150
Caesarean hysterectomy	8	2	6

TABLE 5: OPERATIVE VAGINAL DELIVERY RATE

	2016	2017	2018	2019	2020
Forceps	4%	4%	4%	5%	5%
Vacuum	10%	11%	11%	10%	9%
Sequential	1%	1%	1%	1%	2%
Total	15%	16%	16%	16%	16%

TABLE 6: INDICATION FOR CAESAREAN DELIVERY

	2019			2020		
	Primary	**Repeat**	**Total**	**Primary**	**Repeat**	**Total**
Previous caesarean section	0	969	969	0	961	961
Fetal reason	548	100	648	496	64	560
IUA – Inability to treat fetal intolerance	308	20	328	319	33	352
Maternal medical reasons/pains	247	53	300	326	52	378
IUA – Poor response	255	15	270	344	26	370
EUA – Persistent malposition	93	5	98	80	4	84
Non-medical reason/patient request	74	8	82	140	1	141
Preeclampsia/hypertension	35	20	55	59	14	73
IUA – No oxytocinon given	26	46	72	21	29	50
EUA – Cephalopelvic disproportion	24	4	28	30	1	31
Prolonged rupture of membranes	11	13	24	12	8	20
IUA – Inability to treat over contracting	5	1	6	7	0	7
Post-dates	4	0	4	6	0	6
Totals	**1,630**	**1,254**	**2,884**	**1,840**	**1,193**	**3,033**

IUA – inefficient uterine action
EUA – efficient uterine action

TABLE 7: TRENDS IN CAESAREAN RATES (2016-2020) CAESAREAN DELIVERY - ROBSON TEN GROUP ANALYSIS

	2016	2017	2018	2019	2020
All Deliveries	8,405	8,226	8,359	8,262	8,147
All Caesarean Sections	2,904	2,904	2,820	2,884	3,034
Section Rate	35%	35%	34%	35%	37%
Group 1 – Nulliparous single cephalic term spontaneous labour	269/1554	226/1504	201/1541	185/1334	171/1269
Section rate	17%	15%	13%	14%	13%
Group 2 – Nulliparous single cephalic term induced	447/122	451/1337	469/1349	500/1573	604/1656
Section rate	37%	34%	35%	32%	36%
Group 2a – Nulliparous single cephalic term CS before labour	242	259	291	295	276
Group 3 – Multiparous single cephalic term spontaneous labour	49/1963	35/1840	25/1773	25/1636	34/1424
Section rate	3%	2%	1%	2%	2%
Group 4 – Multiparous single cephalic term induced	80/1098	73/1017	60/1078	74/1146	81/1208
Section rate	7%	7%	6%	7%	7%
Group 4a – Multiparous single cephalic term CS before labour	144	124	123	110	175
Group 5 – Previous section single cephalic term	1026/1247	1026/1261	996/1261	1073/1267	1006/1185
Section rate	82%	81%	79%	85%	85%
Group 6 – All nulliparous breeches	161/169	157/167	176/180	181/186	199/206
Section rate	95%	94%	98%	97%	97%
Group 7 – All multiparous breeches	158/169	143/152	145/157	141/150	128/139
Section rate	93%	94%	92%	94%	92%
Group 8 – All multiple pregnancies	128/179	117/182	104/152	104/145	123/169
Section rate	72%	64%	68%	72%	73%
Group 9 – All abnormal lies	19/19	18/18	21/21	28/28	25/25
Section rate	100%	100%	100%	100%	100%
Group 10 – All preterm single ceph.	181/399	167/365	209/433	168/392	212/415
Section rate	45%	46%	48%	43%	51%
Elective caesarean section total	1430	1417	1435	1455	1558
Emergency caesarean section total	1,474	1,379	1,385	1,429	1,476
Total Multiparous	**3,441**	**4,674**	**4,747**	**4,655**	**4,452**
Total Nulliparous	**4,964**	**3,552**	**3,612**	**3,607**	**3,695**

Anaesthesiology Service

HEAD OF SERVICE

Dr. Niamh Hayes, Consultant Anaesthesiologist

STAFF

Dr. Mary Bowen, Consultant Anaesthesiologist
Dr. Anne Doherty, Consultant Anaesthesiologist
Dr. John Loughrey, Consultant Anaesthesiologist
Prof. Conan Mc Caul, Consultant Anaesthesiologist
Dr. Brian Murphy, Consultant Anaesthesiologist
Dr. Caitriona Murphy, Consultant Anaesthesiologist
Dr. Ciara Jean Murphy, Consultant Anaesthesiologist
Dr. Roisin Ni Mhuircheartaigh, Consultant Anaesthesiologist
Dr. Doireann O'Flaherty, Consultant Anaesthesiologist
Dr. Patrick Thornton, Consultant Anaesthesiologist

SERVICE OVERVIEW

The Anaesthesiology Service at the Rotunda provides an integrated pain management service for labouring mothers on a 24-hour basis. The most popular analgesic options are epidural or combined spinal–epidural (CSE) neuraxial techniques. Epidural drug administration is via Programmed Intermittent Epidural Bolus (PIEB) with the option for labouring mothers to self-administer Patient Controlled Epidural Analgesia (PCEA) boluses. This novel regime has high patient satisfaction, is associated with fewer interventions to 'top up' the epidural compared to traditional regimes, and importantly has a lower maternal fever rate than previous pump regimes, which impacts positively on both maternal and neonatal birth outcomes.

Remifentanil analgesia is available as alternative pain relief in selected cases where epidural options are unsuitable. This analgesic option is supervised by both anaesthesiology and midwifery staff and offers improved analgesia over traditional patient-administered Entonox (nitrous oxide).

There is immediate anaesthesiology support for elective and emergency care for operative obstetrics and gynaecology, critical care and resuscitation around the clock. The Anaesthesiology Service also directly provides transport care for critically ill women who need to be transferred to level three critical care in other general adult hospitals. Anaesthesia is also provided for interventional fetal medicine procedures in the operating rooms when required.

CLINICAL ACTIVITY

The Anaesthesiology Service provided care for more than 3,000 patients for caesarean delivery and neuraxial block for almost 4,000 labouring mothers in 2020. Overall 7,100 obstetric, gynaecology and fetal medicine patients received anaesthesia care in the operating theatre in the Rotunda. This represents an increase in service delivery in every aspect of anaesthesiology care despite the organisational and patient safety challenges that arose as a result of the COVID-19 pandemic. Another 71 anaesthetic procedures for urgent gynaecology surgeries were provided by Rotunda anaesthesiologists via RCSI Hospitals Group contingency planning during the peak of the pandemic by outsourcing some services to the Bons Secours Hospital. In addition, 1,151 patients were seen either virtually or in person in specialist anaesthesiology clinics to manage active co-morbidities and provide for multi-professional care planning during the calendar year.

Local and national (Health Protection Surveillance Centre [HPSC]) infection prevention and control advice, and published evidence relating to optimal operating room management from prior SARS CoV-1 and MERS CoV epidemics were synthesised into novel clinical care pathways to adapt to the emerging COVID-19 pandemic in early 2020. The focus was on the safety of both patients and staff and the continued provision of high-quality care consistent with rapidly emerging global evidence, while emphasising the importance of the efficiency of operating room activity in a new, more challenging environment. Increasing anaesthesiology activity in 2020 compared with 2019 in extraordinary operational circumstances is testament to the effective multi-professional collaboration that is evident at the Rotunda Hospital.

OBSTETRICS

NEURAXIAL ANALGESIA IN LABOUR

A total of 3,999 patients received neuraxial blockade for labour analgesia in 2020, with 79% using epidural and 21% using a combined spinal–epidural (CSE) technique. This represents a slight increase in the overall delivery suite activity when compared with 2019. The proportion of first-time mothers utilising epidural analgesia in labour has increased to 89%, and the uptake of neuraxial blockade for labouring multiparae is currently 40%.

TABLE 1: NEURAXIAL ANALGESIA USE IN LABOUR

Nulliparous	2,763 (89% of labouring nulliparae)
Multiparous	1,236 (40% of labouring multiparae)
Total	**3,999**

A total of 17 patients used remifentanil intravenous patient-controlled analgesia as an alternative to neuraxial blockade in 2020. This is a slight decrease on 2019, but alternative options to neuraxial blockade continue to be supported by the Anaesthesiology Service to facilitate the availability of a range of analgesic options for the Rotunda's labouring mothers.

POST DURAL PUNCTURE HEADACHE (PDPH)

Accidental dural puncture (ADP) with or without postdural puncture headache (PDPH) was reported in 32 patients following labour neuraxial analgesia in 2020. In keeping with recent years, the rate of ADP is less than 1% which compares very favourably with international reports of this complication in teaching obstetric units. All patients with ADP were followed forward according to new guidance from the Obstetric Anaesthetists' Association (OAA) to track the evolution of PDPH in individual patients so that a guideline-based approach to the identification of complications and

subsequent management can be implemented. About two-thirds of Rotunda patients with recognised ADP developed PDPH in 2020.

Thirty-five patients overall had symptoms of postural headache indicative of PDPH. Again, this is well within expected international benchmarks. All were included in a newly developed database developed by Drs. Loughrey and Brian Murphy, and managed on a new electronic record template devised in response to OAA international guidance which advocates standardised patient information and forward communication with GPs to utilise community care processes on behalf of the patient and facilitate effective longer-term follow-up.

Epidural Blood Patch to treat the symptoms of PDPH was administered to 27 patients in the Rotunda in 2020, three of these patients required a second blood patch and one required a third blood patch for relief of symptoms. Collating accurate information about symptom frequency, diagnosis and management of possible complications of neuraxial blockade in our hospital is evolving and important in both a local and international context.

ANAESTHESIA FOR CAESAREAN DELIVERY

The vast majority of patients had a neuraxial technique (a spinal or epidural anaesthetic) for caesarean delivery in 2020, allowing most mothers to be awake for the delivery of the baby. Only 1% of elective caesarean deliveries had general anaesthesia (GA) de novo, or needed to be converted to GA for failed neuraxial block. Only 3% required GA de novo for emergency caesarean delivery in 2020 (a reduction from 2019), and the emergency GA conversion rate was 6% (which was also lower than 2019). GA rates for both elective and emergency caesarean deliveries fall within the suggested audit standard of less than 5% for elective (category 4) caesarean delivery, and less than 15% for urgent/emergent (category 1–3) caesarean delivery.

This is consistent with the Rotunda's adaptive responses to COVID-19, which recognised the viral exposure to operating department staff from GA compared to neuraxial anaesthesia for caesarean delivery, and possible adverse pulmonary complications to our patients post-intubation following GA. A number of COVID-19-related changes were implemented: 1) enhanced anaesthesiology consultant presence on the Delivery Suite and in the Emergency Operating Theatre to supervise emergency cases, 2) early epidural/CSE placement for potentially complex labouring patients, 3) agreed multi-professional clinical care pathways for the management of acute gynaecology and/or obstetric patient care to avoid GA/intubation exposure of COVID-19 patients.

TABLE 2: ANAESTHESIA FOR CAESAREAN DELIVERY

2019	Elective	%	Emergency	%
Spinal	1,385	95%	672	47%
General	16	1%	74	5%
Epidural	4	< 1%	560	39%
Spinal/Epidural - CSE	36	2%	30	2%
General/Spinal/Epidural*	14	1%	93	7%
Total	**1,455**		**1,429**	
2020	**Elective**	**%**	**Emergency**	**%**
Spinal	1,463	94%	682	46%
General	15	1%	52	> 3%
Epidural	7	< 1%	632	43%
Spinal/Epidural - CSE	54	> 3%	25	2%
General/Spinal/Epidural*	18	> 1%	85	6%
Total	**1,557**		**1,476**	

OUTPATIENT OBSTETRIC CLINICS

More than 1,000 patients were reviewed in the anaesthesiology/obstetric high-risk clinic during 2020, 80% of which were new visits. The Pre-Anaesthesiology Clinic (PAC) nurse-midwives revised local protocols to incorporate virtual patient pre-assessment, and also provided a co-ordinated COVID-19 pre-operative screening process to facilitate thousands of elective and emergency surgeries in 2020.

All Anaesthesiology Service consultants are available to participate in obstetric and gynaecologic pre-assessment and advanced care planning on an ad-hoc basis; but complex co-morbid conditions require dedicated MMMDT/MFM/Cardiac Obstetric and PAC clinics to work together. Altogether, 257 patients had the benefit of multidisciplinary, optimised care planning in this way in 2020. Adaptive virtual/hybrid PAC changes because of COVID-19 will be re-assessed to optimise safe assessment and patient convenience.

GYNAECOLOGY

A total of 1,745 gynaecology surgical procedures were carried out in the operating theatres during 2020. Gynaecology pre-assessment anaesthesiology clinic efficiencies, electronic healthcare record integration and broader safety systems/processes continue to evolve under the direction of Dr. Patrick Thornton and the PAC Nursing Team.

SUCCESSES & ACHIEVEMENTS 2020

EPIDURAL PUMP TECHNOLOGY

A review of anaesthetic, obstetric and neonatal outcomes from the use of new epidural smart pumps delivering a PIEB technique has demonstrated reduced labour room workload (decreased need for midwifery and anaesthesiology administered top-ups) and significantly lower epidural-related maternal fever rates in 2020. This also results in reduced intervention for pyrexia in both mothers and babies postpartum.

EDUCATION, RESEARCH & TRAINING

The Anaesthesiology Service continues to provide education and training for RCSI undergraduate medical students in obstetric anaesthesia with lecture-based and bedside clinical teaching in anaesthesia and labour analgesia. There is also an active teaching programme for postgraduate anaesthesiology for College of Anaesthesiologists of Ireland (CAI) trainees up to and including fellowship level. Anaesthesiology fellows are encouraged to participate in the care of complex co-morbid and cardiac patients both in the Rotunda and Mater Misericordiae University Hospitals. Fellows also formally train in trans-thoracic echocardiography in the Department of Intensive Care Medicine in the Mater. Onsite practical echocardiography/point-of-care ultrasound is a feature of the training programme for all our trainees. Dr. Ciara Jean Murphy co-ordinated teaching as the College Tutor.

Members of the Anaesthesiology Service are involved in advanced airway teaching and high-fidelity simulation training in the CAI and RCSI. They also contribute as examiners for both membership and fellowship examinations in the CAI. Dr. Niamh Hayes serves on the council of CAI and chairs its Education Committee. The Anaesthesiology Service research program is diverse, with members working in collaboration with RCSI, UCD, TCD and DCU. Prof. Mc Caul and Dr. Brian Murphy researched airflow mechanics and aerosol distribution during respiratory support practices utilised in anaesthesia and critical care in the context of COVID-19 and won an international prize at the Difficult Airway Society's Learning from COVID-19 conference in 2020. Additionally, comparative assessment of facemasks and visors was undertaken which was considered by the HSE Health Protection Surveillance Centre (HPSC) prior to the development of national public health COVID-19 protection measures.

ENHANCED RECOVERY AFTER SURGERY (ERAS)

Enhanced recovery is an evidence-based system to improve maternal experience and outcome following elective caesarean delivery. It is designed as a package of care that improves maternal co-morbid conditions pre-operatively, limits fasting times and provides anti-sickness prophylaxis peri-operatively, while encouraging prompt mobilisation post-operatively with a combination of multimodal analgesia and early bladder catheter removal. Discharge planning is a key component to support safe discharge as early as possible. The ERAS programme was successfully introduced to the Rotunda in 2020 following substantial multi-professional collaboration.

PLANS FOR 2021

Provision of safe, high-quality anaesthesia care will be an ongoing challenge post-COVID-19. An increasing demand for operating theatre procedures (both gynaecology and obstetric) will need increasing support from anaesthesiology services, as will the year-on-year rise in the number of mothers requesting neuraxial analgesia in labour.

Critical Care Service

HEADS OF SERVICE

Dr. Mary Bowen, Consultant Anaesthesiologist
Dr. Maria Kennelly, Consultant Obstetrician Gynaecologist

SERVICE OVERVIEW

The High Dependency Unit (HDU) at the Rotunda Hospital is a dedicated facility that provides high-intensity nursing and medical supervision for select critically ill patients. Most forms of Level 2 critical care are facilitated. A multidisciplinary approach including obstetrics and gynaecology, anaesthesiology and nursing is provided, supplemented as needed by external specialist consultant advice. The unit receives tremendous support from the intensive care consultants at the Mater Misericordiae University Hospital (MMUH), who regularly facilitate access to their ICU beds when the onwards transfer of Rotunda patients to an adult general hospital is needed. Additionally, support from the intensive care consultants at Beaumont Hospital was also provided throughout 2020, typically when neurosurgical critical care was required.

New clinical care pathways were devised in early 2020 to prepare for the emerging COVID-19 pandemic. Advice was sought from the National Clinical Programme in Critical Care to decide how best to manage critically ill COVID-19 infected mothers. Infrastructural changes were made at short notice to safely accommodate COVID-19-positive patients needing Level 2 care onsite in the Rotunda, and plans agreed with local COVID-receiving adult general hospitals to provide Level 3 care if necessary. Overall, there were 253 admissions to the HDU in 2020, representing a slight decrease from 269 in 2019, as described in Table 1. The vast majority were obstetric patients, with only 4 gynaecologic admissions.

TABLE 1: HDU CLINICAL ACTIVITY

	2016	2017	2018	2019	2020
Obstetrics	217	250	199	258	249
Gynaecology	10	10	1	11	4
Total Admissions	**227**	**260**	**200**	**269**	**253**

Table 2 summarises reasons for obstetric admission to the HDU in 2020, with obstetric haemorrhage being the most common reason for admission. Two of these patients had their caesarean delivery performed at MMUH but with subsequent return to the Rotunda HDU.

TABLE 2: OBSTETRIC CASES REQUIRING HDU ADMISSION IN 2020

Obstetric	Number	%
Haemorrhage	106	41
Preeclampsia/HELLP	57	23
Sepsis	28	11
Cardiac	26	10
Miscellaneous	38	15
Total	**255 ***	**100**

*Including 2 readmissions for sepsis

The 'miscellaneous' obstetric reasons for HDU admission included a case of Ehlers-Danlos syndrome with Chiari malformation and syringomyelia, a case of renal transplantation with repaired myelomeningocele, a case of maple syrup urine disease, a case of chronic pancreatitis with type 1 diabetes, a case of acute liver injury in the setting of preeclampsia, and a patient following an EXIT caesarean delivery.

The reasons for the four gynaecology patients requiring HDU admission included observation for intensive blood sugar control following vaginal hysterectomy, management of epidural anaesthesia following abdominal myomectomy, haemodynamic monitoring following myomectomy, and serotonin syndrome following gynaecologic surgery.

TABLE 3: CARDIAC DIAGNOSES REQUIRING HDU ADMISSION IN 2020 (ALL REQUIRING CAESAREAN DELIVERY)

Cardiac Admissions
Coarctation of the aorta, ventricular septal defect, bicuspid aortic valve (2 cases*)
Bicuspid aortic valve, with prior Ross Procedure
Tetralogy of Fallot with ICD** in Situ
Rheumatic heart disease with mitral stenosis/regurgitation and preeclampsia
Pulmonary stenosis/regurgitation and tricuspid regurgitation
Repaired coarctation of the aorta with moderate aortic stenosis
Cardiomyopathy with mitral regurgitation and LBBB***
AV malformation and prior mitral valve repair
Tetralogy of Fallot with prior Rastelli Procedure
Bicuspid aortic valve with left ventricular hypertrophy
Ebstein's Anomaly, with prior tricuspid regurgitation repair and atrial septal defect
Aortic stenosis

*caesarean delivery performed in MMUH with subsequent HDU care in Rotunda
**ICD – implantable cardioverter defibrillator
***LBBB – left bundle branch block

In addition to these 13 cases who underwent caesarean delivery, one further cardiac case had a successful vaginal delivery in the Rotunda on a background of previously repaired Tetralogy of Fallot.

In 2020, the majority of transfers out of the Rotunda for Level 3 critical care went to MMUH. Patients requiring general surgical intervention in pregnancy, caesarean delivery in MMUH for co-morbid cardiac disease and those needing peripartum hysterectomy as part of the placenta accreta service were returned to the Rotunda HDU for subsequent step-down care and where relevant to maintain proximity to their baby.

TABLE 4: INTER-HOSPITAL TRANSFERS OF HDU PATIENTS TO AND FROM THE ROTUNDA IN 2020

Transfers to MMUH	10
Postpartum with acute liver injury in setting of preeclampsia	
COVID pneumonitis in pregnancy	
Ruptured splenic artery aneurysm in pregnancy for splenectomy	
Severe streptococcal pneumonia with respiratory compromise	
Severe sepsis from pyelonephritis in pregnancy	
Postpartum with acute renal injury in setting of pre-eclampsia	
For appendicectomy at 32 weeks' gestation	
Rheumatic heart disease with preeclampsia	
Pelvic haematoma following caesarean delivery	
Severe sepsis requiring advanced haemodynamic support	
Transfers From MMUH	**8**
Early pregnancy haemorrhage	
Appendicectomy at 34 weeks' gestation	
Planned caesarean hysterectomy for accreta	
Planned caesarean hysterectomy for percreta	
Postpartum appendicectomy	
Following caesarean delivery in MMUH for complex maternal cardiac disease	
Following caesarean delivery in MMUH for maternal cardiomyopathy	

An increasing number of invasive monitoring lines is needed in our patients year on year, reflecting the complexity of co-morbidities and clinical presentation. This included 87 patients requiring arterial lines, 10 patients requiring central venous lines, and one patient requiring a PICC line.

CHALLENGES 2020

The main challenge this year remained the limited physical infrastructure of the HDU. The significant limitation in isolation facilities to safely care for patients and staff was an additional challenge during the COVID-19 pandemic, although adaptation of other ward spaces and some ingenuity allowed us to cope during the various waves of the pandemic.

PLANS FOR 2021

Extensive design plans are being developed for a new Critical Care Wing at the Rotunda which will provide both a new neonatal intensive care unit, but also an optimally designed critical care obstetric unit, enabling select high-risk pregnant patients to receive sufficient intensive care monitoring for safe care at the Rotunda.

> Had my beautiful little boy two days ago in the Rotunda and every single midwife I was in contact with was amazing. I felt like I had family minding me.

Maternal Morbidity

HEAD OF SERVICE

Dr. Maria Kennelly, Consultant Obstetrician Gynaecologist

STAFF

Dr. Sharon Cooley, Consultant Obstetrician Gynaecologist
Prof. Michael Geary, Consultant Obstetrician Gynaecologist
Dr. Niamh Hayes, Consultant Anaesthesiologist
Dr. Claire McCarthy, Assistant Master/Maternal Medicine Fellow
Dr. Khadeeja el Nasser, Maternal Medicine Fellow
Dr. Vanitha Zusthi, Associate Specialist Anaesthesiologist
Ms. Kathy Conway, Clinical Reporting Service
Ms. Ruth Ritchie, Information Technology Service
Ms. Catherine Finn, Administrative Assistant

SERVICE OVERVIEW

Operating as the oldest maternity hospital in the world, the Rotunda Hospital remains committed to caring for women, their babies and families whilst providing the highest standards of care. While maternal mortality rates allow for comparison internationally, it is through examining maternal morbidity that interventions designed to minimise mortality and protect mothers and babies in subsequent pregnancies can be created. To support this process, the Rotunda Hospital continues to provide detailed information on a wide range of major obstetric morbidities that are associated with adverse outcomes. Severe maternal morbidity was prospectively monitored throughout 2020, with the classification system of the Irish National Perinatal Epidemiology Centre (NPEC) being used.

As always, the Rotunda is grateful for the hard work of the large multi-disciplinary team, both in the Rotunda and in our sister adult general hospitals, for their care and dedication to the women who attend the Rotunda, as well as those involved in collecting and analysing the data allowing for this report to be generated.

CLINICAL ACTIVITY

There were 249 obstetric admissions to the Rotunda High Dependency Unit (HDU) in 2020, with 67 major morbidity events fulfilling NPEC severe maternal morbidity criteria. This incidence of major morbidity events has continued to improve consistently over the last five years, as summarised in Table 1. Postpartum haemorrhage, hypertensive disorders and sepsis remain the top three reasons for admission to the Rotunda High Dependency service, which has been consistent over the last 5 years.

TABLE 1: INCIDENCE OF MAJOR MORBIDITY EVENTS AT THE ROTUNDA

	2016	2017	2018	2019	2020
Number of mothers delivered	8,405	8,226	8,358	8,262	8,152
Number of Major Mor-bidity Events	102	109	85	73	67
Incidence of Major Mor-bidity	1.0%	1.3%	0.9%	0.9%	0.8%

There were 18 inter-hospital transfers between the Rotunda and the Mater Misericordiae University Hospital (MMUH) during 2020. These individual cases are described in the Critical Care Service chapter of this report. However, their clinical complexity demonstrates the superb degree of multidisciplinary cooperation with medical, surgical, radiological and critical care services at MMUH that results in excellent clinical outcomes for both mother and baby.

TABLE 2: MAJOR OBSTETRIC HAEMORRHAGE AND RELATED OPERATIVE EVENTS

	2016	2017	2018	2019	2020
Massive haemorrhage	34 (0.4%)	36 (0.4%)	26 (0.3%)	30 (0.4%)	26 (0.3%)
Uterine rupture	3 (0.03%)	1 (0.01%)	1 (0.01%)	3 (0.04%)	1 (0.01%)
Peripartum hysterectomy	9 (0.1%)	12 (0.1%)	6 (0.07%)	2 (0.02%)	6 (0.07%)
Haemorrhage requiring interventional radiology	1 (0.01%)	0 (0%)	0 (0%)	1 (0.01%)	0 (0%)

Major obstetric hemorrhage resulted in 106 admissions to the HDU. As summarised in Table 2, 26 met NPEC criteria for inclusion as major morbidity events (i.e. EBL >2,500mls). The rate of major obstetric haemorrhage has remained consistently stable over the last five years at between 0.3-0.4%. There was only one case of uterine rupture in 2020, which occurred in a 42 year old woman, para 2, and who had one previous caesarean delivery followed by a successful vaginal birth after caesarean (VBAC). She presented at term with spontaneous rupture of membranes, with GBS positivity, for which she underwent induction of labour with oxytocin. A prolonged fetal bradycardia occurred following epidural insertion, and an emergency caesarean section was performed. On entering the peritoneal cavity, it was noted that there was complete rupture of the uterine scar, with the fetal head extruding through the lower uterine segment. The uterus was successfully repaired, and a healthy baby was delivered. In addition, there were six peripartum hysterectomies in 2020, all of which were performed in the context of placenta accreta spectrum (PAS) disorder, at a mean gestational age of 34 weeks. Four out of these six cases were performed in the Rotunda and two were performed as scheduled cases at MMUH to avail of multidisciplinary surgical support. All six of these hysterectomies were performed electively after detailed discussion and management planning at the interhospital PAS multidisciplinary team meeting. We remain grateful for the input and expertise of this expert group, coordinated by Dr. Jennifer Donnelly on behalf of the Rotunda Hospital.

TABLE 3: END ORGAN DISEASE

	2016	2017	2018	2019	2020
Renal / liver dysfunction	25 (0.3%)	37 (0.5%)	19 (0.2%)	9 (0.1%)	3 (0.04%)
Pulmonary oe-dema/ acute respiratory dysfunction	6 (0.1%)	2 (0.02%)	3 (0.04%)	5 (0.06%)	2 (0.02%)
Pulmonary embolism	0 (0%)	1 (0.01%)	0 (0%)	3 (0.04%)	3 (0.04%)
Cardiac arrest	0 (0%)	1 (0.01%)	0 (0%)	1 (0.01%)	2 (0.02%)
Severe sepsis	7 (0.1%)	10 (0.1%)	13 (0.2%)	5 (0.06%)	5 (0.06%)
Other	6 (0.1%)	3 (0.04%)	6 (0.07%)	1 (0.01%)	0 (0%)

As described in Table 3, the rate of end organ disease, including major venous thromboembolism (VTE), was similar to 2019, with three cases of pulmonary embolism. One occurred at 28 weeks' gestation which was bilateral in nature with a large thrombus load. She went on to have a successful vaginal delivery and negative thrombophilia screen. The remaining two cases occurred in the postnatal period. One was in a patient who had an emergency caesarean delivery for severe preeclampsia on a background of Type 1 Diabetes, which was also complicated by the development of a sub-capsular liver haematoma. The second postnatal pulmonary embolism occurred in a patient who was delivered at 30 weeks' gestation for severe fetal growth restriction.

There were five cases of severe sepsis that met NPEC criteria. Two of these were cases of urosepsis in the antenatal period, with one requiring inotropic support at the MMUH ICU. The third case was a postnatal herpes viral septicaemia which also required MMUH ICU support. The fourth case was a group A streptococcal septicaemia following surgical evacuation for incomplete miscarriage. The fifth was an antenatal case of abdominal sepsis secondary to ruptured appendix at 32 weeks' gestation, requiring inotropic support at the MMUH ICU.

Two cardiac arrests occurred in 2020. The first occurred in a 36 year old woman, para 3, who had a PEA cardiac arrest immediately following normal vaginal delivery of her fourth baby. A diagnosis of Amniotic Fluid Embolism was suspected due to a concurrent profound coagulopathy noted at the time of resuscitation and a requirement for massive transfusion. Following 39 minutes of cardiac arrest, the patient was successfully resuscitated and was subsequently transferred to the MMUH ICU for Level 3 support. This patient's recovery was complicated by a persistent left-sided neurological deficit with preserved cognition as a result of hypotension that occurred during the cardiac arrest. Despite this near-catastrophic event, she was discharged from the Mater to a rehabilitation centre where she continues to recover. The second cardiac arrest occurred in the context of a massive obstetric haemorrhage as a result of a spontaneous splenic vein aneurysm rupture in the third trimester. The patient was a 30 year old, multiparous woman who had presented with maternal collapse and suspected placental abruption. Following a category 1 emergency caesarean delivery, she was subsequently noted to have massive hemoperitoneum and a resultant diagnosis of splenic vein aneurysm was made, which was confirmed on later histological examination of the spleen. She required a splenectomy and distal pancreatectomy to achieve haemostasis, with a total 11 litre blood loss with massive transfusion, and PEA arrest of 20 seconds during resuscitation. She was transferred to the MMUH ICU for ongoing Level 3 support, interventional radiology and postoperative surgical management, ultimately making a complete recovery.

TABLE 4: CENTRAL NERVOUS SYSTEM EVENTS

	2016	2017	2018	2019	2020
Eclampsia	0 (0%)	4 (0.1%)	3 (0.04%)	1 (0.01%)	1 (0.01%)
Status epilepticus	2 (0.02%)	2 (0.02%)	0 (0%)	0 (0%)	0 (0%)
Cerebrovascular Accident	0 (0%)	0 (0%)	0 (0%)	1 (0.01%)	0 (0%)
Coma	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (0.01%)

As summarised in Table 4, the incidence of eclampsia has remained low over the past five years, with the only case occurring in a nulliparous patient at 29 weeks' gestation. The eclamptic seizure occurred at home, and diagnostic features consistent with severe preeclampsia were confirmed on arrival at the Rotunda, following which the patient was promptly delivered by caesarean section.

Table 5 summarises the overall intensive care inter-hospital transfer workload at the Rotunda, as well as maternal mortality data. For the sixth year in a row, there were no direct maternal mortalities at the Rotunda Hospital in 2020.

TABLE 5: INTENSIVE CARE MANAGEMENT

	2015	2016	2017	2018	2019	2020
ICU/CCU Transfer	5 (0.1%)	10 (0.1%)	19 (0.2%)	12 (0.1%)	15 (0.2%)	18 (0.2%)
Direct Maternal Death	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

SUCCESSES & ACHIEVEMENTS 2020

The maintenance of efficient multidisciplinary management with our colleagues at the Mater Misericordiae University Hospital for higher level critical care, radiological, medical and surgical support is a major achievement for a standalone maternity hospital. Clinical pathways to ensure streamlined patient transfers, communication, and continued obstetric care when patients are outside of the Rotunda campus, continue to be strengthened and modified to adapt to the ongoing complexity of cases as a result of the efforts of Consultant Obstetrician Gynaecologists, Dr. Jennifer Donnelly, Dr.

Maria Kennelly and Dr. Jennifer Walsh who look after all pregnant patients during their stay at the MMUH.

The COVID-19 pandemic resulted in further collaboration and clinical care pathways being developed between Critical Care, Infectious Diseases and Emergency Department colleagues across the MMUH and Beaumont Hospital campuses, which allowed for rapid transfer and care of pregnant COVID-19 patients in scenarios where managing them in a standalone maternity hospital would not have been appropriate.

The reliance and utilization of secure videoconferencing to communicate with specialist colleagues at external hospital sites during COVID-19 restrictions revolutionised our ability to continue to provide high quality, evidence-based, obstetric care whilst reducing staff and patient exposure risk. This enabled continued participation in education and training across disciplines within the hospital network. The addition of simulation training for elective and emergency care of COVID-19 pregnant patients as part of the RHOET emergency skills training programme was very successful. The appointment of a maternal medicine fellow continues to attract high quality candidates, who have contributed significantly to our service provision.

CHALLENGES 2020

The first and second waves of the COVID-19 pandemic posed significant infrastructural, staffing and patient challenges during 2020. Although pregnant patients did not feature significantly in our severe maternal morbidity data in the first and second waves in 2020, learning how to manage COVID-19 in pregnancy in a continually evolving clinical situation was very difficult.

Data capture of out-of-hospital transfers to other units continues to be challenging. The MN-CMS electronic healthcare record is not utilised when transferring patients to other hospitals for further care. The integration of the MN-CMS system with other hospitals would allow more streamlined communication between healthcare providers, which currently poses challenges for patients receiving care in multiple centres.

While the number of mothers delivering at the Rotunda remains stable, an increase in the medical complexity of patients continues to pose diagnostic and management challenges as a standalone maternity hospital.

PLANS FOR 2021

Building and improvement works to the operating theatre, labour and delivery suite, and theatre recovery area will enhance our ability to look after these complex cases.

From a research perspective, it is hoped to increase collaboration between critical care colleagues at the Rotunda, MMUH and Beaumont Hospitals by generating exploratory data on the management of COVID-19 in pregnancy, in particular as the pandemic and new variants of the virus evolve.

Continued enhancement of the newly developed high risk maternal medicine and pre-conceptional consultation clinic at Cavan General Hospital, which is run by Dr. Kennelly on a monthly basis, will allow for Rotunda-led satellite care of these patients in their own locality.

Complicated Postnatal Service

HEADS OF SERVICE

Dr. Maeve Eogan, Consultant Obstetrician Gynaecologist
Dr. Meena Ramphul, Consultant Obstetrician Gynaecologist

SERVICE OVERVIEW

This service was originally developed to offer postnatal review to women with obstetric anal sphincter injury (OASI) at vaginal delivery. In addition, women who are pregnant again after a previous anal sphincter injury, or other perineal complications, attend the perineal clinic to discuss options and risks in terms of mode of delivery. This clinic is led by Dr. Maeve Eogan.

The primary focus of this service is to provide postpartum follow-up for women who have sustained obstetric anal sphincter injury. This enables assessment of recovery, review and discussion of labour outcomes and events, integration with physiotherapy follow-up and coordination of referral to other disciplines as required, such as colorectal surgery.

The service also supports and advises women who are pregnant again after a previous anal sphincter injury (or other perineal complications) in order to discuss options and risks in terms of mode of delivery and intrapartum care. Written information is given to support this.

The service has also evolved to provide care for patients who have had other postnatal concerns, including wound infection, perineal pain, dyspareunia and faecal incontinence. Since 2014, women have been referred to the clinic for surgical revision of female genital mutilation (FGM). Since 2018, the service provides follow-up for women who have had Word catheter placement for management of Bartholin's gland cyst/abscess. In recent years, the postnatal service developed further to offer postnatal review to women who have had other unexpected intrapartum outcomes and events.

In recent years an enhanced postnatal review service has been offered to people who have experienced other unexpected intra- or postpartum complications and for the first time this is summarised in this report. This particular service is led by Dr. Meena Ramphul, with women being seen two weeks postpartum for an initial debrief and with many being seen on more than one occasion. The clinic provides an opportunity for open discussion, debriefing and planning for subsequent pregnancies. It provides a direct link for patients to the Perinatal Mental Health Team and physiotherapy. Currently, the Complicated Postnatal Service Clinic runs alongside the Post-traumatic Birth Clinic led by the Perinatal Mental Health Team. Patients are referred directly from inpatient wards, the Clinical Risk and Patient Safety Service, as well as from individual midwives or doctors whenever they encounter a patient who has had a relevant complication.

CLINICAL ACTIVITY PERINEAL CLINIC

TABLE 1: INDICATION FOR ATTENDANCE

	2020	2019
Antenatal assessment (previous OASI)	79	81
Antenatal assessment (other issues)	24	34
Postnatal assessment after third-degree tear	104	105
Postnatal assessment after fourth-degree tear	8	1
Postnatal assessment of perineal infection / pain / dyspareunia	64	60
Postnatal assessment of faecal incontinence	2	6
Female Genital Mutilation (FGM) assessment	17	9
Word catheter for Bartholin	9	25
Other	7	13
Total	**314**	**334**

OASI rates in the Rotunda are currently stable with 124 women sustaining obstetric anal sphincter injury in 2020, compared with 116 in 2019. An audit of fourth-degree tears was performed in 2020 in response to an apparent increase in incidence. No key causal factors or associations were noted and subsequently this apparent increase was not sustained. The modes of delivery of those who sustained obstetric anal sphincter injury are described in Table 2 below:

TABLE 2: MODE OF DELIVERY

	3rd degree	4th degree
Spontaneous vaginal	66	5
Vacuum only	16	1
Vacuum and forceps	11	1
Forceps only	22	2
Born outside hospital	0	0
Total	**115**	**9**

A total of 53 patients who attended this specialist clinic required additional treatment or ongoing referral, in addition to physiotherapy, which is offered to all patients. The specific additional treatments that were required are listed in Table 3 below:

TABLE 3: PROCEDURE / REFERRAL

	No. of Patients
Referral to colorectal service	6
Treatment of granulation tissue (outpatient)	28
Removal of persistent suture material (outpatient)	7
Perineal revision / injection (day case)	10
Reversal of Female Genital Mutilation	2
Total	**53**

CLINICAL ACTIVITY COMPLICATED POSTNATAL CLINIC

TABLE 4: INDICATION FOR REFERRAL

	No. of Patients
Postpartum haemorrhage	24
Neonatal encephalopathy	20
Various neonatal complications	7
Shoulder dystocia	6
Fourth degree tear	5
Hospital re-admission	5
Category 1 emergency caesarean delivery	4
Various maternal complications (maternal collapse, organ injury)	2
Caesarean hysterectomy for placenta accreta	1
Total	**74**

A number of patients attended with wound complications and with issues relating to analgesia during labour or delivery.

SUCCESSES & ACHIEVEMENTS 2020

An increase in the number of referrals for review after previous FGM was noted in 2020. It is hoped that this represents an enhanced awareness of the condition and the available treatment options.

A review of mode of delivery after previous OASI for the years 2018 and 2019 was undertaken, which noted a reduction in repeat OASI rates, without an increased caesarean delivery rate, thereby validating our individualised approach to patient counselling regarding mode of delivery after previous OASI.

Multidisciplinary collaboration was achieved through participation in a postnatal / urogynaecology MDT to optimize care of women with significant postnatal pelvic floor symptoms.

CHALLENGES 2020

Like every service in the hospital, the COVID-19 pandemic significantly affected provision of in-person, hospital-based postnatal follow-up, including physiotherapy. Some clinic visits needed to be deferred, with additional clinics being offered at times when COVID-19 numbers fell. That being said, all patients who sustained OASI continued to be offered in-person clinic and physiotherapy follow-up. Telemedicine/virtual health was also employed when examination was not required.

A team including midwifery and obstetric representation will complete the SAFE (Situational Awareness for Everyone) programme being run by HSE and RCPI to review risk reduction strategies and initiatives. A review of patient information and education will also be undertaken to ensure people are aware of the prevalence of OASI and strategies to mitigate risk.

In 2021, the Complicated Postnatal Service will continue to expand to include anaesthesiology review as required in order to address required multidisciplinary needs.

Radiology Service

HEAD OF SERVICE

Dr. Ailbhe Tarrant, Consultant Paediatric Radiologist

STAFF

Prof. Stephanie Ryan, Consultant Paediatric Radiologist
Dr. Neil Hickey, Consultant Adult Radiologist
Dr. Kevin Pennycooke, Consultant Adult Radiologist
Ms. Aine Hahessy, Radiology Services Manager
Ms. Louise Duffy, Clinical Specialist Radiographer in Ultrasound
Ms. Shenaz Subjee, Senior Radiographer, Radiation Protection Officer and PACS Manager
Mr. Paddy Nolan, Clinical Specialist in Radiography
Mr. Patrick Feeney, Senior Radiographer in Ultrasound
Ms. Megan Kelly, Senior Radiographer

SERVICE OVERVIEW

The Radiology Service provides diagnostic imaging for the adults and infants of the Rotunda Hospital, both as inpatients and outpatients. Radiology provides 24-hour support to the maternity service and the neonatal intensive care unit (NICU) through our Rotunda radiography staff and radiologists from the Rotunda Hospital, Children's Health Ireland at Temple Street and Connolly Hospital, Blanchardstown.

In 2020, Ms. Megan Kelly (Senior Radiographer) and Mr. Paddy Nolan, (Clinical Specialist in Radiography) commenced at the Rotunda, working in both pediatric and adult radiography, supporting the increasing volume of patients passing through the service.

CLINICAL ACTIVITY

The Radiology Service performed 7,086 exams in 2020, representing a 12% increase in activity in comparison with 2019 and a 20% increase in activity in comparison with 2018. This increase occurred despite significant disruption to the scheduled lists due to COVID-19 related restrictions.

ADULT RADIOLOGY

2020 saw significant challenges because of the COVID-19 pandemic. For example, no elective interventional radiological procedures occurred between March and May 2020, with a slow return to normal activity occurring after May. Similarly, outpatient ultrasound examinations during this period were restricted to urgent cases only. Activity was further reduced in August and November for interventional procedures, with scheduled slots being necessarily longer. Despite these limitations there was an increase in overall activity compared to 2019 (See Table 1).

An increase in the number of Rotunda Hospital clinical staff has seen the demand for gynaecologic imaging steadily grow, in particular for ultrasound and MRI examinations. A selective tubal catheterisation and re-cannulation service commenced in 2020, conducted by Rotunda staff at Connolly Hospital for Rotunda patients. There was also a steady increase in the number of gynaecologic MRI examinations performed by our team at Connolly Hospital. A new Gynaecology MDT commenced in October 2020, bringing radiology and gynaecology staff together for multidisciplinary care planning.

The 10-fold increase in the volume of adult ultrasound examinations (from to 172 to 1,725 procedures) is partly explained by the cessation of outsourcing of gynaecology ultrasound scans which was facilitated by an increase in adult radiologist capacity in late 2019.

TABLE 1: ADULT CLINICAL ACTIVITY 2020

Exam Type	Number
Pelvic ultrasound (Transabdominal and/or transvaginal)	1,179 (1,020 patients)
Non-pelvic ultrasound	226
Renal	81
Liver	39
Voiding ultrasonography	32
Abdominal	26
Soft tissue	16
Thyroid	3
Testicular	3
Other	26
Fluoroscopy – Hysterosalpingography	207 (26 at Connolly Hospital)
X-Ray	113
Total	**1,725 examinations**

PAEDIATRIC RADIOLOGY

COVID-19 enforced changes in clinical practices necessitated innovative remodeling of workflows. Ultrasound examinations, which had been routinely acquired as outpatients, were facilitated as inpatients, prior to infant discharge, which allowed similar levels of activity to be maintained without breaching guidelines.

In 2020, a total of 5,207 paediatric studies were performed, which was essentially unchanged compared with the 2019 activity volume (5,386). Of these studies, 52% were paediatric ultrasound examinations. These ultrasound examinations include hip ultrasound (1,718), performed as part of the National Screening Programme for Developmental Dysplasia of the Hip (DDH). A total of 2,428 plain x-ray films and 43 fluoroscopy studies (upper and lower gastrointestinal contrast) were performed, which represented no significant change in activity levels compared with 2019.

The CT and MRI needs of Rotunda paediatric patients continued to be provided by Children's Health Ireland at Temple Street and at the National Maternity Hospital. Adult CT and MRI requirements were provided by the Mater Misericordiae University Hospital and Connolly Hospital, Blanchardstown. During 2020, the National Maternity Hospital became more involved in Rotunda referrals for fetal and paediatric studies, including 31 MRI studies on Rotunda

patients. A total of 50 Rotunda patients had MRI examinations performed at CHI at Temple Street.

The findings of paediatric ultrasound, CT and MRI examinations of Rotunda patients continue to be discussed, when appropriate, at multidisciplinary meetings at CHI at Temple Street, attended by Rotunda neonatologists and radiologists.

SUCCESSES & ACHIEVEMENTS 2020

ENHANCING PATIENT CARE

A significant number of new key performance indicators were introduced in 2020, to improve Radiology Service efficiency, to reduce waiting times, to reduce DNA rates, and to improve patient care.

EDUCATION, RESEARCH & TRAINING

The 2020 annual cranial ultrasound training course was cancelled due to COVID-19 restrictions, while the 2020 Graf Hip Ultrasound basic and refresher courses, and neonatal registrar training day were also postponed.

An increased number of obstetric and gynaecologic specialist registrars, and radiology specialist registrars have had the opportunity to train in ultrasound under the supervision of Drs. Hickey and Pennycooke for adult imaging, and Drs. Ryan and Tarrant for paediatric imaging. Ms. Louise Duffy also supervised delivery of ultrasound training for radiographers and registrars.

Ms. Louise Duffy continued in her role as Paediatric Sonographer Lead for the UCD Ultrasound MSc training programme in sonography. In this role, the paediatric ultrasound module leading to an MSc in sonography has been reconfigured. The UCD Ultrasound Masters course is now approved by the Consortium for Accreditation of Sonography Education (CASE), and is recognised by all UK faculties and governing bodies for radiology and midwifery.

CHALLENGES 2020

The major challenge for 2020 was to maintain excellence in the face of vastly changed workflows resulting from COVID-19 related restrictions. Many well established and efficient work practices were restricted, resulting in delayed studies and increased waiting times. Radiology Service-led initiatives coupled with goodwill and collaboration between radiology and many other services at the Rotunda facilitated rapid return to normal workflows.

PLANS FOR 2021

- To continue to increase the capacity of the adult gynaecologic service
- To supply a dedicated ultrasound service for the new postmenopausal bleeding and heavy menstrual bleeding clinics
- To commence a new fibroid embolisation service
- To partake in a multicentre contrast trial for hysterosalpingography (HSG)
- To transition from Computed Radiography (CR) to Digital Radiography (DR) image acquisition in all areas

> The midwives and doctors are the most amazing people in the world. I felt so supported throughout the whole labour and they really couldn't do enough to help me after and ease all my worries as a first time mum. I felt that both myself and my son were really safe and although I couldn't wait to see my husband, the staff are that caring and supportive it felt like I had family there.

Gynaecology

“In March 2020, at a time of great uncertainty, personal stress and health anxieties, our staff provided seamless care and reassurance to patients, clinics were adapted and the Rotunda team continued to provide compassion, support and reassurance to our patients.”

Dr. Nicola Maher,
Consultant Obstetrician Gynaecologist

Gynaecology Service

HEAD OF SERVICE

Dr. Vicky O'Dwyer, Director of Gynaecology

SERVICE OVERVIEW

The Rotunda provides gynaecology services for the large catchment area of North Dublin. The gynaecology services include general benign gynaecology clinics, an Adolescent Gynaecology Clinic, a Urogynaecology/Promotion of Continence Clinic, a Subfertility/Reproductive Medicine Clinic, a Recurrent Miscarriage Clinic, a GP-led Contraception and Family Planning Clinic, a Colposcopy Service, an Outpatient Hysteroscopy Service, and a Termination of Pregnancy Service.

Gynaecology is provided as both a public and private service on the hospital campus with the general outpatient clinics in the main hospital building and the private clinics in the private/semi-private building. There were 2,532 new gynaecology appointments in the public hospital clinics and 3,823 return visit appointments. The 'did not attend' (DNA) rate for appointments was 15%. By late 2020, there was a significant reduction in waiting list numbers, in particular for those waiting more than one year for a routine appointment.

2020 was a challenging but successful year across all sectors of the service, including both emergency and elective gynaecologic surgery. Acknowledgement and credit must be given to all staff involved in providing the gynaecology service at the Rotunda, including administration, household, GP liaison, midwives/nurses and doctors whose individual contributions make it possible to provide this essential service.

Evening clinics were introduced to reduce the gynaecology waiting list, although the impact of this development was reduced by the COVID-19 pandemic. Dr. Meena Ramphul and Dr. Niamh Daly, supported by a team of NCHDs, saw additional general gynaecology patients from 5–8pm from September to December 2020. This was in addition to the established Monday and Thursday evening clinics which were already in operation from June 2020. These two clinics provided additional cervical gynaecology capacity, offering appointments to women with cervical conditions that did not require colposcopy. A number of virtual gynaecology clinics were established as a result of the COVID-19 pandemic and were particularly helpful in 2020 enabling us to care for many women through virtual consultation and organising appropriate baseline investigations prior to in-person general gynaecology clinic review.

In 2020, the Outpatient Hysteroscopy Service was relocated from the Connolly Hospital campus to the Rotunda Hospital campus. Despite the pandemic, urgent hysteroscopy appointments were maintained after this relocation. This enabled women with postmenopausal bleeding to be seen and a diagnosis reached in a timely manner. A manual vacuum aspiration (MVA) procedure clinic was also commenced in 2020, which was the first time such a targeted clinic was offered in Ireland. Women were referred from both the Early Pregnancy Assessment Unit (EPAU) and the Pregnancy Options Clinic to avail of this novel service. Dr. Sharon Cooley and Dr. Deirdre Hayes Ryan (Aspire Clinical Fellow) were instrumental in setting up and providing this MVA service.

Unfortunately, operating theatre services were reduced due to the COVID-19 pandemic, resulting in an increased waiting list for both day case and inpatient gynaecology surgical procedures. To minimise the impact of the restrictions, the Rotunda secured additional operating theatre capacity at the Bon Secours Hospital, Glasnevin, with many of our consultant gynaecologists performing procedures there for women whose procedures were deferred due to the pandemic. I would like to acknowledge the hard work and collegiality provided by the staff at the Bon Secours Hospital, both at ward level and in operating theatres. In 2020, there was a total of 71 day case procedures at the Bon Secours Hospital.

The Rotunda received funding from the National Women and Infants Health Programme (NWIHP) to expand gynaecology outpatient services in 2020. In December the HARI Unit, which had been leased to the Sims Fertility Service, was vacated and a planned refurbishment of the building for gynaecology clinics and outpatient procedures was commenced.

GENERAL GYNAECOLOGY CLINICS

General benign gynaecology outpatient clinics are provided by the following consultants: Dr. Kushal Chummun, Dr. Sharon Cooley, Dr. Sam Coulter-Smith, Dr. Niamh Daly, Dr. Eve Gaughan, Prof. Michael Geary, Dr. Hassan Rajab, and Dr. Meena Ramphul. These consultants all have individual special interest areas such as operative hysteroscopy, pelvic floor surgery, management of ovarian pathology, endometriosis, benign pathology of the vulva and vagina, and minimal access surgery.

SPECIALIST GYNAECOLOGY CLINICS

ADOLESCENT GYNAECOLOGY CLINIC

This clinic is provided by Consultant Gynaecologist, Dr. Geraldine Connolly and Ms. Debbie Browne, Clinical Nurse Specialist. The clinical conditions cared for in this clinic include menorrhagia, abdominal pain, ovarian cysts and complex congenital anomalies of the genital tract including cloacal abnormalities. There is a specialised vaginal dilator clinic for girls with congenital anomalies provided as part of this service. In 2020, there were 83 new and 95 follow-up appointments attended, which represented a slight reduction compared with 2019 (135 new and 129 follow-up cases), due in large part to the COVID-19 pandemic restrictions.

PROMOTION OF CONTINENCE CLINIC

This specialist clinic is a multidisciplinary clinic staffed by Consultant Gynaecologist Dr. Naomi Burke, as well as by physiotherapists, led by Ms. Cinny Cusack, with Ms. Caroline Hendricken, specialist nurse in bladder care and urogynaecology. The clinic structure has been highly successful in ensuring that accurate pelvic floor disorder diagnoses are made and that an individualised management programme is implemented. This includes patient education and insight, medication, biofeedback, physiotherapy and surgery in selected cases. In 2020, there were 200 new and 222 follow-up appointments attended, which also represented a slight reduction compared with 2019 (203 new and 298 follow-up cases).

SUBFERTILITY CLINIC

Two clinics are provided weekly by specialist consultants in reproductive medicine, Dr. Edgar Mocanu and Dr. Rishi Roopnarinesingh, dedicated to the investigation and management of subfertility. This is becoming an increasingly challenging subspecialty as couples are more inclined to delay starting a family for a number of reasons. The complete array of investigations and expertise are available at these clinics to thoroughly assess female and male factor subfertility. Both medical and surgical investigations and treatment options are provided. Advanced assisted reproductive techniques, such as IVF, are not provided by the Rotunda Hospital itself and referral to another unit is required just for this particular aspect of therapy. In 2020, there were 310 new and 762 follow-up appointments attended, which also represented a reduction compared with 2019 (386 new and 1,220 follow-up appointments).

RECURRENT MISCARRIAGE CLINIC

This Recurrent Miscarriage Clinic follows national and international standards for the investigation and management of couples who have experienced three or more consecutive first trimester miscarriages. This specialist clinic is provided by Consultant Obstetrican Gynaecologist, Dr. Karen Flood, with Clinical Nurse Specialist, Ms. Patricia Fletcher. It also provides support and reassurance through early pregnancy ultrasound and care for couples with a history of recurrent miscarriage, in the first trimester of pregnancy and beyond for their subsequent pregnancies. In 2020, there were 120 new and 747 follow-up appointments attended, which was a similar clinical volume compared with 2019 (156 new and 599 follow-up appointments). The large number of follow-up appointments is accounted for by demand for reassurance ultrasound examinations offered in early pregnancy.

VIRTUAL CLINIC

The Rotunda Hospital introduced an innovative gynaecology telemedicine clinic in May 2019. This was expanded further to two clinics in 2020 as well as many of our general gynaecology clinics offering additional virtual consultation rather than face-to-face appointments. Follow-up appointments were offered for patients with benign histology results and for discussion of normal blood test and ultrasound results for selected patients. All patients on the general gynaecology waiting list were assessed for suitability for such a virtual consultation. Select new patients were also referred to the virtual gynaecology clinics through Healthlink based on specified referral criteria including: contraception counselling such as tubal ligation, ovarian cyst follow-up in young women, menorrhagia in women younger than 40 years of age, and initial consultation for intermenstrual or postcoital bleeding. A total of 868 virtual telemedicine appointments were provided in 2020.

OUTPATIENT HYSTEROSCOPY SERVICE

The Outpatient Hysteroscopy Service caters for women referred to the Rotunda who meet eligibility criteria and are scheduled for 'one-stop/see-and-treat' gynaecologic evaluation. The clinics are provided by Consultant Gynaecologists Dr. Naomi Burke, Dr. Kushal Chummun, Dr. Eve Gaughan, Dr. Conor Harrity, Dr. Nicola Maher, Dr. Edgar Mocanu and Dr. Vicky O'Dwyer. Ms. Hannah Bolger is the Clinical Nurse Specialist who ensures the smooth and efficient running of these clinics. The team is supported by Healthcare Assistants Ms. Lisa Hillman and Ms. Ciara Deegan. The Outpatient Hysteroscopy Service received both direct GP referrals and internal referrals for diagnostic and operative hysteroscopy. The procedures offered in the clinic included diagnostic hysteroscopy and biopsy, either through a vaginoscopy approach or with cervical dilatation under local anaesthetic. Operative hysteroscopy was also used for removal of intrauterine contraceptive devices that could not be removed in the outpatient clinic. Uterine polypectomy and myomectomy were performed using Myosure operative hysteroscopes.

In 2020, a total of 849 outpatient hysteroscopies were performed by this service, which represented a significant increase on the 654 procedures performed in 2019.

GP-LED CLINIC

This clinic is run by Dr. Deirdre Lundy, Dr. Geraldine Holland and Dr. Shirley McQuaid, General Practitioners with a special interest in women's health. They work closely with consultant gynaecologist, Dr. Eve Gaughan, and the Outpatient Hysteroscopy Service. The clinic provides an efficient service for insertion and removal of intrauterine contraceptive devices, in particular those that have proven challenging for local GP practices. General contraceptive advice and a perimenopausal support service are also provided. This clinic helps to alleviate some of the pressure on the general gynaecology clinics by accepting both internal and external referrals.

PREGNANCY OPTIONS SERVICE

The Pregnancy Options Service provides a multidisciplinary care programme for patients seeking elective termination of pregnancy, with significant medical, midwifery and social work input. There were 123 terminations performed in 2020 under Section 12 of the Health (Regulation of Termination of Pregnancy) Act 2018. This compared with 178 such terminations performed in 2019. This reduction in referrals between 9 and 12 weeks' gestation compared with 2019 may be attributed to women accessing earlier care in general practice, rather than requiring a hospital-based service.

OPERATING THEATRE

ABBREVIATIONS USED IN TABLES

AP repair	Anterior and posterior colpoperineorraphy
BSO	Bilateral salpingo-oophrectomy
D&C	Dilataion and curettage
Dye	Methylene blue dye
EUA	Examination under anaesthetic
FGM	Female genital mutilation
IUCD	Intraterine contraceptive device
LLETZ	Large loop excision of the transformation zone
STAH	Subtotal abdominal hysterectomy
TOT	Transobturator tape
TVT	Transvaginal tape
TAH	Total abdominal hysterectomy

TABLE 1: HYSTEROSCOPIC PROCEDURES

	2018	2019	2020
Dilatation and curettage (D+C)	272	225	310
D+C with insertion of intrauterine device	185	211	230
D+C with endometrial ablation	71	112	86
Polypectomy	86	65	87
Myomectomy	13	59	56
Resection of uterine septum	4	3	4
D+C with diathermy to cervix	13	12	2
Total	**644**	**687**	**775**

TABLE 2: LAPAROSCOPIC PROCEDURES

	2018	2019	2020
Dye +/- ovarian drilling +/- adhesiolysis	181	289	332
Diagnostic	51	76	87
Ovarian cystectomy	37	78	74
Hysterectomy +/- salpingectomy +/- oophrectomy	52	33	41
Salpingo-oophorectomy	11	36	22
Sterilisation	6	11	9
Myomectomy	5	10	6
Oophorectomy	2	9	8
Appendectomy	1	3	2
Total	**346**	**545**	**581**

TABLE 3: LAPAROTOMY

	2018	2019	2020
TAH +/- BSO	37	53	23
Myomectomy	27	16	18
Oophorectomy	4	2	7
Ovarian cystectomy	6	4	6
Conversion from laparoscopy	8	4	3
STAH	19	0	2
Reversal of sterilisation	4	1	1
Salpingectomy	1	0	1
Cystectomy /oophorectomy / washings	1	1	0
Total	**107**	**81**	**61**

TABLE 4: VAGINAL AND TRANSVAGINAL SURGERY

	2018	2019	2020
Anterior and posterior colpoperineorrhaphy	37	63	63
Vaginal hysterectomy	46	60	51
Sacrospinous fixation	8	16	9
Bulkamid injection	1	0	2
Transvaginal oocyte retrieval	4	3	1
TVT	4	0	0
TOT	1	0	0
Total	**101**	**142**	**126**

TABLE 5: OTHER VULVOVAGINAL PROCEDURES

	2018	2019	2020
Repair of FMG	2	0	10
Fenton's procedure	4	4	7
Revision of perineum	6	10	5
Resection of vaginal septum	0	8	5
Labial reduction / repair	4	4	1
Total	**16**	**26**	**18**

TABLE 6: MINOR SURGICAL PROCEDURES

	2018	2019	2020
Bartholin's abscess or vaginal cyst correction	38	50	74
Vulva biopsy/ excision of vulva lesions	26	26	39
Cystoscopy	11	45	29
EUA +/- smear	20	3	11
LLETZ	11	19	14
Hymenectomy	6	4	5
Intravesical botox injection	1	19	2
Cervical cerclage	24	1	0
Diathermy of labial condyloma	0	1	0
Evacuation of vaginal haematoma	4	0	0
Total	**141**	**168**	**174**

TABLE 7: FIVE YEAR COMPARISON

	2016	2017	2018	2019	2020
Anterior and posterior repair	28	31	37	63	63
Vaginal hysterectomy and AP repair	57	58	46	60	51
Laparoscopic hysterectomy +/- BSO	0	38	52	33	41
TAH +/- BSO	46	24	37	53	23
LLETZ	21	12	11	19	14
Sacrospinous fixation	8	15	8	16	9
Laparoscopic sterilisation	22	14	6	11	9
STAH	15	12	19	0	2
Total	**197**	**204**	**216**	**255**	**212**

ANALYSIS

The number of hysteroscopic procedures in 2020 was similar to previous years. There was an increase in outpatient hysteroscopy procedures, both diagnostic and operative. The Outpatient Hysteroscopy Service received high patient satisfaction scores on qualitative analysis.

The number of laparoscopic procedures increased in 2020 compared with 2018 and 2019. There was a significant increase in the number of laparoscopic hysterectomies performed which was associated with a decline in both total and subtotal abdominal hysterectomies. This reflects the skillset of our consultant gynaecologists.

In 2020, the number of vaginal hysterectomies and pelvic floor repairs remained consistent with previous years. Again, this year there were no TVT or TOT procedures performed. The number of other vulvovaginal procedures, minor surgical procedures and LLETZ procedures remained consistent with previous years. The number of LLETZ procedures performed in the operating theatre is less than 1% of the total number of LLETZ performed in the colposcopy clinic, which is consistent with best practice.

SUCCESSES & ACHIEVEMENT 2020

- The virtual clinics were expanded to twice per week to facilitate more new referrals. Patient satisfaction rates were high, with 40% of women being managed and discharged with a care plan through this modality. Telemedicine consultations were also offered during COVID-19 from other general and specialist gynaecology clinics
- The gynaecology waiting list reduced from 2019 to 2020 in both the number of women waiting for a new consultation and the time from referral to clinic appointment for new routine referrals
- The Rotunda operated a fully electronic gynaecology service both in outpatient clinics and inpatient settings
- The Outpatient Hysteroscopy Service was expanded and relocated to the Rotunda campus. This clinic received the highest patient satisfaction rates among our outpatient services
- Minimal access surgical techniques were promoted by continuing professional development for consultants and dedicated training of the non-consultant medical staff

PLANS FOR 2021

- The Rotunda will further expand outpatient consultation and procedure clinics through the new Rotunda Ambulatory Gynaecology Unit which will open in the first quarter of 2021
- Expansion of urogynaecology services will focus on a multidisciplinary approach to pelvic floor conditions and continence promotion, with the planned appointment of a new consultant subspecialist in urogynaecology
- Benign gynaecology MDT meetings will be scheduled to discuss and manage complex benign cases. These meetings will include gynaecologists and radiologists working across all RCSI Hospitals Group hospitals. In addition to improving patient care, these meetings will be a forum for optimal teaching of our trainee gynaecologists
- A new operating theatre build will lead to four fully compliant operating theatres on the Rotunda campus, which should significantly increase gynaecologic surgical throughput

Colposcopy Service

HEAD OF SERVICE

Dr. Claire Thompson, Consultant Gynaecological Oncologist

STAFF

Dr. Kushal Chummun, Consultant Obstetrician Gynaecologist
Dr. Eve Gaughan, Consultant Obstetrician Gynaecologist
Dr. Conor Harrity, Consultant Obstetrician Gynaecologist
Dr. Yahya Kamal, Consultant Obstetrician Gynaecologist
Dr. Vicky O'Dywer, Consultant Obstetrician Gynaecologist
Dr. Hassan Rajab, Consultant Obstetrician Gynaecologist
Dr. Claire McCarthy, BSCCP Accredited Registrar
Dr. Tushar Utekar, BSCCP Accredited Registrar
Dr. Elzahra Ibrahim, BSCCP Accredited Registrar
Dr. Aliyah Al Sudani, BSCCP Accredited Registrar
Ms. Jennifer O'Neill, Nurse Colposcopist
Ms. Virginie Bolger, Nurse Colposcopist
Ms. Rose Thorne, Trainee Nurse Colposcopist
Ms. Barbara Markey, Trainee Nurse Colposcopist
Ms. Carol O'Rouke, Colposcopy Nurse Co-ordinator
Ms. Nicola Boyd, Healthcare Assistant
Ms. Hollie Dunne, Healthcare Assistant
Ms. Janice Glynn, Healthcare Assistant
Ms. Patricia O'Donovan, Healthcare Assistant
Ms. Yvonne Burke, Administrative Team Leader
Ms. Eilis Dalton, Administration Support
Ms. Lisa Gleeson, Administration Support
Ms. Ruth Mackey, Administration Support
Ms. Miriam McKane, Administration Support
Ms. Jade Ng, Administration Support
Ms. Niamh O'Carroll, Administration Support
Ms. Margaret O'Sullivan, Administration Support

SERVICE OVERVIEW

The Rotunda Colposcopy Service is now one of the largest in Ireland. This is a quality-assured service with careful adherence to an annual review of all key performance indicators.

All colposcopy services throughout the country experienced unprecedented challenges as a result of the COVID-19 pandemic in 2020. In addition, the service had already experienced an ongoing recovery following the impact of the CervicalCheck national audit in 2018, while also implementing major changes in the national screening programme following the implementation of HPV Triage.

A major challenge for the service in 2020 was the fact that the number of new referrals exceeded the projected numbers along with the number of treatments and follow-up appointments required, which had an impact on waiting time targets. Clinic capacity was subsequently increased and, despite the impact of COVID-19, the team has achieved improved target waiting times in 2020, while maintaining a high turnover of new and return appointments alongside treatments.

The team has maximised clinical capacity, including an increase in nurse-led colposcopy clinics and evening smear clinics. Their hard work and dedication have resulted in the service maintaining the highest standards of care, while playing a key role in the national screening programme.

CLINICAL ACTIVITY

TABLE 1: FIVE YEAR COMPARISON

	2016	2017	2018	2019	2020
New Attendances	1,805	1,681	1,936	2,073	1,589
Return Visits	3,857	3,382	3,472	3,940	4,004
Total Visits	5,662	5,063	5,408	6,025	5,593

TABLE 2: COMPLIANCE WITH REFERRAL APPOINTMENT TARGETS

Year	Projected New Referrals	Number of New Referrals Attended	% Referred with clinical indication	Waiting time for High Grade cases*	Waiting time for Low Grade cases**
2017	2,000	1,681	14%	100%	100%
2018	2,000	1,935	31%	91%	97%
2019	2,000	2,073	30%	60%	66%
2020	2,000	1,589	24%	78%	85%

*Target for seeing patients with high grade cervical smear changes is 90% within 4 weeks of the referral
**Target for seeing patients with low grade cervical smear changes is 90% within 8 weeks of the referral

The COVID-19 pandemic impacted significantly on colposcopy services throughout 2020, with an initial redeployment of some colposcopy staff to alternative duties for 4 weeks as well as an understandable initial decline in referral numbers. These impacts explain the significant decrease in number of patients seen in 2020 compared with 2019 and the failure to achieve waiting time targets. As 2020 progressed, the Colposcopy Service adapted to social distancing restrictions and limited available clinical space. The additional nurse-led clinics and evening smear clinics have resulted in subsequent improvement in targets and completion of treatments in late 2020. New referral rates have now increased again due to the national screening programme's attempts to recover from the temporary programme cessation during the initial pandemic. During the first COVID-19 lockdown high grade referrals and clinically suspicious cervix referrals were prioritised.

Monthly reports and Key Performance Indicators (KPIs) are reported to the national CervicalCheck programme. The Colposcopy Service implements quality assurance protocols and clinical governance measures which include monthly departmental MDT meetings attended by all staff, including histopathology and cytology.

TABLE 3: TREATMENTS

	2017	2018	2019	2020
Cervical biopsy	1,388	1,679	3,439	1,476
Large Loop Excision of the Transformation Zone (LLETZ)	386	455	520	462
Cold coagulation (CC)	405	371	359	310
Total treatments				
(LLETZ + CC)	791	826	879	772
Total Procedures	**2,179**	**2,505**	**4,318**	**2,248**

SUCCESS & ACHIEVEMENTS 2020

CLINICAL SERVICE DEVELOPMENTS

- The introduction of early morning nurse-led Cold Coagulation Clinics have received very positive feedback from patients, particularly for continuity of care and convenience. The service created capacity for 8 treatment sessions each week which is the equivalent of one full additional colposcopy session
- Nurse-led evening smear clinics have created increased capacity for colposcopy and provide greater patient choice of appointment times
- Following the new recommendations from CervicalCheck, most patients with a CIN I, viral changes, or Low-Grade colposcopy findings can now be discharged to their original smear provider in the community for a follow-up HPV test in 12 months, resulting in an improvement in smear clinic capacity
- Increasing clinical referrals over the last 3 years has placed pressure on the Rotunda's Colposcopy Service capacity. As a result, the Rotunda's Gynaecology leadership team, under the direction of Dr. Vicky O'Dwyer, has generated new service capacity which has already resulted in over 100 additional patients being seen in 2020
- The appointment of Dr. Claire Thompson as Lead Colposcopist has enhanced the Rotunda's relationship with the Mater Misericordiae University Hospital Gynaecologic Oncology MDT
- In 2020, the service had two Nurse Colposcopists (Ms. O'Neill and Ms. Bolger), while two additional team members (Ms. Thorne and Ms. Markey) have progressed their British Society for Colposcopy & Cervical Pathology (BSCCP) accreditation with a significant expansion in nurse-led colposcopy capacity expected
- The service has focused on the re-accreditation process with the BSCCP of consultant colposcopists alongside an expansion of BSCCP-accredited trainers. The service has increased from one consultant trainer at the beginning of the year to a total of five consultant trainers by the end of 2020
- Audits completed included "Colposcopic Impression with CIN III Histological diagnosis - Standard setting against BSCCP Colposcopy Guidelines" and "Five year audit of invasive cervical cancers"
- Research commenced included "Distraction Therapy in the Colposcopy Setting", an observational study on patient perception and feedback regarding the use of a virtual reality headset during colposcopy.

CHALLENGES 2020

The two main challenges in 2020 included preparation for the new national Primary HPV screening and the current infrastructural limitations of the unit.

The advantages of Primary HPV screening include a higher sensitively to diagnose pre-invasive lesions, improved reassurance with a negative test and safe prolongation of screening intervals. However, evidence has shown that the initial implementation will result in up to a 30% increase in referrals to colposcopy. Improvement of clinical capacity and nurse-led services is therefore going to be paramount to the service in the upcoming years.

The available infrastructure is limited to two colposcopy procedure rooms and one smear clinic room. Great progress has been made in optimising current capacity, but this will continue to come under increasing pressure. Hospital-wide developments to obtain additional clinical space and improvements of infrastructure are ongoing and will be of immense benefit to the service.

PLANS FOR 2021

The next year will be focused on strategy development on the following issues:

- Implementation of primary HPV screening and its impact on initial colposcopy referrals is anticipated in early 2021
- Continued improvement in clinical capacity within current infrastructural restraints
- Improving infrastructure with the main aim being to increase procedure room number and facilities
- Expansion of nurse-led colposcopy services and CNM 3 managerial structure
- Developing an Advanced Nurse Practitioner role within the Colposcopy Service
- Enhancement of training opportunities for both nursing and medical staff following expansion in the number of accredited consultant trainers
- Increase the number of audits which has been impacted in 2020 by COVID-19

Sexual Assault Treatment Service

HEADS OF SERVICE

Dr. Maeve Eogan, National Clinical Lead for SATU Services
Dr. Nicola Maher, Clinical Lead for SATU Rotunda

STAFF

Ms. Noelle Farrell, Clinical Midwife Manager II
Ms. Deirdra Richardson, Clinical Midwife Specialist
Ms. Kate O'Halloran, Clinical Midwife Specialist
Ms. Naomi Finnegan, Clinical Midwife Specialist
Ms. Christine Pucillo, Clinical Nurse Specialist
Ms. Sarah O'Connor, Project Manager for the Post Graduate Diploma in Nursing (Sexual Assault Forensic Examination)
Ms. Rita O'Connor, Administration
Ms. Moira Carberry, Administration
Dr. Nicola Cochrane, Forensic Clinical Examiner
Dr. Wendy Ferguson, Forensic Clinical Examiner
Dr. Aisling Geoghegan, Forensic Clinical Examiner
Dr. Deirdre Hayes-Ryan, Forensic Clinical Examiner
Dr. Elzahra Ibrahim, Forensic Clinical Examiner
Dr. Daniel Kane, Forensic Clinical Examiner
Dr. Haroon Khan, Forensic Clinical Examiner
Dr. Ciara Luke, Forensic Clinical Examiner
Ms. Deborah Marshall, Forensic Clinical Examiner
Dr. Jill Mitchell, Forensic Clinical Examiner
Ms. Sue Roe, Forensic Clinical Examiner
Ms. Aideen Walsh, Forensic Clinical Examiner

SERVICE OVERVIEW

The Rotunda Sexual Assault Treatment Unit (SATU) is one of six HSE-supported SATUs around the country. Each unit provides comprehensive forensic and medical care to individuals who have experienced sexual violence, as part of a collaborative, interagency national Sexual Assault Response Team (SART). The support the SATU receives from the Executive Management Team and all colleagues at the Rotunda Hospital is acknowledged. This support, despite competing and important demands on valuable resources, is greatly appreciated.

CLINICAL ACTIVITY

TABLE 1: FIVE YEAR COMPARISON OF ATTENDANCE NUMBERS

	2016	2017	2018	2019	2020
No.	289	327	319	393	277

Prior to the COVID-19 pandemic, 2020 was set to be a busier year than 2019 based on national SATU attendances in January and February. However, as with other areas of healthcare, the effects of the pandemic altered SATU attendance and service patterns for the remainder of the year. Unfortunately however, despite extensive lockdown restrictions, reported sexual violence continued, confirming that sexual violence is not solely seen in social situations, as is often portrayed.

Nationally, overall attendances decreased by 22%, and at the local level, 277 patients received care at the Rotunda SATU in 2020, a 30% decrease from 2019. Ninety-two percent of these patients identified as female, 8% as male, and less than 1% as other. Care continued to be provided to individuals ranging from 14 years to over 70 years, with an increase in patients aged 14-17 years (16% vs 20%) and a decrease in patients aged 18-35 years (65% vs 58%).

Two hundred and twenty-eight incidents (82%) were reported to have occurred within the Republic of Ireland, most of which took place within Dublin County (161; 71%). Incidents were more likely to happen in either the person's or an assailant's home (39% vs 43%), and assailants were less likely to be strangers or recent acquaintances (50% vs 43%) in 2020 compared with 2019. There was an increase in assailants reported to be intimate partners, ex-intimate partners, family members, or friends, as compared to the previous year (27% in 2020 vs 21% in 2019).

During the acute period following an assault, early presentation is important for timely care provision and forensic evidence collection. In 2020, the majority of patients (79%) attended the Rotunda SATU within 7 days of an incident, and of those patients who requested a forensic examination, 89% were seen within 3 hours by a Forensic Clinical Examiner. While most patients attended SATU for care during daytime hours (72%), approximately one third sought care between 8pm and 8am, reinforcing the importance of providing a round-the-clock service.

Follow-up sexual health care, including STI screening and relevant vaccination, is also provided by the Rotunda SATU. In 2020, 98% of patients were offered an STI review appointment. While there was a notable increase in follow-up attendances in 2020 (66% in 2020 vs 56% in 2019), a portion of patients may never return to SATU, emphasising the importance of providing prophylactic care at the time of initial presentation.

SUCCESSES & ACHIEVEMENTS 2020

EDUCATION & TRAINING

Despite COVID-19 pandemic restrictions, the SATU team remained committed to providing education and outreach among local healthcare, law enforcement, and support services. Although opportunities to offer in-person training were limited, SATU staff embraced a virtual approach, giving presentations remotely to external professional groups. A compilation of training videos was also created during the year, in which Rotunda SATU staff reviewed the forensic examination process and provided a walk-through tour of the unit. Similarly, reliance on virtual communication encouraged knowledge sharing across the Irish national SATU network. Throughout the year, monthly peer review meetings were held via Zoom, and webinars were offered by our own specialists, many of which were recorded for future viewing and staff training purposes.

Each year, the SATU services also coordinate an Interagency Study Day, to bring together allied agencies involved in the provision of care to those who experience sexual violence. Hosted by Mullingar SATU, this year's Interagency Study Day was presented using a virtual, webinar-based format. The remote delivery method allowed for a record 550 people from multidisciplinary agencies to access the virtual event, over double the attendance of previous years, including the largest number of international attendees that have been welcomed to date. Key speakers included Prof. Tom O'Malley, who reviewed his report on recommended protections for vulnerable witnesses in the investigation and prosecution of sexual offences. Diana Faugno, former president of the Academy of Forensic Nursing discussed domestic violence and non-fatal strangulation, and Dr. Maeve Eogan examined the effects of COVID-19 in her presentation titled, "SATU in 2020 - What a Year and Where are We Now?".

This year saw new additions to the core Rotunda team of forensic examiners, with Ms. Christine Pucillo and Ms. Naomi Finnegan earning their qualifications as Clinical Nurse/Midwife Specialists. The hard work of Sarah O'Connor is acknowledged, who in her role as Project Manager for the Post Graduate Diploma in Nursing (Sexual Assault Forensic Examination), ensured that CNS/CMS candidates had the logistical support required to complete their qualifications throughout the year.

A number of new medical colleagues were welcomed to the on-call forensic examiner rota. As ever, the on-call staff remain a valued part of the service, enabling the provision of crucial out-of-hours care to patients. In February 2020, Rotunda staff members Dr. Daniel Kane and Ms. Sarah O'Connor, attended the Galway SATU to help deliver a specialised forensic training program for medical staff. Thanks to all SATU staff for their ongoing training of incoming staff.

ENHANCING PATIENT CARE

This year, we continued to use feedback from patient experience questionnaires to focus service improvement endeavors and enhance patient care. With assistance from the HSE Communications Division, work to redesign our website was completed, improving accessibility to service information and online feedback mechanisms. As always, we strive to deliver high-quality, sensitive care, and we use patient feedback, as shown below, to drive these efforts:

> "It was very private and discreet."

> "I felt safe."

> "It was also reassuring that there was somebody there to support my family while I was having the exam."

> "Staff under difficult circumstances were beautiful."

Since 2016, SATU services have had the ability to offer forensic examinations for storage of evidence, without Garda involvement, to those patients who are undecided regarding their reporting intentions. Evidence is stored for up to one year, giving individuals time to consider whether they wish to have the samples released to An Garda Síochána for investigative purposes. In 2020, 18 (6%) patients chose to store their evidence at the Rotunda SATU. This year, Dr. Daniel Kane conducted research in which he analysed the uptake of this option by patients attending the Dublin SATU since 2016. The study showed that, of the 127 patients who decided to store their evidence over that time period, 25 (20%) subsequently reported their assault to An Garda Síochána. These findings highlight the continued need to provide this care option to our patients, to allow individuals the opportunity to engage with the criminal justice system how and when they wish.

INNOVATION

This year, new means by which to raise awareness of the SATU service were pursued, both locally and nationally. In collaboration with the HSE Communications Division, animated educational videos were created to be used as patient and professional resources. Available on our website, these videos have recently been featured in a European-wide training programme discussing sexual violence and migration. Also introduced were new patient information leaflets, educational posters, and SATU merchandise including USB keys, lanyards, and pens to be distributed during outreach efforts.

In response to the needs of the COVID-19 pandemic, we were delighted to receive HSE funding to acquire new iPads that enabled remote video communication between forensic examiners and patients during consultations. Face-to-face contact was reduced, but the ability to build rapport with patients was maintained.

CHALLENGES 2020

To mitigate the risk of COVID-19 transmission, some unavoidable modifications were made to service provision this year. This included limiting footfall within the unit, with restrictions on the number of Gardaí and accompanying support persons who could attend a consultation. Follow-up care was also restricted to 15 minutes in-person contact duration which, in some cases, limited the ability to support patients who may have needed more time for their care.

PLANS FOR 2021

In 2021, the Minister for Justice Helen McEntee plans to implement criminal justice and legal reform as outlined in Supporting a Victim's Journey: A Plan to Help Victims and Vulnerable Witnesses in Sexual Violence Cases. As a key service involved in the care of those reporting sexual crime, we hope to support this initiative by taking part in the development of a training package for ongoing interagency and public education efforts regarding sexual violence. Moreover, by participating in medical and nursing/midwifery recruitment drives, we aim to maintain our staffing levels, and thus our ability to provide appropriate, responsive care. A review of the national SATU database is also planned, with the goal of improving output capabilities to facilitate future research projects.

Neonatology

“Never has the commitment of staff been more evident than during this pandemic. Teamwork and supporting each other has ensured that we have been able to continue to provide quality care. Within the Neonatal Unit, safe staffing levels were maintained at all times by staff working extra shifts to cover when a colleague was absent. It has been difficult; parents naturally have found it stressful having limited visiting but the team tried to support them in new ways by introducing video messaging, more frequent phone calls and making sure to spend some time with parents when they visited.”

Christine McDermott,
Advanced Neonatology Nurse Practitioner

Department of Neonatology

HEADS OF DEPARTMENT

Dr. Breda Hayes, Consultant Neonatologist
Prof. Naomi McCallion, Consultant Neonatologist

STAFF*

Prof. Michael Boyle, Consultant Neonatologist
Prof. David Corcoran, Consultant Neonatologist
Dr. Katie Cunningham, Locum Consultant Neonatologist
Prof. Afif El Khuffash, Consultant Neonatologist
Prof. Adrienne Foran, Consultant Neonatologist
Dr. Margaret Moran, Consultant Neonatologist
Dr. Jan Franta, Consultant Neonatal Transport
Dr. Hana Fucicova, Consultant Neonatal Transport
Dr. Wendy Ferguson, Clinical Specialist Paediatric Infectious Diseases
Dr. Shaishi Vaish, Locum Consultant Neurodevelopmental Paediatrics
Dr. Fiona McElligott, Consultant Paediatrician in Palliative care
Dr. Orla Franklin, Visiting Consultant Paediatric Cardiologist
Dr. Sarah Chamney, Visiting Consultant Paediatric Ophthalmologist

*Supported by a team of nurses, midwives, non-consultant hospital doctors, health and social care professionals and healthcare assistants.

SERVICE OVERVIEW

For many years, the Paediatric Department in the Rotunda Hospital has cared for sick and preterm infants, well infants on the postnatal ward, babies requiring outpatient support and infants with specialist concerns, and provided both ante- and postnatal counselling for parents and families. 2020 brought new and unexpected challenges with the arrival of COVID-19. The Neonatal Team is deeply grateful for the commitment and flexibility shown by all staff throughout the pandemic, as well as for the understanding and support of patients' families, which helped the Rotunda to continue to deliver high-quality and evidence-based care under new and ever-evolving conditions.

The Neonatal Intensive Care Unit (NICU) at the Rotunda Hospital provides special, high-dependency and intensive care to approximately 1,200 babies each year. It is one of the busiest NICUs in the country and is one of only three sites nationally that combine tertiary neonatal intensive care with neonatal transport services. As a tertiary NICU, the service cares for sick and premature infants, as well as those born with complex problems and those who need additional support after birth. The service cares for infants delivered here in the Rotunda and for complex, sick and extremely preterm infants transferred from RCSI Hospitals Group partner hospitals as well as other centres nationally. The service works closely with the Fetal Medicine Service to support and care for families with antenatal diagnoses of fetal problems and, through strong links with Dublin's paediatric hospitals, supporting patient transition to specialist services if required.

The central hub of the neonatal service is the Neonatal Intensive Care Unit, which admitted 1,199 infants during 2020. These babies were admitted into one of 39 beds in the NICU, according to the level of care required. Within the NICU, 7 spaces are designated as providing intensive care (level 3 support), 12 high-dependency care (level 2 support) and 20 for special care (level 1 support). As ever, the unit responded flexibly to the needs and requirements of our babies. While overall patient admission numbers were similar to previous years, these patients required a higher total of intensive care days (2,039 in 2020, an increase of 10% on the previous year) and a greater total of high-dependency days of treatment (3,528, also an increase of 10% on 2019), reflecting a greater intensity of clinical care. The NICU is a critical care service providing emergency responses to often unpredictable and unavoidable patient needs. Average daily bed occupancy rates were 76% during 2020, although this figure does not reflect intermittent peaks of even greater activity within that time period. The Rotunda NICU is recognised as a national referral centre for therapeutic hypothermia and management of extreme prematurity, as well as for state-of-the art specialist therapies, such as high-frequency ventilation and inhaled nitric oxide.

The Department of Neonatology at the Rotunda is the tertiary neonatal centre for the RCSI Hospitals Group and remains closely linked to the paediatric teams at both Our Lady of Lourdes Hospital, Drogheda and Cavan General Hospital. These links are not merely with respect to immediate patient care, but also to support education, audit and guideline development. In addition, the Department rotates responsibility for the National Neonatal Transport Programme (NNTP) with its sister tertiary NICUs at the National Maternity Hospital and the Coombe Women and Infants' University Hospital, Dublin. The Rotunda also acts as paymaster and provides key NICU links for the only NNTP Transport Fellow post in the country. The NNTP provides emergency and planned transfer of infants between all maternity and paediatric centres nationally on a 24-hour basis 365 days per year. The transport team comprises highly trained NICU and ambulance staff, including a neonatal registrar or fellow, a transport nurse and either a driver (for road transports) or air transport team. During 2020, the overall service transported 546 infants on a national basis, with 32% (173 infants) being transported by the Rotunda NNTP Team. The NICU accepted 43 outside postnatal transfers (8% of all NNTP transports, and 25% of all tertiary maternity hospital referrals), while another 77 infants were transferred from the Rotunda to another centre due to capacity issues (72% to Dublin paediatric hospitals). We are extremely grateful for the leadership provided by Drs. Jan Franta and Hana Fucicova, as well as by the other neonatal transport consultants, for this service. A new neonatal transport consultant role, linked specifically to the Rotunda Hospital NICU, will further support our team's national role in this regard.

In 2020, Dr. Margaret Moran joined the permanent neonatal consultant staff. Dr. Moran had been a valued and respected member of the team for over two years, and her new cross-hospital role strengthened the Rotunda's links with Children's Hospital Ireland, improving patient access to specialist services. Prof. Michael O'Keefe provided excellence in the care of retinopathy of prematurity (ROP) for Rotunda infants for many years until his retirement in 2019, and in 2020 we were very delighted to welcome his successor, Dr. Sarah Chamney, to the Rotunda. Dr. Chamney has already brought innovative ideas in paediatric ophthalmology to the NICU service and we are delighted to work with her in developing many new projects, including the planned purchase of a new retinal camera to aid with both ROP screening and management with the assistance of the Rotunda Foundation.

The intensive care provided to sick infants at the Rotunda Hospital would not be possible without the expertise of our affiliated health and social care professionals (HSCPs). Our service benefits from strong links with the Radiology Service, specialist neonatal dietetics, senior pharmacy input, daily consultant microbiology guidance, medical social work, chaplaincy family support, inpatient and outpatient physiotherapy review and lactation consultant support. The unit also relies on the important work of our administrative team, healthcare assistants, porters and household staff.

CLINICAL ACTIVITY

In response to an outbreak of ESBL-producing K. pneumoniae in 2019, the Rotunda instituted a policy of restricting unit bed occupancy to 70%, where possible, to reduce the risk of further outbreaks. In response to this infection prevention and control policy, the Rotunda was closed to admissions on 84 days during 2020, with 90% of these closures due to lack of available beds. Three Rotunda infants were transferred to another hospital postnatally due to overcrowding. Unfortunately, there was another infectious outbreak in the NICU during October/November 2020, where three infants were colonised with an ESBL-producing E. coli. Although one of these infants had necrotising enterocolitis, the ESBL organism was not felt to have contributed to this condition. This outbreak again resulted in the closure of the NICU to admission and a formal outbreak response was initiated. The outbreak was rapidly brought under control, and the subsequent report identified ongoing overcrowding and infrastructural concerns within the unit as contributing factors, similar to the findings after previous outbreaks. These repeated NICU closures contributed to the lower numbers of admissions of infants < 1,500g to the NICU in the last two years, with 99 very low birthweight (VLBW) infants admitted in 2020, which was similar to the 97 infants admitted in 2019, both of which were lower than previous years.

NEONATAL NURSING

Highly trained neonatal nursing staff are the cornerstone of our high-quality neonatal clinical care. International standards for neonatal nursing published by the British Association of Perinatal Medicine suggest that 86 whole-time-equivalent (WTE) nurses are required to staff our 39-bedded unit, although this figure is likely conservative as it dates from 2010. There is a recognised national and international shortage of trained neonatal nurses. Staff recruitment remained challenging during 2020, particularly amidst the COVID-19 pandemic restrictions. However, despite this, seven new nurses were recruited to our team. As ever, there was some staff attrition, with four resignations and one retirement, but it is a testament to senior management that the whole-time equivalent remained steady throughout the year at 81 WTEs. Increasing neonatal nursing numbers will remain one of the main priorities for the Department going forward.

Nursing staff in the neonatal unit were supported by hospital management to undertake additional educational programmes specific to neonatal nursing. These included the RCSI Postgraduate Diploma in Neonatal Nursing, the Key Principles of Special Care and High Dependency Nursing and Key Principles of Intensive Care Nursing programmes in the Centre for Midwifery Education, the latter two being approved by the Nursing and Midwifery Board of Ireland at Category Level One. In 2020, four staff completed the Postgraduate Diploma in Neonatal Nursing, and eleven staff completed the foundation-level Key Principles programmes. NICU clinical facilitators play a key role in supporting staff through the neonatal unit orientation programme along with providing updates and ongoing in-house education to all staff throughout the year.

The HSE approved the appointment of a Clinical Nurse Manager in Neonatal Transport for each of the three Dublin maternity hospitals, which is an exciting new clinical role that will be beneficial both for the unit and for neonatal transport. This full-time post was funded by the NNTP. The Rotunda Executive Management Team also approved a one-year pilot of a new Neonatal Resuscitation Officer post, responsible for the co ordination and development of resuscitation practice and education within the hospital. Recruitment also began for a new neonatal neurology clinical nurse specialist which, along with the development of other new specialist roles, will lead to exciting new developments in neonatal practice.

Our three Advanced Nurse Practitioners (ANPs), Christine McDermott, Edna Woolhead and Mark Hollywood, continue to advance evidence-based practice through their roles in nursing education and the advancement of specialist nursing roles. They have major roles with curriculum development, assessment and teaching on the Postgraduate Diploma in Neonatal Nursing and also on the Key Principles programmes. They continue to play a major role in the Neonatal Resuscitation Programme (NRP) training nationally and they also provide continued medical education for midwifery study days and lectures for HDip and BSc Midwifery students at Trinity College Dublin.

VERMONT OXFORD NETWORK (VON) OUTCOMES

The Rotunda NICU records anonymised data on all very low birthweight (VLBW) infants (birth weight < 1,500g) admitted, including a range of key performance indicators (KPIs) in the Vermont Oxford Network (VON). VON is an international collaboration of tertiary neonatal intensive care units reporting on over 55,000 very preterm infants each year. This allows the Rotunda

to benchmark its highly specialised management and outcomes against the performances of leading NICUs worldwide. Our rates of severe intraventricular haemorrhage (3%), cystic periventricular leucomalacia (0%) and severe retinopathy of prematurity (0%) compare favourably with network averages. Our rate of late onset infections (after day 3 of life) remains high at 10% in 2020, compared with a VON median of just 5%. Much work has gone into care bundles, unit upgrades, staff recruitment, optimisation of occupancy levels and education over the past few years in an effort to reduce this rate of infections, however the 2020 figure of 10% late onset infection has not improved from previous years (9% during 2015–2019). In our opinion, this persistently high rate of late onset infection likely reflects the ongoing infrastructural problems in the Rotunda NICU, where the small footprint and restricted space around individual cots falls below recommended international standards. Our overall mortality rate (14%) falls within expected VON reference levels. Adjustment of neonatal outcomes to allow for differences in rates of prematurity, birthweight and other illnesses, shows that the Rotunda compares well with overall VON outcomes, with the exception of necrotising enterocolitis (NEC) and chronic lung disease (CLD) which are also slightly higher than VON averages.

A multidisciplinary working group on NEC was established in 2020 to identify risk factors for NEC in our population and possible interventions to reduce these risks. Promoting maternal breastfeeding and breast milk expression is core to reducing NEC, and we are grateful for the hard work of our NICU Nursing Team, our lactation consultants and the dedication of our midwifery colleagues to supporting breast milk expression after preterm delivery. In 2020, our rates of any breast milk feeding at discharge among VLBW infants was 63%, compared with a VON average of 51%. Improving these rates even further is a key quality improvement project for the NICU Team.

Chronic lung disease (CLD) is multifactorial, influenced by gestation at birth, perinatal infection, chorioamnionitis and the need for ventilatory support after birth, among other factors. The VON data shows that the Rotunda falls within expected network levels for each of these underlying risk factors, although there may be other critical influences in our patient cohort, such as preterm premature rupture of membranes and low antenatal amniotic fluid volumes, that significantly impact lung function after birth. The reduction of CLD remains a key quality improvement project for the NICU going forward.

HYPOXIC ISCHAEMIC ENCEPHALOPATHY

During 2020, a total of 23 babies were diagnosed with moderate or severe hypoxic ischaemic encephalopathy (HIE) (see Table 4.1). Mild cases of HIE are not reported for comparison given the inaccuracy of identification of mild HIE and uncertainty regarding diagnostic criteria.

Of the 23 total cases of HIE, 18 (14 inborn and 4 outborn) were diagnosed with moderate encephalopathy, and five (4 inborn and 1 outborn) were diagnosed with severe encephalopathy. Initial amplitude-integrated electroencephalography (aEEG) data were available for all inborn babies, being normal in three cases (17%), moderately abnormal in eleven cases (61%) and severely abnormal in four cases (22%). In the three cases with a normal aEEG, one baby had a large subdural hematoma and seizures, with the remaining two babies both having evidence of multi-organ dysfunction, defined as evidence of renal or liver dysfunction, and one of these babies being treated for seizures.

Therapeutic hypothermia is usually commenced within six hours of birth and was provided for 16 of the 18 (89%) inborn cases. In one of the treated infants, therapeutic hypothermia was not commenced until 13 hours of age, following the late onset of seizures. In that case the initial examination had showed only mild features of mild encephalopathy. Two infants were not treated with therapeutic hypothermia. In the first case, this was because seizures only manifested at 20 hours following delivery, with the initial examination suggestive only of mild encephalopathy. The second case was not treated with therapeutic hypothermia as there was evidence of both an extensive coagulopathy and severe pulmonary hypertension at birth, both of which are contraindications to the initiation of therapeutic hypothermia. In both of these cases, early cranial ultrasound (within 24 hours after birth) showed already established brain injury. A summary of baseline data – including Apgar scores, cord gases, brain MRI findings and outcomes – is given in Table 4.2.

A total of 61% (14 of 23) of babies had seizures, with neuroimaging being abnormal in 17 (74%) of cases. However, in 5 cases (22%) the radiological abnormality was merely extra-axial haemorrhage, with no intra-parenchymal involvement. Outcomes have been largely favourable for inborn infants, but unfortunately longer-term outcome data was not available on all outborn babies, as they are followed in their local centres.

Of the 14 inborn babies with moderate encephalopathy, one baby has sensorineural hearing impairment but an otherwise reassuring neurodevelopment examination for age. Another baby has subtle asymmetry of gait but has overall normal tone on examination and otherwise reassuring neurodevelopment examination for age. The remaining 12 children all have appropriate development at their most recent neuro-assessment, at between 4 and 18 months of age.

Unfortunately, two of the five babies with severe encephalopathy (1 inborn) died, and a further baby required transfer to a children's hospital for multidisciplinary input due to ongoing feeding issues at 4 weeks. The remaining two children with a history of severe HIE were both doing well, with appropriate neurodevelopment when last assessed at between 9 and 11 months of age.

An increase in reported cases of moderate or severe HIE in 2020 prompted the establishment by the hospital Executive Management Team of a Multidisciplinary Taskforce including obstetrics, neonatology, midwifery and risk management to evaluate all cases with a view to identifying potentially avoidable risk factors and/or missed opportunities. During 2020, two unique challenges were faced by the Hospital which had the potential to impact on neonatal outcomes. This included a significant decrease in Delivery Suite capacity due to construction and renovation of the existing Delivery Suite, thereby reducing the capacity to monitor all labouring patients in the Delivery Suite setting, rather than the Prenatal Ward of the Emergency and Assessment Unit. Secondly, the COVID-19 pandemic also significantly impacted on the ability to provide all antenatal assessments. It is unclear at this time whether either of these factors had a direct impact on the apparently higher rate of moderate and severe HIE seen in 2020. A report of the Taskforce findings will be published in February 2021, with suggested recommendations being implemented in 2021.

PAEDIATRIC OUTPATIENTS

The COVID-19 pandemic of 2020 brought significant additional challenges for the busy paediatric outpatient department (POPD), which manages approximately 8,000 infant visits per year, including a cohort of extremely high-risk ex-preterm and vulnerable infants. Staff met infrastructural and infection control challenges with flexibility and innovative solutions to altered arrangements for patient flow. Experienced nurses and nurse managers, with extensive support from administrative staff, introduced telemedicine consultations, streamlined triage and clinical reviews, while providing safe outpatient services for patients with close COVID-19 contacts.

The POPD provides outpatient support for infants and families following initial neonatal discharge, including follow-up appointments after NICU admission for term and preterm infants, well-baby checks, jaundice checks and support for infant feeding. The POPD recorded 7,920 attendances during 2020, despite infrastructural and pandemic restrictions that were in place for most of the year. Unfortunately, approximately 8% of patients did not attend their OPD appointment, which is an ongoing challenge as this negatively impacts on timely availability of appointments for other babies. All patients were triaged and screened for suitability for telemedicine consultations, and 289 families were seen in this way. A new midwife-led clinic was started in 2020 and provided care for 24% (1,897 babies) of all patients attending the POPD. In addition to general neonatal clinics, the specialist clinic services provided in the POPD included infectious diseases, dietetics and neurodevelopmental assessment.

PAEDIATRIC INFECTIOUS DISEASE SERVICE (RAINBOW CLINIC)

The Paediatric Infectious Disease Service (Rainbow Clinic) manages infants with antenatal, perinatal or postnatal exposure to harmful infectious diseases, is provided by Dr. Wendy Ferguson, which includes care of infants with CMV, toxoplasmosis, HIV, Hepatitis C, Hepatitis B, syphilis, TB, malaria, genital HPV and other sexually transmitted diseases. Optimal management of these infants can reduce the lifelong burden of illness of these conditions. The service links families from the adult Infectious Disease Service at the Rotunda (DOVE Clinic) to the national Rainbow Infectious Disease specialty services at Children's Health Ireland. In 2020, the Paediatric Infectious Disease Service provided care to 326 affected families and their infants, as well as expert guidance, staff education and guideline development.

NEONATAL DEVELOPMENTAL SCREENING PROGRAMME

NICU graduates, particularly those born very prematurely or with early encephalopathy, are at much higher risk of neuro-disability than the general population. Early identification and intervention for developmental concerns has been shown to improve outcomes. The Neonatal Developmental Screening Programme formally assesses the later development of babies with a birthweight < 1,500g, as well as those with a history of Hypoxic Ischemic Encephalopathy (HIE). Providing high-quality, validated neurodevelopmental follow-up is a priority for the Rotunda, in keeping with the Model of Care document for Neonatal Services (2015). A Senior Clinical Psychologist, Dr. Liezl Wienand, was appointed to our team on a part-time basis initially, which quickly resulted in significantly reduced waiting times for neurodevelopmental assessment by over a year. In October 2020 this position became a full-time permanent position. Despite severe curtailment in nonessential clinics due to the COVID-19 pandemic, 110 children were assessed in 2020 out of the 214 children who were offered appointments. Many parents (58) did not wish to avail of assessments due to fears about contracting COVID-19 in a hospital setting. Developmental scores are available on all of the children assessed, providing robust long-term neurodevelopmental outcome data on NICU graduates and facilitating early transition to neurodevelopmental specialists and early intervention services where required.

Assessment is via the Bayley Scales of Infant and Toddler Development (BSID-3) at two years' corrected gestational age for the preterm population, and two years' chronological age for the term population. Using BSID-3, scaled scores ≥ 8 are considered to be within or above the typical/normal range. Scaled scores of 5–7 (composite score equivalent 75–85) are considered borderline, while scaled scores ≤ 4 (composite score equivalent 55–70) are suggestive of mild, or moderate or severe developmental delay. The domains assessed include gross motor skills, fine motor skills, expressive and receptive language skills and cognition. A total of 93 of the 110 assessments performed in 2020 were of very low birth weight (VLBW) babies, with 63 (68%) of these 93 children assessed as being normal. However, two of these 63 children demonstrated behaviours suggestive of a potential future diagnosis of attention deficit hyperactivity disorder (ADHD). One child demonstrated cortical visual impairment, and 7 (8%) demonstrated isolated delays in speech development. A total of 21 (23%) of these 93 children had evidence of a potential future diagnosis of Autism Spectrum Disorder (ASD) but with no current associated developmental delay. One child's clinical presentation was suggestive of a potential future diagnosis of ASD with cognitive outcome in the low average range, and language and motor development outcomes in the borderline range.

The remaining 16 of the 110 assessments were carried out in babies who had received therapeutic hypothermia for hypoxic ischaemic encephalopathy. It was reassuring to note that 14 (88%) out of these 16 HIE cases had normal assessments. The remaining 2 (12%) cases of HIE demonstrated behaviours suggestive of a potential future diagnosis of Autism Spectrum Disorder (ASD).

NEURODEVELOPMENTAL CLINIC

Early identification of neurological and developmental concerns allows expert assessment and onward referral to community and specialist services. In 2019, Dr. Shaishi Vaish was recruited as a locum developmental paediatrician to streamline care pathways for infants identified in both neonatal follow-up clinics and at the Neonatal Developmental Screening Programme. This clinic works closely with the Neonatal Developmental Screening Programme and in 2020 a service-level agreement was signed with Summerhill Primary Care Centre to move both services to this larger facility, while remaining under the governance of the Rotunda Hospital. The clinic provided comprehensive neurodevelopmental assessments of 92 high-risk infants in 2020, fast-tracking access to key multidisciplinary, specialist and community support for these babies.

DIETETICS CLINIC

The neonatal Dietetics Clinic, managed by Ms. Anna Claire Glynn, provides specialist paediatric dietetic advice and management for infants with complex nutritional needs and infants with faltering growth. It links these babies with general neonatal clinics and supports parents managing feeding issues at home, including in the use of specialist feeds. The clinic provided 173 appointments in 2020, of which 20% were telemedicine consultations implemented due to COVID-19 restrictions. This response ensured that key supports for parents of infants with problematic weight gain were maintained throughout the period of COVID-19 restrictions.

SPECIALIST CARDIOLOGY SERVICES

The NICU at the Rotunda is at the forefront of cardiovascular management of term and preterm infants thanks to the expertise of its echocardiography team. Weekly reviews are provided by visiting consultant cardiologist, Dr. Orla Franklin, who provides in-house assessment of sick infants with cardiovascular problems and guides complex cardiac management in the NICU. Dr. Franklin also provides a critical link to cardiac and cardiothoracic surgical services in the Children's Hospital Ireland at Crumlin. We also benefit significantly from the expertise of Prof. Afif El-Khuffash, a world leader in neonatologist-performed echocardiography (NPE) who provides both clinical and research NPE in the NICU to optimise cardiac outcomes. A total of 804 echocardiographic scans were performed on 262 infants during 2020, of which 15% were inpatient cardiology scans and 85% were neonatology-performed echocardiography scans. This represents a near doubling of the echocardiography workload seen in 2019, during which time 140 infants had echocardiographic assessment in the NICU. This work was made possible due to the generous donations received by the Rotunda Foundation, which enabled the NPE Team to purchase high-end echocardiography equipment.

ROTUNDA FOUNDATION SUPPORT

As ever, many of the positive changes in the NICU were supported by the wonderful work of the Rotunda Foundation and the generous donations received. The Foundation, and the incredible support of those who conducted fundraising for the service, allowed the NICU to purchase many key pieces of equipment during 2020, including:

- High-end echocardiography equipment
- Brainwave monitoring system used for therapeutic hypothermia for infants with birth asphyxia
- High-fidelity term and preterm mannequin models to train staff in complex newborn resuscitation
- Breast pumps for mothers with babies in the NICU
- Car seats to facilitate inter-hospital transfer of well infants for scans and tests
- Blanket warmers
- Carbon dioxide monitors
- Tentacles for Tinies programme
- Beads of Courage programme

The Rotunda Foundation Team, working with Prof. Michael Boyle, also ensured that the traditional Rotunda Hospital marking of World Prematurity Day (WPD) happened in 2020, albeit in a slightly different form. Each year, NICU graduates and their families are invited back to the Pillar Room for a party to celebrate WPD, where they meet with staff and each other in a joyous celebration. While COVID-19 pandemic restrictions meant that the usual in-person party was not possible, instead each VLBW graduate received a parcel filled with WPD goodies and an invitation to an online virtual celebration. It was extremely successful and a lovely way to mark the achievements of our smallest graduates in this challenging year.

RESEARCH

The Department of Neonatology plays a very active role in clinical and laboratory research, with 36 peer-reviewed publications produced during 2020. There is a busy postgraduate research programme, with seven candidates undertaking either MD or PhD programmess during 2020 (3 MDs and 4 PhDs). Two candidates successfully submitted their theses in 2020 (Dr. Nurul Aminudin and Dr. Neidin Bussmann) and the remainder will submit in either 2021 or 2022. The current research areas within the department include the preterm infant, neonatal echocardiography, haemostasis, neonatal transport, perinatal asphyxia and neonatal neurology, infectious diseases (including COVID-19) and pharmacology, as well as cross-disciplinary collaborations with paediatric and obstetric colleagues.

CHALLENGES 2020

There is no doubt that 2020 was a difficult year, with it being impossible to have foreseen the challenges that the COVID-19 pandemic would bring or imagine the impact that a viral illness would have, not only on our unit but also on our society. Staff from all disciplines responded with hard work, kindness and innovation through stressful times. It was a particularly challenging time for parents and families and we are extremely grateful for their forbearance, understanding and support as we responded to ever-evolving information on the virus and its implications for the safe provision of neonatal care. It was with great reluctance that visiting access restrictions were implemented in the NICU to keep babies, parents and staff safe. As the understanding of COVID-19 increased we were able to increase the time parents could spend with their babies, but infrastructural restrictions and the small footprint of the NICU within the hospital could not accommodate adequate social distancing for a return to normal visiting.

The family integrated care program (FiCare) in the Rotunda Hospital NICU faced considerable barriers during 2020 due to restricted parental visiting, which negatively impacted on the amount of infant care that could be provided by parents. However, the neonatal team continued to maximise parental involvement in infant care despite lockdown restrictions, with plans to restart recruitment as soon as public health guidance allowed, in particular as widespread COVID-19 vaccination is implemented.

A multidisciplinary team, led by Bróna Fagan from our physiotherapy department, investigated potential systems to maintain parental contact with their infants despite COVID-19 restrictions. In collaboration with colleagues at Cork University Maternity Hospital, the V-Create video messaging system was implemented within just 24 hours from its initial proposal at the outset of the COVID-19 pandemic. A public call to ask for donations of iPads for use with the system was met with phenomenal generosity and not only provided sufficient equipment to run the system in the Rotunda but also allowed us to donate an iPad each to our partner NICU and Special Care Baby Units at Cavan General Hospital and Our Lady of Lourdes' Hospital, Drogheda. NICU staff embraced this new technology and aimed to send at least one picture or video to parents each day showing their baby's progress. It allowed us to capture moments such as bath time, or to send goodnight messages to parents from their babies. Over 150 families enrolled in the project during 2020, with over 2,000 photos and 1,200 videos being sent to parents. Parental feedback was overwhelmingly positive, with mothers and fathers describing how much they enjoyed watching them at home and forwarding them to family members. It is intended to make these photos and videos part of the NICU experience for all NICU families going forwards.

Another key challenge for neonatal practice during 2020 was how to provide adequate high-quality nutrition to critically ill and very preterm infants. Precise caloric intake, protein intake, salts and key nutrients must be provided in minute quantities to meet the needs of the tiniest babies, many of whom cannot tolerate or absorb milk feeds. Intravenous nutrition, known as 'total parenteral nutrition' (TPN), has often been individually prescribed and made off site daily, a system which is extremely costly and subject to delays and interruptions in service, in particular due to COVID-19 restrictions. Work by our dietician, Anna Claire Glynn, and our pharmacists, Prof. Brian Cleary and Fiona Gaffney, led to the successful implementation of new 'stock' TPN bags, which could be stored on site to meet the needs of almost all preterm and sick infants with only minor modifications in other fluids. This not only led to significant cost savings but also allowed more timely initiation of balanced, total nutrition immediately after birth for the majority of NICU infants. This improvement allowed us to move from 50% to over 90% 'stock' TPN usage.

Maintaining staff education despite COVID-19 restrictions was also particularly challenging during 2020. Staff at the Rotunda NICU continued to support undergraduate paediatric education in neonatology throughout the pandemic. At every level, clinical staff facilitated the online and in-person clinical teaching of key skills for over 320 undergraduate medical students. Additionally, fifteen staff members still managed to obtain specialist higher qualifications during 2020. Social distancing requirements made in-person teaching challenging during 2020. The Rotunda typically has a full and diverse teaching programme each week for junior doctors, nursing staff and health and social care professionals. This includes grand rounds, radiology teaching, consultant- and team-led NICU-specific theory and practice, targeted SHO education, structured critical appraisal of publications during journal club, as well as multidisciplinary hospital teaching across departments. There was a pause in this teaching programme in the initial phase of the COVID-19 response; however, by April 2020 a new weekly online virtual interactive teaching programme had been created which ran until in-person teaching could be initiated again. The comprehensive, multidisciplinary NICU induction programme for new trainees starting in July also moved online, with feedback being extremely positive. The Department of Paediatrics also played an active role in postgraduate education at a national level during 2020. Prof. Michael Boyle was a National Speciality Director (NSD) for Paediatrics and Prof. Naomi McCallion was NSD for Neonatology, with responsibility for recruitment, delivery and governance of each higher specialty training programme. In addition, Prof. David Corcoran sat on the Committee for the Specialist Division of the Register for both Paediatrics and Neonatology. At a local level, the Rotunda Department of Neonatology has run annual or biannual national training courses in neonatal skills for clinical practice, cranial ultrasound and echocardiography for many years, although pandemic restrictions during 2020 meant these were unable to proceed. It is hoped to restart these important training days in the future when public health restrictions allow.

PLANS FOR 2021

It is hoped that 2021 will bring a normalisation of care pathways in the NICU, as vaccination and public health measures will likely be

associated with declining transmission rates. Repeated patterns of outbreak and infrastructural constraints on the neonatal service in particular should ultimately improve with an eventual relocation to a co-located acute general hospital campus, however the 15- to 20-year timeframe for this to occur means that interim alleviating measures are required to optimise neonatal facilities in the meantime. It is hoped in 2021 to participate in the design process for a Critical Care Wing on the west side of Parnell Square, which should include a completely new NICU. This should enable us to continue to deliver excellence in clinical care to infants delivered in the Rotunda, RCSI Hospitals Group hospitals and nationally, while supporting our families from their infant's birth to their ultimate safe transition to community and home.

TABLE 1.1:
ADMISSIONS AND DISCHARGES TO THE NEONATAL UNIT

	2016	2017	2018	2019	2020
Admissions*	1,262	1,146	1,116	1,300	1,181
Discharged alive	1,213	1,094	1,114	1,265	1,199
Infants > 1,500grms	1,089	975	1,097	1,176	1,103
Infants treated on the ward	911	773	967	875	442**

*Infants are not always admitted and discharged within the same clinical year
**Policy change regarding antibiotic administration

TABLE 1.2:
CATEGORIES OF NEONATAL CARE*

	2016	2017	2018	2019	2020
Total number of intensive care days	2,084	1,855	1,568	1,838	2,039
Total number of high dependency days	2,431	2,343	3,403	3,281	3,528
Total number of special care days	6,264	6,222	5,081	4,278	5,398

* British Association of Perinatal Medicine. Categories of Care 2011

TABLE 1.3:
ADMISSIONS TO THE NEONATAL UNIT BY BIRTH WEIGHT

	2016	2017	2018	2019	2020
< 500gms	0	2	2	3	1
501–1,000grms	50	51	44	30	36
1,001–1,500grms	74	68	63	55	59
1,501–2,000grms	120	115	126	114	117
2,001–2,500grms	168	178	160	158	200
Over 2,500grms	801	680	719	905	786
Total Admitted	**1,213**	**1,094**	**1,114**	**1,265**	**1,199**

TABLE 1.4:
ADMISSIONS TO THE NEONATAL UNIT BY INDICATION*

	2016	2017	2018	2019	2020
Jaundice	294	326	328	365	546**
Prematurity <37 weeks	317	332	401	428	471
Respiratory symptomatology	497	458	464	447	453
Low birth weight < 2.5Kg	237	246	397	360	230
Hypoglycaemia	141	200	184	167	227
Congenital abnormalities	181	174	184	205	208
Neonatal abstinence syndrome	18	16	21	15	24
Suspected sepsis	35	28	36	30	23
Hypoxic ischaemic encephalopathy (HIE)	13	25	12	18	23
Seizures	12	8	9	10	15
Social	7	8	4	8	12
Dehydration	14	16	11	9	8
Gastro-intestinal symptoms	5	3	3	1	2

* Some infants are assigned more than one reason for admission
** Affected by postnatal ward bed availability

TABLE 1.5: RESPIRATORY MORBIDITY IN TERM INFANTS > 37 WEEKS ADMITTED TO THE NEONATAL UNIT

	2016	2017	2018	2019	2020
Transient tachypnoea of the newborn (TTN)	263	209	156	211	176
Respiratory distress syndrome (RDS)	29	27	35	40	50
Stridor	4	4	1	9	14
Meconium aspiration syndrome (MAS)	9	14	9	3	9
Congenital pneumonia	27	19	12	7	4
Congenital diaphragmatic hernia	2	2	1	3	3
Laryngomalacia	2	0	1	2	3
Pulmonary hypoplasia	0	1	0	0	1
Trachea-oesophageal fistula	1	2	2	0	1
Congenital cystic adenomatoid malformation (CCAM)	0	1	2	0	0
Air leak	0	0	0	0	0

TABLE 1.6:
HEART DISEASE IN INFANTS ADMITTED TO THE NEONATAL UNIT

	2016	2017	2018	2019	2020
Dysrhythmia	49	38	55	65	60
Patent ductus arteriosus (PDA)	68	55	62	53	52
Ventricular septal defect (VSD)	23	36	30	21	30
Persistent pulmonary hypertension of the newborn (PPHN)	41	35	27	25	30
Atrial septal defect (ASD)	21	11	13	9	11
Atrioventricular septal defect (AVSD)	5	4	2	6	5
Transposition of the great arteries (TGA)	3	6	6	7	5
Tetralogy of Fallot	2	4	1	8	3
Hypoplastic left heart syndrome (HLHS)	4	3	1	1	1

TABLE 1.7:
GASTROINTESTINAL ABNORMALITIES IN INFANTS ADMITTED TO THE NEONATAL UNIT

	2016	2017	2018	2019	2020
Inguinal hernia	8	15	4	6	8
Bowel atresia	1	1	1	0	5
Spontaneous perforation	0	2	1	1	4
Isolated cleft palate	2	7	1	6	3
Imperforate anus	7	4	2	2	3
Gastroschisis	1	0	0	1	3
Cleft lip	1	2	2	6	3
Omphalocele	10	4	5	4	2
Tracheo-oesophageal fistula	1	2	2	0	1
Pyloric stenosis	0	0	1	1	0

TABLE 1.8:
CENTRAL NERVOUS SYSTEM ABNORMALITIES IN INFANTS ADMITTED TO THE NEONATAL UNIT

	2016	2017	2018	2019	2020
Neonatal abstinence system (NAS)	18	16	21	15	24
Seizures not associated with HIE	12	8	9	10	15
Microcephaly	3	6	4	1	6
Meningitis	7	11	8	10	5
Erb's palsy	0	3	2	1	5
Schizencephaly	2	1	2	0	2
Hydrocephalus	5	3	4	1	1

TABLE 1.9:
METABOLIC/ENDOCRINE/HAEMATOLOGICAL ABNORMALITIES IN INFANTS ADMITTED TO THE NEONATAL UNIT

	2016	2017	2018	2019	2020
Hypoglycaemia	141	200	184	167	194
Anaemia of prematurity	75	81	72	63	63
Polycythaemia	17	36	44	29	44
Thrombocytopaenia	28	38	32	34	36
Haemolytic disease of newborn	13	27	19	27	34
Hyperglycaemia	20	31	29	24	32
Syndrome of Inappropriate antidiuretic hormone secretion (SIADH)	5	7	17	3	15
Anaemia (Not associated with prematurity)	7	8	10	8	6
Hypothyroidism	4	1	4	3	5
Disseminated intravascular coagulopathy	4	7	0	6	4
Galactosaemia	0	1	2	2	2

TABLE 1.10:
CHROMOSOMAL ABNORMALITIES IN INFANTS ADMITTED TO THE NEONATAL UNIT

	2016	2017	2018	2019	2020
Trisomy 21 (Down Syndrome)	22	18	23	15	14
Trisomy 18 (Edwards Syndrome)	0	2	1	2	0
Trisomy 13 (Patau Syndrome)	0	2	1	0	0

TABLE 1.11:
JAUNDICE IN TERM INFANTS >37 WEEKS ADMITTED TO NEONATAL UNIT

	2016	2017	2018	2019	2020
Non-Haemolytic Jaundice	178	176	178	180	271
Haemolytic Jaundice					
— ABO Incompatibility	11	32	14	23	31
— Rhesus Incompatibility	4	4	4	5	1

> The community midwives and all the staff at the Rotunda are amazing especially during this hard time!! Thank you for all you do for us.

TABLE 2.1:
BABIES ADMITTED TO NICU WITH BIRTH WEIGHT ≤ 1,500GMS AND/OR <29+6 WEEKS' GESTATION

	2016		2017		2018		2019		2020	
	All Cases	Excluding Congenital Anomalies	All Cases	Excluding Congenital Anomalies	All Cases	Excluding Congenital Anomalies	All Cases	Excluding Congenital Anomalies	All Cases	Excluding Congenital Anomalies
Infants < 401g but ≥22+0 weeks gestation	0	0	0	0	2	2	0	0	0	0
Infants 401-500g	2	1	3	2	2	2	4	3	3	3
Infants 501-1,500g	118	87	111	92	104	94	90	85	93	90
Infants > 1,500g but ≤29+6 weeks gestation	2	0	1	1	1	1	2	2	0	0
Total	**122**	**88**	**115**	**95**	**109**	**99**	**96**	**90**	**96**	**93**

TABLE 2.2.1:
SURVIVAL TO DISCHARGE OF INFANTS < 1,500G AND/OR < 29 + 6 WEEKS' GESTATION

	Inborn 2020			Outborn 2020			Inborn & Outborn 2020			Aggregate 2015-2019		
Gestational Age at birth	n	Survival to discharge	%	n	Survival to discharge	%	n	Survival to discharge	%	n	Survival to discharge	%
< 22 Weeks	0	0	0	0	0	0	0	0	0	4	0	0
22+0—22+6	1	0	0	0	0	0	1	0	0	14	0	0
23+0—23+6	4	1	0	0	0	0	4	1	25	30	3	10
24+0—24+6	5	4	80	1	1	100	6	5	83	47	27	57
25+0—25+6	7	6	86	0	0	0	7	6	86	49	35	71
26+0—26+6	3	3	100	0	0	0	3	3	100	43	36	84
27+0—27+6	12	9	75	0	0	0	12	9	75	57	48	84
28+0—28+6	9	9	100	1	1	100	10	10	100	83	77	93
29+0—29+6	12	12	100	3	3	100	15	15	100	73	66	90
30+0—30+6	8	8	100	1	1	100	9	9	100	68	65	96
31+0—31+6	15	12	80	0	0	0	15	12	86	47	43	92
32+0—32+6	6	6	100	2	1	50	8	7	88	23	20	87
>32 weeks	7	6	86	0	0	0	7	6	86	23	21	91
Total	**89**	**76**	**85**	**8**	**7**	**88**	**97**	**83**	**86**	**561**	**441**	**79**

TABLE 2.2.2:
SURVIVAL TO DISCHARGE FOR BABIES BORN LESS THAN 1,500G AND/OR < 29+ 6 WEEKS GESTATION BASED ON GESTATION AGE AND EXCLUDING INFANTS WITH MAJOR CONGENITAL ANOMALIES

	Inborn 2020			Outborn 2020			Inborn & Outborn 2020			Aggregate 2015-2019		
Gestational Age at birth	n	Survival to discharge	%	n	Survival to discharge	%	n	Survival to discharge	%	n	Survival to discharge	%
< 22 Weeks	0	0	0	0	0	0	0	0	0	4	0	0
22+0—22+6	1	0	0	0	0	0	1	0	0	14	0	0
23+0—23+6	4	1	0	0	0	0	4	1	25	30	3	10
24+0—24+6	5	4	80	1	1	100	6	5	83	47	27	57
25+0—25+6	7	6	86	0	0	0	7	6	86	49	35	71
26+0—26+6	3	3	100	0	0	0	3	3	100	43	36	84
27+0—27+6	12	9	75	0	0	0	12	9	75	57	48	84
28+0—28+6	9	9	100	1	1	100	10	10	100	83	77	93
29+0—29+6	12	12	100	3	3	100	15	15	100	73	66	90
30+0—30+6	7	7	100	1	1	100	8	8	100	68	65	96
31+0—31+6	14	12	100	0	0	0	14	12	86	47	43	92
32+0—32+6	6	6	100	2	1	50	8	7	88	23	20	87
>32 weeks	5	5	100	0	0	0	5	5	100	23	21	91
Total	**85**	**74**	**87**	**8**	**7**	**88**	**92**	**81**	**88**	**561**	**441**	**79**

TABLE 2.3.1:
SURVIVAL TO DISCHARGE FOR BABIES BORN <1,500G AND/OR <29+6 WEEKS GESTATION- BASED ON GESTATIONAL AGE AND INCLUDING INFANTS WITH CONGENITAL MALFORMATIONS

	2020 Inborn			2020 Outborn			2020 Total (Inborn & Outborn)			2015-2019 (Aggregate Inborn & Outborn)		
Birth weight grams	n	Survival to Discharge	%	n	Survival to Discharge	%	n	Survival to Discharge	%	n	Survival to Discharge	%
< 501	3	1	33	0	0	0	3	1	33	20	2	10
501-600	7	4	57	0	0	0	7	4	57	37	13	35
601-700	5	3	60	0	0	0	5	3	60	51	25	49
701-800	7	7	100	0	0	0	7	7	100	46	31	67
801-900	8	6	75	1	1	100	9	7	78	47	36	77
901-1,000	6	6	100	1	1	100	7	7	100	37	33	89
1,001-1,100	9	7	78	0	0	0	9	7	78	54	46	85
1,101-1,200	9	8	89	0	0	0	9	8	89	56	52	93
1,201-1,300	7	7	100	2	2	100	9	9	100	67	64	96
1,301-1,400	6	6	100	0	0	0	6	6	100	52	49	94
1,401-1500	21	21	100	4	3	75	25	24	96	95	90	95
Total	**88**	**76**	**86**	**8**	**7**	**88**	**96**	**83**	**87**	**562**	**441**	**79**

TABLE 2.3.2:
SURVIVAL TO DISCHARGE FOR BABIES BORN ≤ 1,500GMS AND/OR <29+6 WEEKS' GESTATION—BASED ON BIRTH WEIGHT & EXCLUDING BABIES WITH CONGENITAL ANOMALIES

	2020 Inborn			2020 Outborn			2020 Total (Inborn & Outborn)			2015-2019 (Aggregate Inborn & Outborn)*		
Birth weight grams	n	Survival to Discharge	%	n	Survival to Discharge	%	n	Survival to Discharge	%	n	Survival to Discharge	%
< 501	3	1	33	0	0	0	3	1	33	20	2	10
501-600	7	4	57	0	0	0	7	4	57	37	13	35
601-700	5	3	60	0	0	0	5	3	60	51	25	49
701-800	7	7	100	0	0	0	7	7	100	46	31	67
801-900	6	6	100	1	1	100	7	7	100	47	36	77
901-1,000	6	6	100	1	1	100	7	7	100	37	33	89
1,001-1,100	8	7	88	0	0	0	8	7	88	54	46	85
1,101-1,200	9	8	89	0	0	0	9	8	89	56	52	93
1,201-1,300	7	7	100	2	2	100	9	9	100	67	64	96
1,301-1,400	6	6	100	0	0	0	6	6	100	52	49	94
1,401-1500	20	20	100	4	3	75	24	23	96	95	90	95
Total	**84**	**75**	**89**	**8**	**7**	**88**	**96**	**83**	**87**	**562**	**441**	**79**

TABLE 2.4:
MORBIDITY DATA (INCLUDING BABIES WITH CONGENITAL ANOMALIES)

	Rotunda 2020			Vermont Oxford Network 2020 Birth Year Comparison Data		Rotunda 2015-2019 Aggregate		
	No. Cases	No. Infants	%	No. Infants	%	No. Cases	No. Infants	%
Inborn	91	99	92	57,407	94	523	578	91
Male	51	99	53	57,370	51	312	578	54
Antenatal steroids – all infants	88	98	90	57,061	86	479	554	87
Multiple gestation	31	99	31	57,402	23	194	577	34
Antenatal magnesium sulphate	72	98	74	56,737	65	377	540	70
Caesarean delivery	77	99	78	57,380	75	410	578	71
Any major birth defect	5	98	5	57,365	4	92	575	16
Small for gestational age	24	99	24	56,639	20	44	534	8
Surfactant – administered in delivery room	34	98	35	57,308	13	314	572	55
Surfactant – at any time	58	98	59	57,344	57	441	562	79
Any ventilation	58	92	63	55,735	55	291	538	54
Conventional ventilation – after early CPAP	2	32	6	31,020	35	61	207	30
Conventional ventilation	57	92	62	55,734	52	287	538	53
High-frequency ventilation	9	92	10	55,708	18	71	536	13
Nasal IMV	1	92	1	55,664	31	18	537	3
Nasal CPAP	80	92	87	55,708	80	453	539	84
CPAP before or without intubation and/or ventilation	32	83	39	47,020	69	207	471	44
High flow nasal cannula	59	92	64	55,660	54	266	538	49
Inhaled nitric oxide	11	92	12	55,716	2	65	540	12
Respiratory distress syndrome	85	92	92	55,694	78	60	508	12
Pneumothorax	4	92	4	55,749	3	492	534	92
Chronic lung disease	29	74	39	47,901	21	90	422	21
Chronic lung disease in infants < 33 weeks	28	68	41	43,578	22	88	399	22
Corticosteroids for chronic lung disease	10	91	11	55,646	8	383	571	67
Early bacterial infection	1	92	1	55,741	0	17	539	3
Late bacterial infection	9	90	10	53,197	5	44	514	9
Coagulase negative Staphylococcus infection	1	90	1	53,198	1	42	514	8
Nosocomial infection	9	90	10	53,191	7	73	514	14
Fungal infection	0	90	0	53,195	0	0	515	0
Any late infection	9	90	10	53,191	8	73	514	14
Necrotizing enterocolitis (NEC)	10	92	11	55,733	3	49	538	9
NEC requiring surgery	5	92	5	55,735	0	17	541	3
Focal gastrointestinal perforation	2	92	2	55,711	0	2	536	0.4
Probiotics	80	92	87	55,683	0	374	526	71
Any human milk feed at discharge	58	92	63	55,793	51	303	529	57
Patent ductus arteriosus (PDA)	27	92	29	55,595	22	198	539	37

Table continued on next page →

TABLE 2.4:
MORBIDITY DATA (INCLUDING BABIES WITH CONGENITAL ANOMALIES) *(CONTINUED)*

	Rotunda 2020			Vermont Oxford Network 2020 Birth Year Comparison Data		Rotunda 2015-2019 Aggregate		
	No. Cases	No. Infants	%	No. Infants	%	No. Cases	No. Infants	%
Ibuprofen for PDA	13	92	14	55,531	0	51	538	10
PDA ligation or device closure	5	92	5	55,713	0	48	540	9
Retinopathy of prematurity (ROP)	18	79	23	40,569	25	84	385	22
Severe ROP	0	79	0	40,569	3	76	563	14
Anti-VEGF treatment for ROP	4	92	4	55,371	0	4	539	1
Severe intraventricular haemorrhage	3	87	3	49,896	6	20	385	5
Cystic periventricular leucomalacia	1	90	1	51,379	1	9	511	2
Mortality	13	96	14	56,428	12	121	562	22
Mortality excluding early deaths	7	90	8	54,023	8	78	519	15
Survival	83	96	87	56,428	88	441	562	79
Survival without specified morbidities	47	96	49	56,404	61	280	562	50

Nosocomial Infection: defined as late bacterial infection or coagulase negative staphylococcus infection. Any late infection: defined as any late bacterial infection, coagulase negative staphylococcus infection or fungal infection after Day 3. Mortality: defined as death at any time prior to discharge home or prior to first birthday. It is applicable to all infants in whom survival status is known. In this table it only includes infants 501–1,500g and it includes infants with major congenital anomalies. Survival: indicates whether the infant survived to discharge home or first birthday. Survival without specified morbidities: indicates whether the infant survived with none of the following key morbidities: severe IVH, CLD < 33 weeks, NEC, pneumothorax, any late infection or periventricular leucomalacia.

TABLE 2.5:
SHRUNKEN STANDARDISED MORTALITY RATIOS & MORBIDITY RATES

	Rotunda 2020				Rotunda 2017-2019			
Measure	n	SMR*	Lower 95%**	Upper 95% ***	n	SMR	Lower 95%	Upper 95%
Mortality	90	1.1	0.6	1.7	285	1.3	1	1.7
Mortality excluding early deaths	86	1	0.5	1.8	276	1.3	1	1.7
Death or Morbidity	90	1.2	0.9	1.5	285	1.1	0.9	1.2
Any retinopathy of prematurity	75	0.9	0.5	1.3	188	0.9	0.7	1.2
Chronic lung disease	70	1.6	1.1	2.2	220	1	0.7	1.2
Chronic lung disease < 33 Weeks	64	1.6	1.1	2.2	207	1	0.7	1.2
Necrotising enterocolitis	88	2	1	3.2	292	1.7	1.1	2.3
Late bacterial infection	86	1.3	0.6	2.2	279	1.3	0.9	1.7
Coagulase negative Staphylococcus infection	86	0.4	0	1.1	279	1.2	0.7	1.9
Fungal infection	86	0.4	0	2.1	280	0.2	0	0.8
Any late infection	86	0.9	0.4	1.6	279	1.1	0.8	1.5
Nosocomial infection	86	0.9	0.5	1.6	279	1.1	0.8	1.5
Pneumothorax	88	1.1	0.6	1.9	293	1.6	1.1	2.2
Severe intraventricular haemorrhage	83	0.9	0.5	1.4	275	1.2	0.9	1.6
Cystic periventricular leucomalacia	86	0.5	0	1.4	273	0.7	0.3	1.3
Any retinopathy of prematurity	75	0.9	0.5	1.3	188	0.9	0.7	1.2
Severe retinopathy of prematurity	75	0.4	0.1	1	188	0.7	0.3	1.2

*Shrunken standardised morbidity/mortality ration (SMR) and its 95% confidence intervals indicate whether the centre has more or fewer infants with the outcome than expected given the characteristics of the infants being treated.
**If the lower 95% confidence interval is > 1, the centre has more infants with the outcome than would be expected. If the upper and lower 95% confidence intervals include 1, then the number of infants with the outcome is not significantly different from the number of infants expected to have that outcome, after adjusting for the characteristics of the infants treated. The model is adjusted for gestation, gender,1 minute Apgar score, mode of delivery, presence of congenital malformations, and whether baby is inborn or outborn.
***If the upper 95% confidence interval is < 1, the centre has fewer infants with the outcome than expected.

TABLE 3.1:
MORTALITY AMONGST INFANTS DELIVERED IN 2020 – EXCLUDING INFANTS WITH MAJOR CONGENITAL MALFORMATIONS

Birth Weight (grams)	Gestation	Delivery	Apgar scores (1 and 5 minutes, and 10 minutes)	Principal Cause of Death	Age at Death
500	22+5	SVD	1,0	Extreme prematurity, chorioamnionitis, abruption	
3,060	40+0	SVD	9,10	Severe neonatal encephalopathy, cause unascertained	22 days
600	23+2	SVD	2,0	Extreme prematurity	0 days
1,195	31+5	LSCS	8,9	GBS sepsis, prematurity	19 days
610	23+2	SVD	7,7	Extreme prematurity	0 days
3,450	39+5	SVD	9,10	Sudden infant death syndrome	21 days
2,240	38+3	LSCS	1,7	Hypoxic ischaemic encephalopathy	23 days
1,920	32+2	SVD	9,9	Prematurity, perforated necrotizing enterocolitis	5 days
660	23+3	LSCS	1,4	Refractory respiratory distress syndrome, severe grade 4 intraventricular haemorrhage	2 days
2,785	35+6	LSCS	2,4	Hypoxic ischaemic encephalopathy, severe neonatal anaemia, severe intracranial haemorrhage with post haemorrhagic hydrocephalus, MRSA sepsis	19 days

SVD: spontaneous vaginal delivery; LSCS: lower segment caesarean section; GBS: group B Streptococcus

TABLE 3.2:
MORTALITY AMONGST INFANTS BORN IN 2020 - INFANTS WITH MAJOR CONGENITAL MALFORMATIONS

Birth Weight (grams)	Gestation	Delivery	Apgar scores (1 and 5 minutes, and 10 minutes)	Diagnosis	Age at Death
880	31+3	LSCS	3,1	Anencephaly	2 hours
1,040	35+6	LSCS	4,4	Trisomy 18	4 hours
2,195	34+3	LSCS	4,5	Bilateral congenital diaphragmatic hernia, VSD	1 day
1,600	30+0	LSCS	4,6	Pulmonary hypoplasia, ascites, renal abnormality, tracheo-oesophagela fistula/ oesophagela atresia	0 days
1,770	30+2	SVD	5,3	Bladder outlet obstruction, servere renal dysplasia, prematurity, e coli infection	8 days
1,800	37+3	SVD	5,4	Trisomy 13	0 days
2,200	33+6	LSCS	1,2	Trisomy 21, E coli sepsis, severe pulmonary hypertension, PPROM	36 hours
2,230	40+2	SVD	4,4	Trisomy 18	2 hours
2,510	37+3	SVD	3,3	Congenital Diaphragmatic Hernia	22 hours
2,820	40+1	SVD	5,9	Trisomy 18	1 day
2,880	40+2	Vacuum	6,6	Zellweger's Syndrome, meconium aspiration, anomalous coronary artery, polymicrogyria	3 days
2,900	38+2	LSCS	3,3	Complex chromosomal abnormality: partial trisomy 16, partial loss chromosome 9	Day 1
3,550	40+5	SVD	6,9	Hypoplastic left heart syndrome	19 days
2,350	33+4	LSCS	8,8	Giant omphalocoele, vsd, bilateral severe ventriculomegaly, encephalocoele	8 days
3,920	32+3	LSCS	4,3	Polycystic Kidney disease	
4,010	40+0	SVD	9,10	Ornithine Transcarbamylase Deficiency	3 days

SVD: spontaneous vaginal delivery; LSCS: lower segment caesarean section; OVD: operative vaginal delivery

TABLE 4.1:
HYPOXIC-ISCHAEMIC ENCEPHALOPATHY (HIE)

	2016		2017		2018		2019		2020	
	Inborn	**Outborn**	**Inborn**	**Outborn**	**Inborn**	**Outborn**	**Inborn**	**Outborn**	**Inborn**	**Outborn**
Total	7	9	22	9	13	1	10*	7	18*	5
Mild (Grade1)	4	-	12	-	5	-	Not Reported Given Inaccuracy with Case Ascertainment		Not Reported Given Inaccuracy with Case Ascertainment	
Moderate (Grade 2)	2	8	8	6*	5	1	4	3	14	4
Severe (Grade 3)	1	1	2	3**	3	-	6	4**	4	1
Therapeutic Hypothermia	3	8	10	8	8	1	9***	6	16**§	5

One infant admitted outside the time window for initiation of therapeutic hypothermia

*Therapeutic hypothermia discontinued early on two infants due to severe pulmonary hypertension
**One infant was not eligible for therapeutic hypothermia due to gestation age.

*Grade 1 Encephalopathy not included
** One infant was not eligible for therapeutic hypothermia due to preterm gestational age
***Therapeutic hypothermia not commenced in one case as baby did not meet cooling criteria on initial review

*Grade 1 Encephalopathy not included
** Commenced at 13 hours in 1 case
§ Therapeutic hypothermia not commenced in one child given extensive coagulopathy and severe pulmonary hypertension and in a second child who initially showed signs of mild encephalopathy but who progressed with onset of seizures at 20 hours

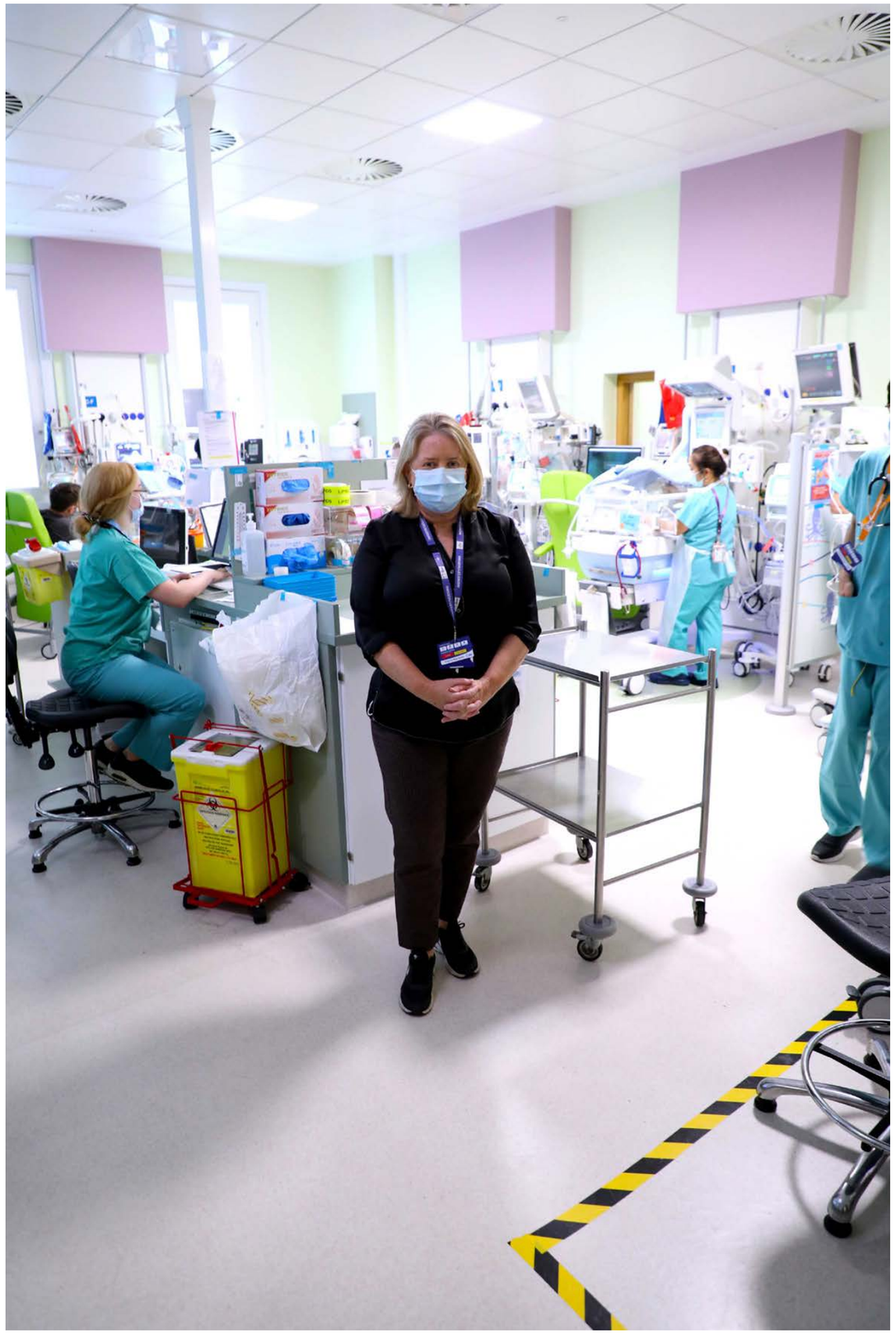


TABLE 4.2: CLINICAL DETAILS OF NEWBORNS WITH SIGNS OF MODERATE TO SEVERE HIE

Grade HIE	Inborn/ outborn	Gestation	Mode of delivered	Arterial Cord Gas		Venous Cord Gas		1 Minute Apgar		5 Minute Apgar	Therapeutic Hypothermia	Seizures	Brain MRI	Neurodevelopmental Progress	
				pH	Base Excess	pH	Base Excess							Outcome at Last Review	Age Assessed (months)
2	Inborn	38+6	EMCS	7.09	-8.8	7.12	-9.0	4		4	Yes	No	Normal	Appropriate	18
2	Inborn	37+6	EMCS	7.2	-4.8	7.3	-2.8	2		4	Yes	No	Small area low signal in superior left parietal lobe on Axial T2; Small focus of restricted diffusion right posterior parieto-occipital region	Appropriate	13
2	Inborn	41+5	Vacuum	7.1	-	7.22	-	ND		4	Yes	Yes	Right extradural haematoma with minimal midline shift	Appropriate	10
2	Inborn	37+5	EMCS	6.9	-12.4	7.15	-10.9	1		6	Yes	Yes	Normal	Appropriate	6
2	Inborn	39+4	Vaginal	7.27	-8.7	7.29	-9.6	6		7	Yes**	Yes	Multifocal acute restricted diffusion predominantly on left temporal and right parietal lobe	Referred to neurodevelopmental paediatrics. Subtle asymmetry in limb / gait	13
2	Inborn	36+1	EMCS	6.73	-	6.81	-17.0	2		4	Yes	No	Small subdural haematoma	Appropriate	10
2	Inborn	37+6	EMCS	6.84	-12.0	6.86	-11.6	1		4	Yes	Yes	Slightly prominent T1 hyperintensity within the inferior basal ganglia and ventrolateral thalami	Appropriate	12
2	Inborn	38+5	Vacuum	6.9	-9.3	7.0	-7.7	2		6	Yes	Yes	Small subdural haematoma	Appropriate	12
2	Inborn	35+2	EMCS	-	-	-	-	4		7	Yes	No	Restricted diffusion within corpus callosum	Sensori-neural hearing loss	9
2	Inborn	38+2	EMCS	7.28	-1.1	7.33	-2.92	nd		5	No	Yes	Abnormal T1 prolongation in anterolateral thalami and globus pallidi bilaterally; Reduced diffusivity in genu and splenium of corpus callosum; Two punctuate foci of reduced diffusivity in periventricular white matter in right frontal lobe and right caudate nucleus	Appropriate	9
2	Inborn	38+1	Vacuum	7.13	-8.0	7.28	-7.0	7		8	Yes	Yes	Small left subdural haematoma	Appropriate	4
2	Inborn	39+0	EMCS	7.21	-5.0	7.23	-6.1	2		2	Yes	Yes	Bilateral Grade 3 IVH; Small amount of extraaxial haemorrhage (subarachnoid &subdural)	Appropriate	4
2	Inborn	38+4	EMCS	6.9	-14.0	7.33	-4.5	1		4	Yes	No	Subgaleal haemorrhage	Appropriate	5
2	Inborn	40+3	Vaginal	7.17	-8.5	7.24	-8.21	1		4	Yes	No	Single small focus T1 hyperintensity in deep white matter adjacent to trigone of right lateral ventricle	Appropriate	5
2	Outborn	37+6	EMCS	6.8	-	-	-	1		3	Yes	No	Reduced diffusion PLIC bilaterally and also within the posterior thalami bilaterally; T1 prolongation within lentifirm nuclei bilaterally	Postnatal diagnosis of Trisomy 21	
2	Outborn	41+1	Vaginal	7.17	-9.7	7.33	-11.0	6		6	Yes	Yes		Follow up locally	
2	Outborn	40+5	Vacuum	6.7	-16.2	7.13	-16.9	3		6	Yes	Yes	Normal	Follow up locally	
2	Outborn	38+1	EMCS	6.83	-20.0	7.23	-7.0	4		6	Yes	Yes	Normal	Follow up locally	
3	Inborn	40+0	Forceps	7.3	-4.8	7.3	-3.0	1		0	Yes	No	Normal	Appropriate	9
3	Inborn	35+6	EMCS	6.9	-16.5	7.20	-9.9	2		4	No	Yes	MRI not performed due to instability; Cranial ultrasound showed increased echogenicity parenchyma of both cerebral hemispheres; Large haemorrhagic infarct right thalamus and basal ganglia; Haemorrhage posterior to lateral ventricle. With severe dilation of both lateral ventricles	Neonatal Death Day 18	
3	Inborn	38+1	Forceps	7.29	-6.47	7.29	-5.48	1		0	Yes	No	Subtle T2 hypointensity posterior aspect of putamen and globus pallidus bilaterally; Punctate foci of reduced diffusion in white matter adjacent occipital horn of right ventricle	Transferred to CHI Temple Street at 4 weeks of age for multidisciplinary management. Significant neurological impairment on transfer.	
3	Inborn	41+4	Vaginal	6.85	-	7.26	-	1		2	Yes	Yes	Minor increased signal within posteroinferior globus pallidi	Appropriate	11
3	Outborn	38+5	Vaginal	7.2	-9.3	7.3	-5.4	1		2	Yes	Yes	MRI not performed; Cranial ultrasound showed hyperechogenicity of thalami and basal ganglia in bilateral symmetric manner	Neonatal Death Day 3	

EMCS= Emergency Caesarean Section; ND= Not documented

Allied Clinical Services

"Covid-19 kept so many people apart, however the tremendous team spirit in the Rotunda Hospital brought all of the staff together, and the Department of Occupational Medicine are eternally grateful for the 'round the clock' assistance from administrators, physiotherapists, catering staff, household staff, nursing and medical staff.

The ability of them all being able to work together in a new working environment to help with swabbing, contact tracing, and answering phone calls and emails is to their credit. Staff ill health and absences were kept to the minimum.

The Rotunda staff kept the hospital working and patients very well looked after in extremely difficult circumstances."

Dominick P. Natin,
Consultant in Occupational Medicine

Laboratory Medicine Service

HEAD OF SERVICE

Dr. Noel McEntagart, Clinical Director of Laboratory

STAFF

Mr. John O Loughlin, Laboratory Manager
Ms. Susan Luke, Laboratory Quality Manager
Ms. Caroline Bosse, Laboratory Administration Team Leader

SERVICE OVERVIEW

The Rotunda Hospital Laboratory Medicine Service provides a full suite of tests across the major disciplines of haematology/blood transfusion, histopathology, microbiology and biochemistry. The laboratory also provides a 24/7 laboratory emergency testing service, a Phlebotomy Service, Haemovigilance Service, antimicrobial surveillance as well as a Point-of-Care Service. The Mortuary and Post-mortem Services also fall under the governance of the Laboratory Medicine Service.

2020 was one of the most challenging years faced by the Laboratory Medicine Service in its 120-year history. COVID-19 put enormous pressure on the Service to introduce the most appropriate tests for detecting the virus, not only in patients but also amongst staff. This challenge was efficiently met by the laboratory team, with 4 separate methods for detecting the virus by PCR being introduced throughout 2020. The laboratory also had to introduce strict measures to comply with social distancing and appropriate PPE use to protect staff while ensuring business continuity. This required dramatic changes in work practices as staff worked in teams or 'pods' to ensure business continuity in the event of an outbreak in the laboratory. This was very difficult in sometimes cramped conditions, and while several staff members were diagnosed with COVID-19, none contracted it in the workplace and none transmitted it to other staff. The Divisions of Clinical Biochemistry/Point-of-Care Testing and Haematology/Blood Transfusion also had to provide new tests for COVID-19 patients, such as increased blood gas analysers and D-Dimer testing amongst others.

The pre-existing Laboratory Medicine Service strategy of transitioning to more molecular-based assays proved to be a huge advantage when introducing COVID-19 testing, demonstrating the merits in continued investment in the laboratory service. This enabled us to respond very quickly, with the Rotunda being one of the first laboratories in the country to perform in-house COVID-19 testing. In addition to screening Rotunda patients and staff, the hospital was also able to help other hospitals and organisations as they struggled to implement testing. At one point in 2020, the Rotunda was providing COVID-19 testing for 11 other hospitals, not only within the RCSI Hospitals Group but also for CHI at Temple Street, the National Maternity Hospital, St. Mary's Hospital, the Dublin Fire Brigade, as well as assisting local GPs and their staff.

ISO 15189 and ISO 22870 accreditation with the Irish National Accreditation Board (INAB) was maintained but again, in the face of COVID-19, required a new and novel approach. The Rotunda was the first laboratory in the country to undergo a remote INAB accreditation assessment, which was a very successful assessment where the scope of accreditation was extended to include all new tests and analysers.

During 2020 the main areas of concern remained the difficulties associated with operating a modern laboratory in the historical building, increasing workloads, especially 'out-of-hours', and also the ongoing difficulty with recruitment of pathologists and medical scientists.

CLINICAL ACTIVITY

FIGURE 1: WORKLOAD SUMMARY (% CHANGE)

Bio = Biochemistry; Haem = Haematology, Blood Tx = Blood transfusion; Micro = Microbiology; POCT = Point-of-care testing.

SUCCESSES & ACHIEVEMENTS 2020

The national trend across the country was for laboratory workload to be reduced in 2020 due to curtailed services in general hospitals. This was not reflected in the Rotunda's activity, with all divisions except for histology demonstrating an increased workload. The decline in histology throughput reflected the cancellation of many gynaecology services due to COVID-19.

The Laboratory Medicine Service continued to expand its scope of accreditation to ISO 15189 and ISO 22870 standards. All new tests and equipment were added to the scope of practice, to ensure that a fully accredited service was delivered for all patients and users.

Several new pieces of laboratory equipment were commissioned in 2020, such as a new histology processor and several new blood gas analysers.

The Division of Microbiology rapidly implemented several new tests and saw a further expansion in molecular testing capabilities. The Division had to repatriate some tests as the National Viral Reference Laboratory was no longer able to provide a full repertoire of tests due to the challenges of the COVID-19 pandemic.

The Division of Biochemistry saw a large increase in requests for paediatric bilirubin, ammonia and vitamin D assays. Requests for glucose testing have dropped dramatically year-on-year, likely reflecting a significant increase in point-of-care testing for haemoglobin and glucose. The Division of Blood Transfusion saw a dramatic increase in workload, largely driven by an increase in requests for inpatients, while the Division of Haematology saw a dramatic increase in coagulation screens being requested in 2020.

CHALLENGES 2020

Apart from the obvious COVID-19 challenges, the main challenge for the Laboratory Medicine Service in 2020 was the staffing problems with the ongoing provision of a 24/7 testing service, in particular as the workload and repertoire of tests increased steadily.

The laboratory infrastructure, both in terms of size and condition, continues to be a major challenge for the service. It is also coming under renewed pressure due to the significant increase in workload across all divisions.

Recruitment of medical scientists and pathologists remains a significant challenge for the Laboratory Medicine Service. Additional positions were approved to cope with the COVID-19 pandemic, while focus was also placed on retain staff in the face of challenging work conditions.

PLANS FOR 2021

The strategy for 2021 will focus on consolidating and improving existing services, while making relevant modifications to increase the available space within the current footprint of the laboratory.

In haematology, it will be necessary to replace the coagulation analyser and both haematology analysers. This is a major project that will be challenging by the lack of space unless some modifications to the current laboratory are undertaken.

In microbiology, it is planned to consolidate COVID-19 and other molecular testing. It is hoped to move the andrology service out of the current laboratory into the new free-standing ambulatory gynaecology building.

The Biochemistry Service will also replace its current biochemistry analyser with two smaller instruments to replace its current single analyser.

Division of Biochemistry and Point-of-Care Testing

HEAD OF DIVISION

Dr. Ingrid Borovickova, Consultant Chemical Pathologist

STAFF

Ms. Grainne Kelleher, Chief Medical Scientist
Ms. Sharon Campbell, Senior Medical Scientist
Ms. Ava Brazier, Medical Scientist
Ms. Emma Young, Medical Scientist
Mr. Ernest Czerkies, Medical Scientist
Ms. Aiveen O'Malley, Biochemist
Mr. Paul Reilly, Laboratory Aide
Ms. Lorna Pentony, POC Co-ordinator

SERVICE OVERVIEW

The Division of Biochemistry and Point-of-Care (POC) Testing provides an extensive range of routine and specialised biochemistry and endocrinology testing for the hospital and external organisations.

TABLE 1: CHANGES IN TEST VOLUME 2019 TO 2020

	2019	2020	% Difference
Biochemistry and Endocrinology	318,228	342,963	+7%
Blood gas	16,343	17,274	+6%
Glucose Point-of-Care (POC)	36,076	38,284	+3%
Haemoglobin Point-of-Care (POC)	4,136	4,271	+3%

During 2020, there was a 16% increase in requests for paediatric bilirubin testing, and a 10% increase in urinary protein:creatinine ratio (PCR) testing. There was a 49% reduction in requests for glucose testing, reflecting changes to the gestational diabetes service, which relies more on self-monitoring of glucose levels at home. There was a 50% increase in requests for vitamin D assays due to its inclusion in infertility evaluations.

SUCCESSES & ACHIEVEMENTS 2020

- Retention of INAB accreditation for laboratory testing for biochemistry, endocrinology and POC
- Introduction of Free Androgen Index for all female patients when a testosterone is requested
- Adult reference ranges were reviewed in line with the Pathology Harmonisation Group
- Repatriation of testing for creatine kinase (CK) to manage COVID-19-infected patients with more efficient turnaround times
- Changes made to the MN-MCS electronic healthcare record, which resulted in only one sample being required for paediatric bilirubin and thyroid function testing
- Validation of HCG and ferritin assays on lithium heparin samples
- Three additional blood gas analysers were installed to assist in patient care during the COVID-19 pandemic
- Implementation of online training tutorials and proficiency testing via Moodle for users of POC devices

CHALLENGES 2020

- Maintaining exellent turnaround times whilst staff were split into separate teams as part of COVID-19 restrictions
- Inability to expand the Biochemistry and Endocrinology Service due to COVID-19 restrictions

PLANS FOR 2021

- Begin the tendering process to replace the current main biochemistry analyser
- Investigate the Nova StatStrip meter for haemoglobin, haematocrit and lactate POC testing

Division of Clinical Microbiology

HEAD OF DIVISION

Dr. Richard Drew, Consultant Microbiologist

STAFF

Dr. Joanne O'Gorman, Consultant Microbiologist
Mr. David Le Blanc, Chief Scientist
Ms. Niamh Cahill, Senior Medical Scientist
Ms. Ellen Lennon, Senior Medical Scientist
Ms. Jenny Tormey, Senior Medical Scientist
Ms. Patricia Baynes, Medical Scientist
Ms. Ita Cahill, Medical Scientist
Ms. Caroline Doherty, Medical Scientist
Ms. Maeve Fogarty, Medical Scientist
Ms. Laura-Jane McGowan, Medical Scientist
Mr. Tom Murphy, Medical Scientist
Ms. Gemma Tyrrell, Medical Scientist
Ms. Shauna Devine, Laboratory Aide

SERVICE OVERVIEW

The Division of Clinical Microbiology provides serology, molecular (Including COVID-19) and routine bacteriology testing to the hospital. The andrology laboratory provides initial semen analysis as part of subfertility investigations.

TABLE 1: CHANGES IN TEST VOLUME 2019 TO 2020

Location	2019	2020	% difference
Microbiology	73,637	63,528	-14%
Serology	54,571	55,429	+2%
PCR	12,991	19,546	+51%
Referrals	17350	15,283	-12%
Andrology	4,403	4,959	+13
Total	**162,958**	**158,745**	**-3%**

SUCCESSES & ACHIEVEMENTS 2020

- Implementation of COVID-19 testing on four platforms (Seegene, GeneXpert, FilmArray and Luminex)
- Continuation of ISO 15189 Accreditation for Microbiology, Serology, Molecular Testing and Andrology
- Increased capacity on the GeneXpert to accommodate increasing numbers of specimens, including COVID-19
- Continual verification of COVID-19 tests on all platforms as assays evolved in line with new variants
- Introduction of a second assay for C. difficile testing, in line with best practice
- Introduction of a single-discipline Sunday and Bank Holiday service for microbiology
- New specialist-grade medical scientist implemented for molecular testing and dedicated surveillance
- Continued enrolment for all staff in CORU

CHALLENGES 2020

The main challenge faced by the Division of Clinical Microbiology was to rapidly train, validate and introduce a new assay for COVID-19 testing across four different platforms.

Additional challenges relate to difficulties in recruiting and retaining highly trained laboratory personnel. With the growing complexity of specialised testing out of hours, training of non-microbiology staff to provide an effective on-call service has proved difficult.

PLANS FOR 2021

The Division's plans for 2021 include:

- Upgrading of the Abbott Architect System
- Introducing HSV testing in-house on the Aries Luminex platform
- Improving the process flow of the Andrology Service, to enable expansion of the overall service
- Expanding the test repertoire on the Seegene platform, including for ESBL, GBS and AV

Division of Haematology and Blood Transfusion

HEAD OF DIVISION

Prof. Fionnuala Ní Áinle, Consultant Adult Haematologist

STAFF

Dr. Barry Mac Donagh, Consultant Haematologist
Ms. Deirdre Murphy, Chief Medical Scientist
Ms Natasha Drury, Senior Medical Scientist
Ms. Emily Forde, Senior Medical Scientist
Mr. Sarah Kelly, Senior Medical Scientist
Ms. Deirdre O'Neill, Senior Medical Scientist
Ms. Rose O'Donovan, Haemovigilance Officer
Ms. Christine Clifford, Medical Scientist
Ms. Catriona Ryan, Medical Scientist
Ms. Edel Cussen, Medical Scientist
Ms Meabh Hourihan, Medical Scientist
Ms Ellen O Connor, Medical Scientist
Ms. Lilliana Rasidovic, Medical Scientist
Ms. Suzanne Barrow, Medical Scientist
Ms. Karen Fennelly, Laboratory Aide
Ms. Catherine Conran, Laboratory Aide

TABLE 1: BLOOD TRANSFUSION ACTIVITY

Blood Transfusion Activity	2019	2020	% Difference
Total blood group tests	56,543	63,605	+13%
Group and save	7,399	9,590	+29%
Direct anti-globulin tests	3,313	3,665	+11%
FMH estimation by flow cytometry	688	688	No change

TABLE 2: HAEMATOLOGY ACTIVITY

Haematology Activity	2019	2020	% Difference
Full blood count	42,167	43,361	+3%
Coagulation screen	2,844	2,534	-11%
Cord blood electrophoresis	1,843	1,943	+5%
Manual differential	1,043	664	-36%
LUPUS screens	241	223	-3%

During 2020, the division made 11 reports to the National Haemovigilance Office. The obstetric transfusion rate was 22 per 1,000 patients, which included 143 women transfused during the postpartum period (a 21% reduction compared with 2019). A total of 95 babies received transfusion in 2020, which represented a 9% reduction compared with 2019.

SUCCESS & ACHIEVEMENTS 2020

The hospital successfully implemented routine use of cell-free fetal DNA (cffDNA) for Rhesus D positive status early in pregnancy. This fetal RhD typing, or FREDA test, allows significant reduction in anti-D administration to RhD negative antenatal patients after sensitising events. Only Rhesus negative patients who have a confirmed Rhesus positive fetus now receive prophylactic anti-D immunoglobulin in the antenatal period.

The haematology laboratory verified and introduced an upgrade of the current analyser for coagulation testing. This was accredited using the laboratory's flexible INAB scope. The blood transfusion laboratory verified a second blood group analyser, which was accredited during the laboratory's remote INAB inspection in 2020.

The following audits were conducted:

- Fibrinogen usage in neonates
- Increased usage of blood products in ERPC patients
- Documentation of indication for RBC transfusion
- Fibrinogen usage in postpartum haemorrhage patients
- Usage of emergency O negative red cells in the Neonatal Intensive Care Unit

All haemovigilance training is now provided electronically due to COVID-19 restrictions. This iniative has received positive feedback from users, allowing flexibility as to when training is carried out and thereby making compulsory training more user friendly.

Anti-D compatibility report forms were removed from circulation in order to reduce the generation of paper reports, thereby contributing to the reduction in our carbon footprint.

PLANS FOR 2021

The haematology laboratory plans to introduce and verify two new full blood count analysers in 2021.

Changes to the laboratory layout will be implemented in 2021 to optimise usable space.

Patient safety initiatives planned for 2021 include the reduction of WBIT (Wrong Blood in Tube) incidents in the clinical setting through audit of current practice followed closely by a targeted education programme.

A team will examine the feasibility of electronic PPID (positive patient identification) in the Neonatal Intensive Care Unit.

Division of Histopathology

HEAD OF DIVISION

Dr. Eibhlís O'Donovan, Consultant Histopathologist

STAFF

Dr. Emma Doyle, Consultant Histopathologist
Dr. Noel McEntagart, Consultant Histopathologist
Dr. Keith Pilson, Consultant Histopathologist
Dr. Rhona Thullier, Histopathology Registrar
Dr. Anna Keogh, Histopathology Registrar
Mr. Kieran Healy, Chief Medical Scientist
Ms. Lorna Thomas, Senior Medical Scientist
Mr. Michael Smith, Senior Medical Scientist
Ms. Miriam Hurley, Medical Scientist
Ms. Tokiko Kumasaka, Medical Scientist
Ms. Aderanti Morenigbade, Medical Scientist
Ms. Sarah Morris, Medical Scientist
Ms. Karen Barber, Laboratory Aide

SERVICE OVERVIEW

The Division of Histopathology provides diagnostic interpretation of human tissue specimens. These include routine surgical specimens, placentas and perinatal pathology cases. The Division also provides a diagnostic cytopathology service for surgical specimens.

KEY PERFORMANCE INDICATORS (KPI'S)

The Division of Histopathology routinely measures turnaround times on surgical cases and autopsy cases each month. The Division also participates in the National Quality Assurance Intelligence System – Histopathology (NQAIS) which monitors many KPIs and facilitates comparison to other Irish laboratories. The Division of Histopathology is accredited to the ISO 15189 standard. The Division of Histopathology participates in several external quality assurance schemes such as NEQAS ICC, NEQAS CPT and NORDI QC. The division performed satisfactorily in all of these KPIs.

There was an overall reduction in the specimen throughput associated with a reduction of clinical activity due to the COVID-19 pandemic.

TABLE 1: CLINICAL ACTIVITY

	2018	2019	2020	% diff.
Surgical cases	5,120	5,653	4,983	-12%
Surgical specimens	6,726	7,656	6,329	-17%
Surgical blocks	13,040	13,816	12,564	-9%
Placental cases	1,771	1,971	1,795	-9%
Placental blocks	5,739	5,855	5,436	-7%
Full autopsy cases	65	91	71	-22%
Limited autopsy cases	11	14	21	+50%
Cytology cases	58	68	63	-7%

Table 1: Each case represents a clinical event or procedure (e.g., surgery, delivery). One case may have multiple specimens. One specimen may generate multiple blocks for histological interpretation, each block may generate multiple slides.

SUCCESSES & ACHIEVEMENTS IN 2020

- Accreditation to ISO 1589 was maintained
- In-house tissue processing of histology samples was re-introduced as well as an in-house backup for this process
- The quality of stains was improved with the replacement of equipment
- Continued to provide a centre for perinatal pathology for regional hospitals as part of the RCSI Hospitals Group

CHALLENGES 2020

The COVID-19 pandemic was a major challenge for the Division in 2020, with significant difficulty in continuing service provision and contingency planning that met infection control requirements. The Division's main tissue processor failed during 2020, which necessitated the urgent purchase of a backup machine mid-year.

The identification of specimens due to ambiguous labelling continues to be a challenge that consumes significant staff resources.

PLANS FOR 2021

- Maintain ISO 15189 accreditation
- Resolve ongoing issues with the tissue processing machines
- Recruit and train replacement staff, including up-skilling of laboratory aides to medical scientist grades

Laboratory Medicine – Quality Management

HEAD OF DIVISION

Ms. Susan Luke, Quality Manager

STAFF

Ms. Emily Forde, Deputy Quality Officer
Ms. Lorna Pentony, Point-of-Care Testing Co-ordinator
Ms. Sarah Kelly, Deputy Point-of-Care Testing Co-ordinator
Ms Gemma Tyrrell, Deputy Point-of-Care Testing Co-ordinator
Ms. Aiveen O'Malley, Health and Safety Officer
Mr Michael Smith, Deputy Health and Safety Officer
Mr. Ciaran Mooney, ICT Co-ordinator
Mr John O'Loughlin, Deputy ICT Co-ordinator
Mr. Niamh Cahill, Training Officer
Ms. Miriam Hurley, Deputy Training Officer

ACTIVITY

The Laboratory Medicine Service maintained accreditation in 2020 across all disciplines to ISO 15189 and ISO 22870 and the right to flexible scope. In maintaining flexible scope, this enables the laboratory to provide a continuous accredited service for tests which fall under the scope for flexible accreditation. Blood transfusion is not covered by the flexible scope process.

The laboratory was assessed by the Irish National Accreditation Board (INAB) in April 2020 and was the first medical laboratory to be assessed remotely due to the COVID-19 pandemic.

The laboratory submits an annual report for blood transfusion to the Health Protection Agency (HPRA). This report is required to be submitted under EU Directive 2002/98/EC and describes blood usage and wastage, planned changes and accreditation status. The laboratory has a Dangerous Goods Safety Advisor audit twice a year

SUCCESSES & ACHIEVEMENTS 2020

The laboratory continued to provide a full range of laboratory services during the COVID-19 pandemic. A number of testing platforms for COVID-19 were verified and placed into service in the early weeks of the pandemic. Following review with the users of the laboratory services, creatinine kinase was repatriated by the Division of Biochemistry, and procalcatonin was made available as a referral test to support the care pathway for patients with COVID-19.

A number of new instruments were placed into service by the teams in Blood Transfusion, Haematology, Histology, Andrology and Microbiology, where disciplines continued to provide an accredited service using a flexible scope option or by extension to scope.

The external assessment of the histology extension to scope was performed remotely, which included a review of documentation, viewing of slides and a tour of the laboratory equipment.

A relocation of the haematology analyser and reassigning desk/ office space improved the testing environment.

The introduction of cell-free fetal DNA (cffDNA) testing was achieved for all non-immunised Rh D negative antenatal patients, which has led to a reduction in the administration of Anti-D immunoglobulin.

Adherence to an audit calendar is one of the key quality indicators utilised by the Quality Management Team, with the number of audits scheduled for 2020 increasing.

FIGURE 1: NO. AUDITS/YEAR

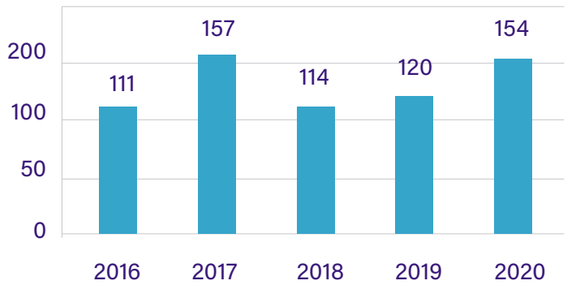
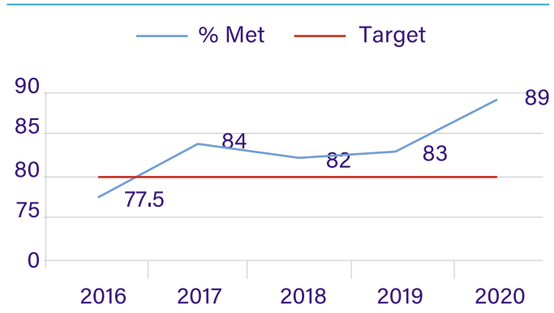


FIGURE 2: AUDIT RECORDS FOR PREVIOUS FIVE YEARS



PLANS FOR 2021

- Continue to review laboratory infrastructure and layout to ensure best use of space available
- Use of training videos for point-of-care-testing haemovigilance, laboratory processes and use of Q Pulse modules to improve availability of training to staff
- Implement a point-of-care-testing interface with the Laboratory Information Management System

Laboratory Medicine – Information and Communications Technology

HEAD OF DIVISION

Mr. Ciaran Mooney, Specialist Grade Medical Scientist

STAFF

Mr. John O Loughlin, Laboratory ICT Co-ordinator
Ms. Sharon Campbell, Senior Medial Scientist – Biochemistry
Mr. Michael Smith, Senior Medial Scientist – Histology
Ms. Deirdre O Neill, Senior Medial Scientist –Haematology / Blood Transfusion
Ms. Ellen Lennon, Senior Medial Scientist –Microbiology
Ms. Caroline Bosse, Laboratory Administration

SERVICE OVERVIEW

The Laboratory Medicine Division of Information and Communications Technology (ICT) oversees the maintenance, troubleshooting and verification of the Laboratory Information Management System (LIMS - Apex), the laboratory MN-CMS Powerchart order communications, implementation and maintenance system, GDPR requirements and ICT security. It also drives innovation through various ICT projects, and business object reporting.

The Division of ICT periodically monitors the progress of ongoing projects against set timelines, and iASSIST turnaround times.

SUCCESSES & ACHIEVEMENTS 2020

Due to the COVID-19 pandemic, ongoing staff training was provided as required using virtual systems, including Zoom and Microsoft Teams. Building interfaces for new analysers was successfully achieved.

CHALLENGES 2020

- Building new interfaces to facilitate COVID-19 testing
- APEX 6.1 was postponed until 2021 due to COVID-19.
- Cognos, the laboratory statistical package is no loger supported beyond 2020.

PLANS FOR 2021

- Recruitment of a new Laboratory ICT Co-ordinator
- Upgrade APEX to Version 6.1 from 5.8
- Investigate and secure funding for the replacement of Cognos system with Corvue system
- Investigate and try to secure support for moving to digital pathology

Clinical Nutrition and Dietetics Service

HEAD OF SERVICE

Ms. Laura Kelly, Dietitian Manager
Ms. Naomi Hastings, Interim Dietitian Manager

STAFF

Ms. Anna-Claire Glynn, Clinical Specialist Dietitian (Neonatology/ Paediatrics)
Ms. Alexandra Cunningham, Senior Dietitian (Obstetrics/ Gynaecology)

SERVICE OVERVIEW

The mission of the Clinical Nutrition and Dietetics Service is to provide the highest quality dietetic service to women and children attending the Rotunda, and to improve clinical and quality of life outcomes.

Adult dietetic services are delivered in both inpatient and outpatient settings to women with: diabetes in pregnancy, high nutritional risk (e.g. eating disorders, low BMI, post bariatric surgery) or nutritional issues in pregnancy (e.g. hyperemesis gravidarum, anaemia, severe reflux, active weight loss, or post COVID-19 illness) and selected gynaecology patients (e.g. PCOS, fertility support). In 2020, outpatient services were predominantly delivered in a virtual setting via webinars for group education and telehealth for 1:1 contact due to COVID-19 restrictions.

The neonatal / paediatric dietetic service is predominantly based in the NICU and prioritised for infants <32 weeks' gestation or those with birthweight <1.5kg. A limited service is available to high-risk outpatients, as well as telehealth follow up.

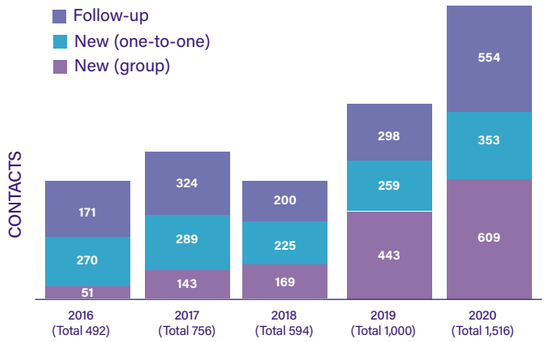
CLINICAL ACTIVITY

ADULT SERVICES

Total activity within the adult dietetic services in 2020 was 3,962 contacts, similar to 2019. Table 1 outlines reasons for referral for dietetic input.

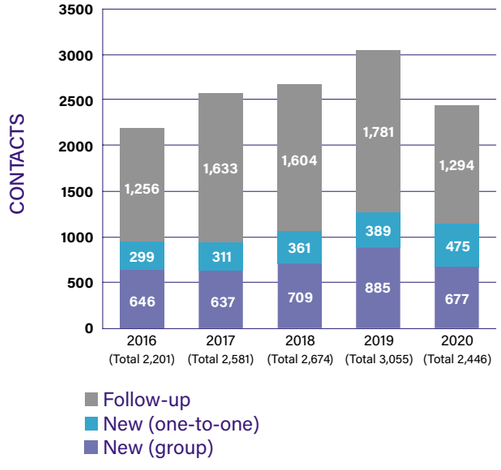
In 2020, dietetic activity for general obstetrics and gynaecology services increased by 53% for both group and individual contacts compared with 2019 levels. Non-attendance (DNA) rates were reduced significantly (10% vs 23% in 2019) through the use of telehealth phone consultations. Since its transition to a virtual platform this year, attendance at the antenatal nutrition classes has increased by 39% compared with 2019. Additionally, our dietetic staff supported colleagues in acute general hospitals caring for pregnant women with COVID-19 illness on nutritional aspects of care during pregnancy.

FIGURE 1: OBSTETRICS & GYNAECOLOGY SERVICES ACTIVITY (2016-2020)



Diabetes activity continues to dominate the service, with a 4% increase in new referrals to dietetics during 2020 (n=1,375), due to increasing numbers of women diagnosed with gestational diabetes. Overall activity within the diabetes services reduced slightly. This may in part be attributed to the cancelation of the diabetes lifestyle education classes from March-July 2020 due to COVID-19 restrictions. Due to changes within the wider diabetes service, all women with GDM now self-monitor blood glucose levels using glucometers. The dietetic staff continue to provide intensive support to these women, however, services were revised and prioritised to provide 1:1 follow up only to women who meet certain referral criteria. Complexity of the diabetes caseload has increased, with an increase in women with pre-existing diabetes and those using continuous subcutaneous insulin infusion pumps (CSII) and sensor technology (n= 16 in 2020 vs n= 6 in 2019), therefore requiring greater dietetic time input.

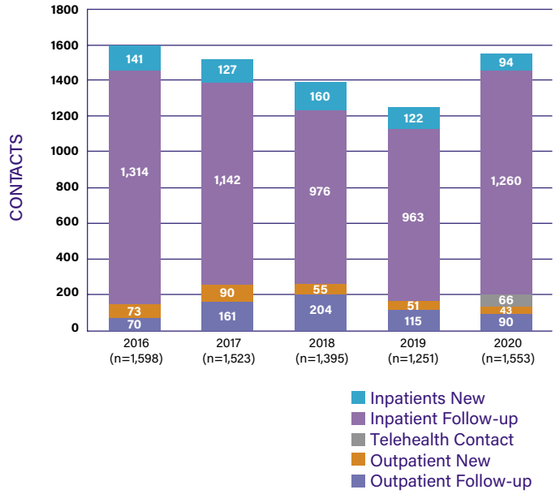
FIGURE 2: DIABETES DIETETIC SERVICES ACTIVITY (2016-2020)



NEONATOLOGY / PAEDIATRIC SERVICES

Neonatal dietetic service activity increased by 24% compared to 2019. Outpatient services for paediatrics were prioritised due to inpatient demands as well as COVID-19, with an increase in telehealth (representing 33% of OPD activity). Non-clinical demands on the neonatal dietitian (teaching on neonatal nutrition; guideline development; committee involvement) continue to compete with time available for clinical patient contacts.

FIGURE 3: NEONATAL DIETETIC SERVICE ACTIVITY 2016-2020



SUCCESSES & ACHIEVEMENTS 2020

ENHANCING PATIENT CARE

- In light of COVID-19, services moved to telehealth platforms (maternity and some neonatal services) and group education moved to webinars
- Developed series of resources for the nutrition section of the Rotunda website including videos and diet sheets
- Completed an audit of the number of women meeting dietetic referral criteria and referral rates
- Participated in the Rotunda virtual open day
- A new national patient information booklet was developed for women with diabetes in pregnancy as well as a resource (awaiting national approval) for women with hyperemesis and diabetes in pregnancy
- Revised delivery of the diabetic 'breakfast club' and revision of dietetic service provision to women with gestational diabetes (GDM), improving service efficacy
- A patient satisfaction survey was completed for the GDM Lifestyle webinar - 100% of participants reported that the diabetes midwives and dietitians provided them with all the information needed to manage their GDM
- A hypoglycaemia management poster was created
- Developed a 'World food' resource for diabetes service
- Established monthly meetings with diabetes midwives
- Established joint consultations with diabetes midwives for women with Type 1 diabetes using CSII pumps/sensors
- Updated neonatal parenteral nutrition guideline
- Implemented new stock / standard parenteral nutrition solutions in NICU
- Devised: 'Vitamin and Mineral Supplementation' guide, 'Breast Milk Fortifier Administration' guide and 'Nasogastric Tube Top-up Chart' for breastfed infants
- Involved in the implementation of a new brand of probiotics (ProPrems)

CONTINUING PROFESSIONAL DEVELOPMENT

- Facilitated a 4-week student placement for undergraduate dietetic students (UCD) November 2020
- Regular nutrition teaching was provided to NCHDs, nurses and midwives, including hyperemesis, diabetes and neonatal nutrition ('cotside' teaching)
- Engaged with professional groups, including: Maternity Dietitians Collaborative Group and diabetes subgroup; RCSI Dietitian Managers Group; Neonatal Dietitians Ireland Group; Neonatal Dietitians Interest Group UK &Ireland; and Neonatal Nutrition Group (N3)
- Attendance at multiple virtual CPD education and training events (including Healthcare and Law, N3 and SIGNEC annual conference)

CHALLENGES 2020

Current activity does not reflect the true demand for dietetic services. Current staffing levels are below the recommended WTE for diabetes and neonatology services. 2020 placed additional strain on the service with COVID-19 requiring the development and reconfiguration of dietetic services. The National Maternity Experience Survey 2020 highlighted additional requirements for provision of nutrition information to women, with the Rotunda Hospital scoring below the national average at 6.2.

PLANS FOR 2021

- Seek approval and funding for additional staffing for the neonatology and diabetes services
- Improve social media presence to ensure access to reliable nutrition information for women/parents, including parent information on post–discharge information for the NICU, nutrition in pregnancy facts and a gestational diabetes Question and Answer forum

- Repeat audit of dietetic service improvements for women with GDM in light of 2020 service changes
- Develop video resources for women with diabetes
- Review donor human milk criteria and enteral feeding guideline
- Evaluation/service user feedback of Nutrition in Pregnancy webinar
- As part of NDI, organise virtual study day
- Midwifery and NCHD teaching on diabetes in pregnancy and hyperemesis

> Most amazing place. Full of wonderful, dedicated staff. Always a smile for you when you are there for appointments or going home with your baby.

Medical Social Work Service

HEAD OF SERVICE

Ms. Sinead Devitt, Head Medical Social Worker

STAFF

Ms. Pauline Forster, Senior Medical Social Worker
Ms. Stefanie Fobo, Senior Medical Social Worker
Ms. Clare Naughton, Senior Medical Social Worker
Ms. Louise O'Dwyer, Senior Social Work Practitioner
Ms. Susan Finn, Medical Social Worker
Ms. Rebecca Haughan, Medical Social Worker
Ms. Laura Feely, Medical Social Worker
Ms. Connie Mullen, Medical Social Worker

SERVICE OVERVIEW

The service provides a comprehensive social work role for patients, their partners and their families. It operates from the rationale that addressing problems in a timely manner can prevent their escalation and can serve to minimise the distress experienced by patients. There is a social worker attached to each of the hospital's four obstetric teams and to each of the larger specialist clinics and units.

CLINICAL ACTIVITY

CHILD PROTECTION

In 2020, the Medical Social Work Team was involved in 152 child protection cases. The main types of concerns where a referral was made or received from Tusla in 2020 are summarized in Table 1.

TABLE 1: REASONS FOR TUSLA INVOLVEMENT

	2016	2017	2018	2019	2020
Drug use	56	53	57	46	60
Domestic violence	22	34	48	38	30
Child welfare	9	16	24	23	29
Underage pregnancy	38	22	34	14	15
Previous children in care	11	4	9	6	6
Alcohol misuse	6	3	1	8	3
Learning difficulty	2	2	1	1	3
Child neglect	5	3	3	6	2
Mental health	15	9	7	8	1
Adoption	2	2	0	2	1
Retrospective disclosure	0	0	3	1	2
Total	**166**	**148**	**187**	**153**	**152**

The majority of child protection cases are complex and involve a medical social worker working in partnership with parents, colleagues in the Rotunda, Tusla and other relevant agencies, over a number of months to ensure a baby's safe discharge. When parents are experiencing difficulties, every support should be explored to help them take care of their baby. Only in exceptional cases, should children be separated from their parents after all alternative means of protecting them have been exhausted.

DOMESTIC VIOLENCE

Domestic violence has a significant physical and emotional impact on a woman's health, including her sexual and reproductive health. Of those women contacting the Women's Aid Helpline in 2020, 148 reported being abused while pregnant and 28 reported suffering a miscarriage because of the abuse. In 2020, COVID-19 restrictions created an additional stressor for women managing domestic abuse.

The role of the medical social workers is to provide immediate support and advice to women disclosing domestic violence and to introduce women and families to longer-term community-based supports. In 2020, 30 referrals were made by medical social workers to Tusla, where domestic violence was the primary concern. The referral is not an indication that the woman is responsible for the behaviour of the perpetrator but reflects Tusla's overall statutory responsibility for assessing all child protection and welfare concerns, which no other agency can carry out. Ultimately, it is the goal of all services working with pregnant women experiencing abuse, to ensure that the woman, her baby and her family are safe and appropriately supported.

PERINATAL MENTAL HEALTH

For the management of mental health difficulties in pregnancy, and up to a year postnatally, women have access to the Specialist Perinatal Mental Health Service at the Rotunda. The medical social worker works as part of a multidisciplinary team, in collaboration with the mental health midwives, mental health nurses and perinatal psychiatrist to provide appropriate assessment, support and interventions to women, their partners and families.

In conjunction with the senior psychologist and other colleagues, the medical social worker was involved in the co-facilitation of the antenatal anxiety group, Me to Mom. The intervention was initially provided as a face-to-face group but was changed to a virtual group in 2020 due to COVID-19 restrictions. The group is for women who are preparing for the changes and challenges of becoming a mother and looking after a new baby. The group uses principles of cognitive behaviour therapy, compassion-focused therapy and mindfulness to help mums prepare for the social, emotional and psychological changes that accompany having a baby.

Along with perinatal mental health colleagues, the medical social worker was also involved in the facilitation of the Postnatal Depression Group, which ran in partnership with Better Finglas.

TEENAGE PREGNANCY SERVICE

Teenagers attending the Rotunda Hospital are offered psychosocial and practical support from the Teenage Clinic medical social worker. Where required, the medical social worker liaised with external services such as Tusla, public health nurses and community teenage parenting support programmes, to ensure that the teenagers and their babies had the appropriate assistance in place during the pregnancy and following discharge. In 2020, 15 referrals to Tusla were made due to underage pregnancies. The number of teenagers referred for underage pregnancies has reduced over the years since the commencement of the Children First Act 2015, which introduced certain exemptions from reporting underage consensual sexual activity.

BEREAVEMENT MEDICAL SOCIAL WORKER

The bereavement medical social worker offers a service to parents who experience the loss of a baby at all stages, including miscarriage, ectopic pregnancy, stillbirth or neonatal death. In 2020, information and support were offered to 155 families whose babies required funeral arrangements. The medical social worker provided face-to-face or telephone support to 78 (50%) of these bereaved families. The medical social worker also offered support to 140 patients who experienced an early pregnancy loss and met with 14 of these patients.

FETAL MEDICINE SERVICE

The medical social worker attached to the Fetal Medicine Service works closely with the multidisciplinary team to identify patients who may require additional emotional and practical support. In 2020, the medical social worker received 130 referrals from the Fetal Medicine Service. The most common reason for a referral to medical social work in this area was a prenatal diagnosis of Trisomy 21 (Down syndrome), Trisomy 18 (Edwards' syndrome) and Trisomy 13 (Patau's syndrome), amounting to 28 referrals (20%), as well as 14 (10%) fetal cardiac malformations. Many patients also receive support as a result of parental anxiety due to an abnormal prenatal diagnosis in a previous pregnancy. A total of 57 patients (43%) required bereavement support.

NEONATAL INTENSIVE CARE UNIT

The role of the medical social worker attached to the Neonatal Intensive Care Unit is to help families cope with the stressful experience of having a premature or sick baby. The social worker provides emotional support, information and practical assistance to parents while their baby is in the hospital and also after their baby has been discharged home. In addition, bereavement support is offered to parents if their baby dies while in neonatal care. The medical social worker provided this service to over 300 families whose babies were admitted to the neonatal unit in 2020.

PREGNANCY OPTIONS CLINIC

The availability of impartial and non-directive counselling for women considering a termination of pregnancy is essential. A crisis pregnancy medical social worker works as part of the multidisciplinary team, to provide confidential support and counselling to women attending the Pregnancy Options Clinic. Many of the patients met were affected by issues such as domestic violence, mental health, relationship breakdown and homelessness. Three referrals to Tusla were made as a result of child protection concerns. The benefit of a medical social worker being located on-site with midwifery/medical colleagues is that they can provide support to patients immediately as their need dictates.

SUBSTANCE MISUSE

In 2020, the medical social worker attached to the DOVE (Danger of Viral Exposure) clinic provided emotional and practical support to women attending this specialist clinic. Patients attending this clinic are women who have an infectious disease diagnosis and/or substance misuse issues. The social worker liaises closely with the specialist midwives to provide a comprehensive service for women attending the DOVE clinic. In 2020, 51 women attending the DOVE clinic were referred to Tusla by the medical social worker. Referral to Tusla regarding drug misuse also occurred when a patient did not attend the DOVE clinic but drug use was identified postnatally.

In 2020, Tusla held 28 child protection case conferences in relation to substance-misusing Rotunda patients. This is twice as many as held in 2019. These conferences are interagency, and multidisciplinary meetings are held where a child protection plan is formulated. The conference helps everyone involved in the child's life to find out what the child's needs are and decide whether or not the child is at risk of significant harm or abuse.

In 2020, there was a significant increase in babies being discharged to substitute care under a court order. The medical social worker attended court and participated in these proceedings. It is ultimately a judge who makes the difficult decision for the baby not to be discharged to the care of their parents.

The medical social worker worked closely with colleagues in the neonatal unit. In 2020, 21 babies were admitted to the neonatal unit for the treatment of Neonatal Abstinence Syndrome (NAS), an increase of 10 from 2019. The medical social worker needs to balance the sometimes conflicting interests of parents struggling with addiction, a busy neonatal unit, requests from Tusla, and instructions from the courts to ensure that each baby is safely discharged.

TABLE 2: NUMBER OF DELIVERIES TO SUBSTANCE MISUSING WOMEN

Year	2016	2017	2018	2019	2020
Deliveries to substance misusing women	59	62	61	56	56
Child protection referrals to and from Tusla	56	53	57	46	51
Parent(s) signing baby into voluntary care	1	5	5	3	1
Babies taken into care under a court order	4	1	1	1	10
Mothers and babies returned home under supervision of non-drug using relative	8	7	10	19	9

SUCCESSES & ACHIEVEMENTS 2020

In conjunction with her midwifery colleagues, the head medical social worker completed the revision of the Domestic Violence Routine Enquiry Policy.

The challenge of providing a comprehensive Medical Social Work Service during a pandemic was successfully responded to in 2020. The team continued to meet patients face to face, where possible, adhering to all safety guidelines. They also provided support and counselling over the phone so that service delivery was not undermined. They attended child protection case conferences and service-related meetings virtually. Along with their colleagues in other disciplines, they contributed to virtual antenatal classes, ensuring that patients attending virtually were aware of the medical social work service during a time of uncertainty. A number of medical social workers also devoted a considerable amount of time and commitment to contact-tracing within the hospital.

The medical social worker, along with colleagues in the Perinatal Mental Health Team, provided support and counselling for staff members, struggling with the understandable anxiety related to COVID-19.

EDUCATION & TRAINING

The Medical Social Work Team attended a number of courses and training days during 2020 to enhance their continuous professional development. This included the medical social worker attached to bereavement attaining a Professional Certificate in the Therapeutic Use of Mindfulness through the Institute of Integrative Counselling and Psychotherapy (IICP). The team also virtually attended a Symposium on Coercive Control.

CHALLENGES 2020

A significant challenge faced by the Medical Social Work Service during 2020 was to continue to deliver the high level of service to vulnerable patients whose situations were further compromised by issues related to the pandemic. On a very practical level, many patients found themselves without essential baby equipment during the first lockdown. The Medical Social Work Service responded to this basic but important need by purchasing or using donated items. This facilitated the timely and safe discharge of mothers and babies at a time of heightened anxiety.

At the start of the pandemic, there was a demand for emergency accommodation for COVID-19-positive patients to self-isolate. The Medical Social Work Team liaised with the relevant agencies involved in establishing care pathways to overcome this challenge.

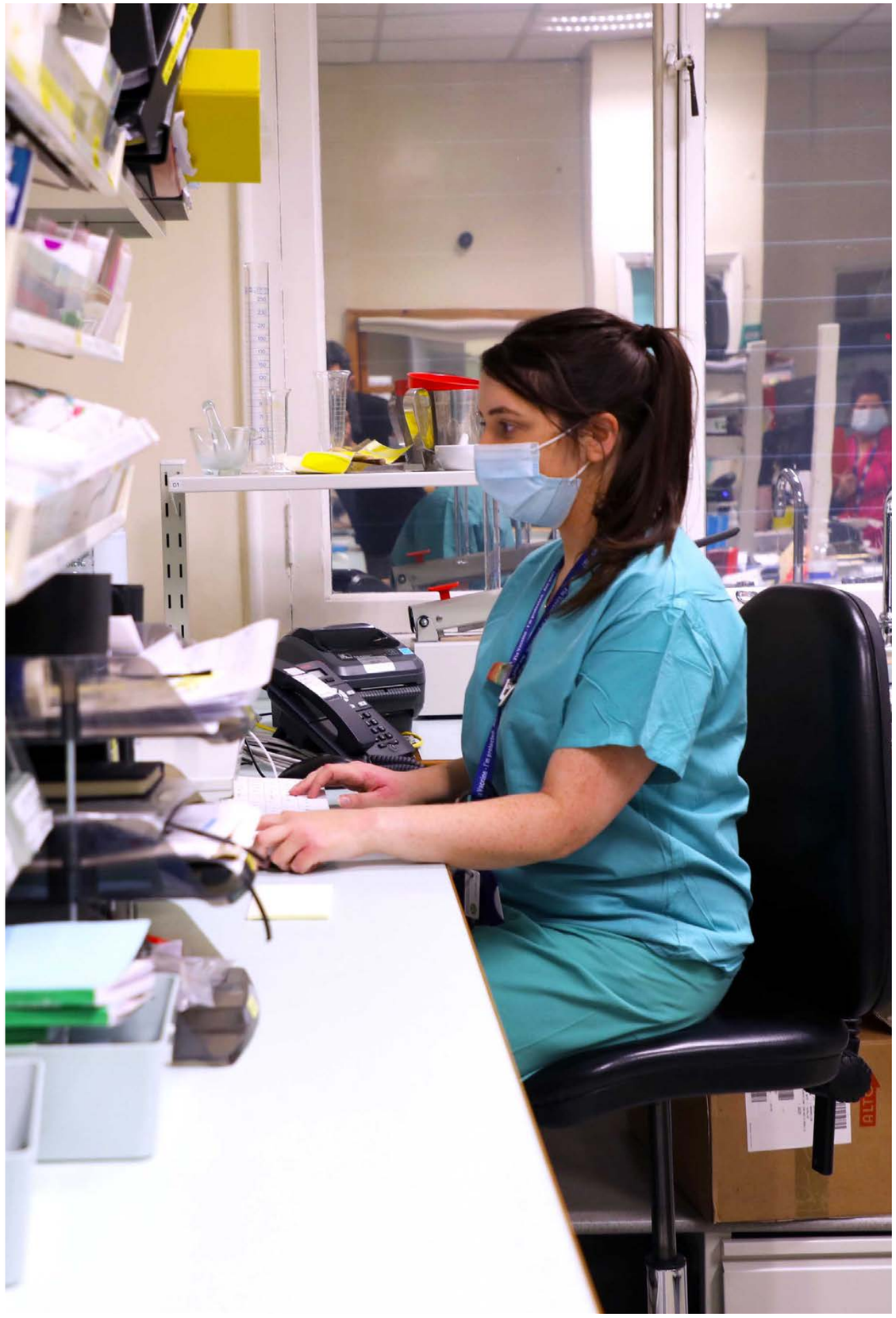
Plans to further enhance collaboration between the social work teams in the three Dublin maternity hospitals in the context of ongoing professional training and service development needed to be paused in 2020 due to resources being diverted on account of the pandemic.

PLANS FOR 2021

With the revision of the Rotunda's Routine Enquiry Policy on Domestic Violence, the medical social work service plans to work in collaboration with Woman's Aid to provide additional support to patients attending the hospital where domestic violence is an issue. The plan is also to raise awareness of domestic violence within the hospital through bespoke and targeted staff training and awareness campaigns.

The various manifestations of homelessness continues to be an issue for many patients attending the Rotunda. Evidence shows that homelessness has an immediate impact on children's health and wellbeing and it is likely that this impact will also manifest as difficulties for these children when they reach adulthood.

The pandemic facilitated the availability of hotel accommodation for some homeless patients, which will greatly diminish with the easing of travel restrictions. In 2021, the plan is for the HSE's Homeless Hospital Discharge Programme to be extended to the three Dublin maternity hospitals with the recruitment of a medical social worker in each site dedicated to homeless presentations. The project will focus on developing systems, structures and supports for homeless pregnant patients, and their families, so that existing and future services respond to their housing needs in a more consistent and coherent fashion.



Pharmacy Service

HEAD OF SERVICE

Dr. Brian Cleary, Chief Pharmacist

STAFF

Ms. Elena Fernandez, Senior Pharmacist
Ms. Elaine Webb, Senior Pharmaceutical Technician
Ms. Margaret Donnelly, Senior Pharmacist
Ms. Fiona Gaffney, Senior NICU Pharmacist
Ms. Claudia Looi, Senior Pharmacist
Ms. Emer Coll, Senior Pharmaceutical Technician
Dr. Fergal O'Shaughnessy, Senior Pharmacist
Ms. Aileen Cullen, Senior Antimicrobial Pharmacist
Ms. Kamelia Krysiak, PhD Scholar/Research Pharmacist
Ms. Joan Devin, PhD Scholar/Research Midwife

SERVICE OVERVIEW

The Pharmacy Service supports the safe and effective use of medicines for Rotunda patients. Along with ward-based clinical services, the Pharmacy Team provides specialist medicines supply services, ensuring cost-effective purchasing and supply of medicinal and nutrition products. The Pharmacy Team collaborates with multidisciplinary colleagues to optimise medication use processes, utilising advances in health information technology to improve patient safety and remove latent system risks.

The Pharmacy Team provides a full pharmacy service to all clinical areas in the hospital, including adult and neonatal pharmacy requirements. Clinical pharmacy services are provided on a team-based model in the NICU and a location-based model in all other clinical areas.

The Pharmacy Service conducts ongoing audit and continuous quality improvement projects, together with collaborative research and medicines information initiatives. Themes include Medication Safety, Optimal Medication use in Pregnancy/Lactation, Maternal and Newborn Randomised Controlled Trials (RCTs), Vaccination in Pregnancy, Clinical Informatics and Venous Thromboembolism (VTE) Prevention.

Approximately 250,000 medication orders are placed each year for inpatients and outpatients, with over 500,000 inpatient medication administrations per year. Team- and ward-based pharmacist review drug charts and patient records on a daily basis (Monday – Friday) provide support to medical and midwifery/nursing colleagues to ensure safe and effective use of medicines. A goodwill on-call service is available out-of-hours to help with clinical or supply queries.

SUCCESSES & ACHIEVEMENTS 2020

- Continued development of the Irish Medicines in Pregnancy Service, a multidisciplinary collaboration to support the safe and effective use of medicines in pregnancy and lactation through medicines information services, advocacy and research. We have engaged with national and international networks and have strengthened collaborations with the European Network of Teratology Information Services, the National Immunisation Advisory Committee and the Health Products Regulatory Authority
- Expansion of MN-CMS electronic healthcare record prescribing and administration reporting functionality and use of these reports to improve medication use processes
- Optimisation of MN-CMS alerts to enhance allergy recording, identify potentially hazardous medications in pregnancy or for women with epilepsy, minimise alert fatigue, optimise medication use processes and reduce the risk of medication errors
- Ongoing optimisation of MN-CMS medication processes in collaboration with end-users of the system
- Sharing experience with RCSI Hospitals Group and other hospitals from the implementation of an oxytocin medication safety bundle incorporating standardisation of oxytocin infusions, smart pumps and care plans in MN-CMS to facilitate safe administration of oxytocin. This may facilitate national implementation of an oxytocin medication safety bundle
- Ongoing implementation of the hospital's Medication Safety Strategy
- Ongoing support and optimisation of the Thrombocalc VTE risk assessment tool which has been used to identify and reduce the risk of venous thromboembolism in over 45,000 women
- Procurement and implementation of new standardised neonatal parenteral nutrition bags that optimised nutrition and minimised cost
- Improvement of palliative care processes for neonates, development of care plans, parent education materials and establishment of collaborative multidisciplinary planning processes
- Engagement in an EU-wide collaborative project - ConcePTION, to develop a knowledge bank on medication use in pregnancy and lactation, as well as an education resource for health professionals on medication use in pregnancy and lactation
- Secured funding for a collaborative project with NHS colleagues on Parent Co-Designed Drug Information for Parents and Guardians Taking Neonates Home (PADDINGTON Study).

- Development and updating of the Rotunda Antimicrobial Guide App, with continued development of antimicrobial consumption surveillance
- Collaboration on National Antimicrobial Point Prevalence Survey with the European Centre for Disease Prevention and Control
- Continued staff development with completion of postgraduate qualifications at MSc and PhD level
- Preparation for the procurement process for the Hospital Medicines Management System, a national project to modernise the hospital pharmacy IT infrastructure
- Establishment of an electronic process for Pharmacy invoices saving time for both Pharmacy and Finance Services and minimising delays in processing payment
- A HIQA Medication Safety Monitoring Programme report concluded that:

  'The Rotunda Hospital had a well established medication safety programme in place. The hospital had set clear objectives for medication safety outlined in a medication safety strategy with short, medium and long term operational plans in place to support the implementation of the strategy. Progress with medication safety plans was evident to inspectors during this inspection and it was clear that medication safety was prioritised at executive level in the hospital with strong leadership from the Chief Pharmacist'

RESEARCH, AUDIT & EDUCATION

- Honorary clinical lecturer posts have been established for Pharmacy Service staff and we co-ordinated the delivery of women's health education to pharmacy undergraduates in RCSI in addition to medicines in pregnancy and medication safety teaching for postgraduate medical, midwifery and nursing students
- The Pharmacy Service collaborates with, and provides ongoing support to, a range of maternal and newborn randomised controlled trials on conditions, including pre-eclampsia, persistent pulmonary hypertension, patent ductus arteriosus and induction of labour
- Ongoing projects at PhD and MSc level with Kamelia Krysiak, Joan Devin, Margaret Donnelly and Claudia Looi undertaking postgraduate research projects in the areas of neonatal drug delivery and medication safety, health informatics and medication safety, postpartum bleeding and antimicrobial stewardship

ENHANCING PATIENT CARE

- Neonatal and Adult Medication Safety Huddles continue to be implemented providing feedback to frontline staff and disseminating information on potential risk reduction strategies for medication safety issues identified through the hospital's clinical incident reporting system

CHALLENGES 2020

- Serious staffing constraints early in 2020 led to significant strain on services in the context of a very competitive recruitment environment
- The onset of the COVID-19 pandemic led to profound operational challenges including splitting the service into two teams to ensure minimise risk of staff infection
- Continuing to deliver clinical services while minimising costs of medicines in the challenging context of 2020

PLANS FOR 2021

- Deliver responsive clinical and supply services in the context of ongoing challenges posed by the COVID-19 pandemic and recruitment challenges to maintain staffing
- Continued development and sharing of Rotunda innovations on thrombosis risk assessment, NICU high-risk infusions and medication safety with other hospitals nationally
- Support the roll-out of the COVID-19 vaccination programme, advocating for access to vaccination for pregnant women
- Establish a new procurement process for epidural products
- Continue the development of the hospital's role within the European Network of Teratology Information Services, publicising the role of the Irish Medicines in Pregnancy Service
- Development of a business case for refurbishment of the Pharmacy Service physical infrastructure and implementation of automation and pharmacy robotics
- Optimise insulin prescribing processes in MN-CMS and examine feasibility of a standardised peripartum insulin medication use processes
- Implement a new version of the neonatal smart pump library and optimise the medication use process for concentrated electrolytes in neonates

Physiotherapy Service

HEAD OF SERVICE

Ms. Cinny Cusack, Physiotherapy Manager

STAFF

Ms. Brona Fagan, Senior Physiotherapist (NICU)
Ms. Anna Hamill, Senior Physiotherapist (NICU)
Ms. Niamh Kenny, Senior Physiotherapist
Ms. Grainne Sheil, Senior Physiotherapist
Ms. Paula Donovan, Senior Physiotherapist
Ms. Nora McCreadie, Physiotherapist
Ms. Aoife Clarke, Physiotherapist

SERVICE OVERVIEW

The mission of the Physiotherapy Service is to provide patient-centred, innovative and evidence-based care in the management and treatment of obstetric (pre- and postnatal), gynaecologic and neonatal/paediatric conditions.

Inpatient postnatal care is focused on mothers who are at risk of pelvic floor dysfunction and all mothers are encouraged to attend postnatal classes. All patients who undergo major gynaecological surgery are reviewed post-operatively.

The outpatient service provides assessment and treatment of pregnant women with musculoskeletal conditions including pelvic girdle pain. Management of pelvic floor dysfunction includes treating urinary and faecal incontinence, pelvic floor pain and dyspareunia. Prolapse management includes lifestyle advice, exercises and fitting pessaries and teaching self-management of removable pessaries. Physiotherapy is a member of the multidisciplinary team that provides a weekly Promotion of Continence Clinic. Suitable patients are triaged directly to physiotherapy for a trial of conservative management first and then followed up in the clinic as required.

The Physiotherapy Service in the Neonatal Intensive Care Unit (NICU) provides assessment of babies who are preterm or at risk of neurodevelopmental deficits, education on developmental positioning, handling, and early neurodevelopmental physiotherapy. Discharge planning with parents facilitates transition to outpatient physiotherapy until ongoing care is provided in the community or the baby is discharged from treatment.

In March 2020, following the COVID-19 pandemic, we changed our working model by implementing virtual/telemedicine consultations for individual appointments.

CLINICAL ACTIVITY

ANTENATAL CLASSES

Health promotion and antenatal education form key components of our service. Preparation for parenthood classes are run in collaboration with the Parent Education Midwifery Team and the community midwifery scheme. When the COVID-19 pandemic occurred, a range of antenatal, pelvic girdle/back pain and postnatal classes were recorded and uploaded to the Rotunda website so that parents still had access to all class information. Subsequently live classes via zoom were introduced, which were interactive. This has increased the accessibility for more parents to attend classes as we were no longer constrained by lack of physical space.

INPATIENT PHYSIOTHERAPY CASELOAD

TABLE 1: INPATIENT CONTACTS

Inpatient Category	2016	2017	2018	2019	2020
Prenatal pelvic girdle pain / carpal tunnel syndrome	88	92	109	77	83
Postnatal	7,338	7,442	7,690	7,747	7,488
Gynaecology	179	200	199	203	105
Urinary retention	42	46	24	43	22

OUTPATIENT PHYSIOTHERAPY

The majority of outpatient referrals are for pelvic girdle or low back pain. These referrals are triaged and patients attend pelvic girdle classes (via Zoom) and/or individual appointments. Telehealth appointments were provided when face-to-face appointments were cancelled. Postnatal classes (via Zoom) include education on good bladder and bowel health, pelvic floor muscle recovery and exercises to reduce the risk of incontinence. Individuals are taught to assess diastasis of the rectus abdominus muscle (DRAM) and are given advice on safe return to exercise, running and fitness.

Women can self-refer for individualised treatment for pelvic floor dysfunction up to six months postpartum.

TABLE 2: ADULT OUTPATIENT CONTACTS

Adult Outpatient Contacts	2016	2017	2018	2019	2020
Pelvic girdle pain	1,517	1,566	2,011	2,145	1,845
Urinary incontinence (Gynaecology)	357	392	434	205	198
Urinary incontinence (Pregnancy/ postpartum)	Previously amalgamated with UI gynaecology			206	161
Obstetric anal sphincter injury	165	138	114	113	124
Previous perineal tear			53	53	46
Prolapse	103	118	115	152	141
Carpal tunnel syndrome	77	78	96	37	108
Dyspareunia/Pelvic floor pain	53	42	87	134	197
Faecal incontinence	13	17	26	26	14
Total	**2,285**	**2,351**	**2,936**	**3,071**	**2,834**

PAEDIATRIC SERVICE

TABLE 3: NEONATAL INPATIENT CONTACTS/PAEDIATRIC OUTPATIENT CONTACTS

Paediatric Inpatient*	2016	2017	2018	2019	2020
Obstetric brachial plexus injury or upper limb fracture	52	77	49	15	21
Talipes	Combined referrals			27	53
Head and neck				4	13
Trisomy 21				14	13
NICU referrals		9	110	145	182
Total	**52**	**58**	**187**	**205**	**282**
Paediatric Outpatient	2016	2017	2018	2019	2020
Plagiocephaly and torticollis	83	75	79	50	59
Talipes	57	34	52	16	17
Neurodevelopmental	64	43	38	30	26
Other musculoskeletal problems				3	1
Grand Total	256	210	356	304	385

*Changes to neonatal service provision has resulted in changes to referral criteria and more inpatient referrals/treatments

In response to the COVID-19 pandemic, the Physiotherapy Team were involved in the setting up of 'virtual visiting' for NICU parents, with the introduction of the vCreate video messaging service to provide a communication link to parents while visiting changes were implemented in the NICU. This technology also allowed the implementation of new Prechtl assessments for developmental follow-up of high-risk neonates, a vital tool in the early prediction of cerebral palsy in the high-risk neonatal population.

SUCCESSES & ACHIEVEMENTS 2020

- Recognised by the 2020 HSE Excellence Awards for the 'Women's Health After Motherhood' (WHAM) online open course as an exemplary project to improving health and social care services
- Provision of undergraduate specialist lectures and placements for RCSI School of Physiotherapy students
- Participation in an Epidural Study Day, which was subsequently recorded for future online access
- Member of the Enhanced Recovery after Surgery (ERAS) working group
- Participation in the 'Closing the gap between theory and practice' working group to review the teaching of pushing in labour in antenatal education to prepare mothers for delivery
- Setting up a complex pelvic floor MDT conference to be held monthly for enhanced patient care

CONTINUOUS PROFESSIONAL DEVELOPMENT (CPD)

Physiotherapy staff actively engage in regular CPD in the form of a weekly journal club, case presentations and clinical supervision of staff. Staff continuously update their CPD requirements by attending postgraduate short/long courses and conferences, including:

- All Ireland Schwartz Rounds and QI Conference, Dublin Castle
- Attending launch of Nurture programme
- Minding Mothers with Morbidities II Conference
- Family and Infant Neurodevelopment Education (Fine) course
- Prechtl General Movements Assessment training
- Perinatal pelvic girdle pain
- Treating and training the female runner
- Postnatal trauma course
- Virtual birth healing summit
- MAMMI – SIM conference and expert working group, panel member Trinity College virtual conference
- Standards on Antenatal education seminar
- Jilly Bond Happy Bladder Course
- Webinar's on Fetal alcohol syndrome, Early Intervention smart masterclass, BAPM neurodevelopmental follow-up, promoting healthy brain development in NICU

PROFESSIONAL WORKING GROUPS

- Voluntary Hospitals Active Risk Management Forum for Minimal Handling Advisory Group
- National Maternity Strategy Steering Group
- Chartered Physiotherapists in Women's Health and Continence (CPWHC) Secretary/committee members
- Neonatal Physiotherapy National Network
- RCSI Physiotherapy Managers working group

PUBLICATIONS AND PRESENTATIONS

- Postnatal Masterclass, Coombe Women and Infants University Hospital, early physiotherapy priorities for the postnatal woman
- On-track (Towards Recovery After Childbirth, through Knowledge) Seminar, School of Nursing and Midwifery, Trinity College Dublin
- Presentation on pelvic girdle pain, diagnosis, management and treatment

- Presentation to Taskforce for Women's Health in the Department of Health on the Role of Physiotherapy and Urinary Incontinence
- Trinity Health and Education International Research Conference (THEconf2020). Integrated Healthcare: developing person-centred health systems. Presenting Maternity hospital/unit-based services on urinary incontinence during pregnancy and postpartum in Ireland; a scoping survey

CHALLENGES 2020

The main challenge in 2020 was maintaining a high-quality service during the COVID-19 pandemic, to ensure compliance with infection control, find new and innovative ways of working and to try and prevent a waiting list building up as face-to-face appointments remained limited.

Physiotherapy staff were actively involved in contact tracing at the hospital, which involved setting up new systems of working, balancing time demands and providing flexibility in working times.

PLANS FOR 2021

GYNAECOLOGY

- Recover service levels and address waiting times for gynaecology patients impacted by the COVID-19 pandemic
- Additional senior physiotherapist training in pessary management as an adjunct to advanced clinical practice
- Implementation of a Promotion of Continence Virtual Clinic to enable triage of new patients directly to physiotherapy as a fast track to treatment and as a waiting list management strategy

OBSTETRIC

- Develop an online resource for returning to safe postpartum exercise
- Re-evaluate the patient experience attending the virtual Pelvic Girdle Class using a prior 2019 questionnaire
- Improve communication with the postnatal complex clinic and delivery suite when patients require ongoing postnatal physiotherapy for complex postpartum issues
- Review virtual antenatal classes with the Parent Education Team with the aim of optimising their role following the COVID-19 pandemic

PAEDIATRIC

- Provision of a Sensory Babies Integration Course
- Review the Shoulder Dystocia Clinical Pathway
- Re-audit of positioning of babies in incubators in the NICU, including an updated training session for all nursing and medical staff, to be jointly run with NICU clinical skills facilitators

> Had my baby boy on March 27 and the care was exceptional from start to finish and also compassionate towards my husband where it was possible given restrictions.

Quality & Safety Services

“The selflessness and commitment among staff has been astonishing. People came to work every day despite the risk to themselves or their families.”

Kathy Conway,
Clinical Reporting Service

Quality and Patient Safety Service

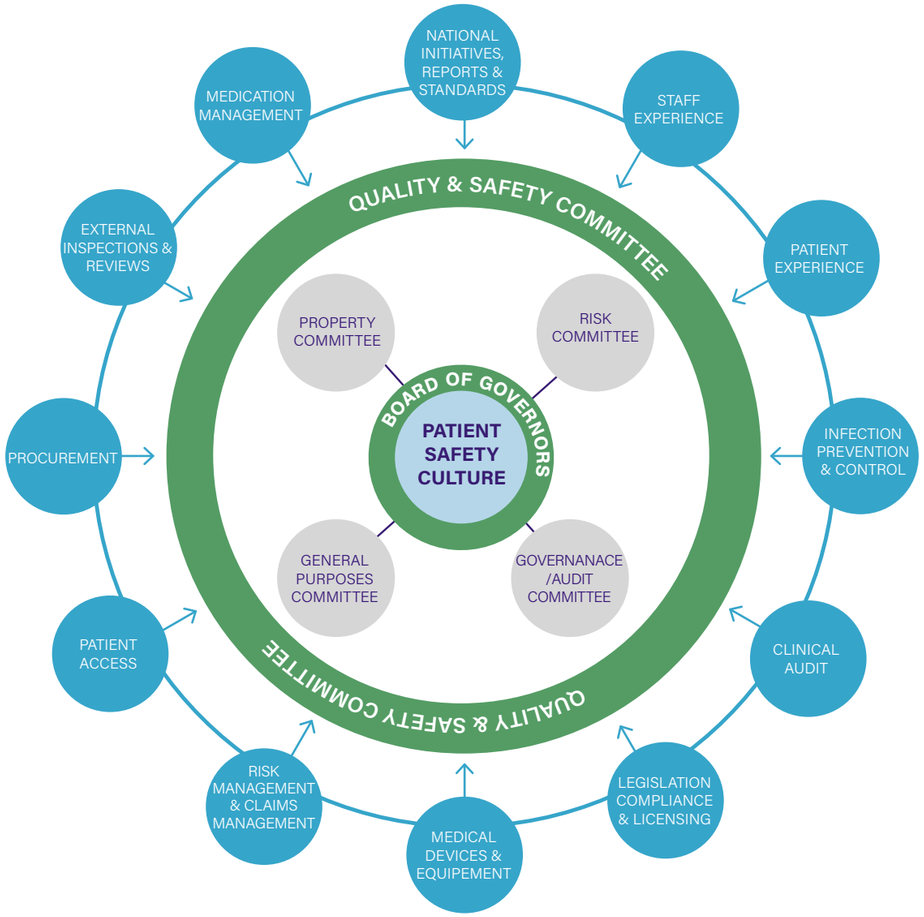
HEAD OF SERVICE

Ms. Sheila Breen, Head of Quality and Patient Safety

STAFF

Ms. Anna Mooney, Information Governance Manager
Ms. Orla Brady, Information Administrator
Ms. Leanne Kiernan, Information Administrator
Ms. Emma O'Mahoney, Information Administrator
Ms. Mariam Rachvelishvili, Information Administrator
Ms. Lynn Richardson, Information Administrator

ORGANISATIONAL STRUCTURE QUALITY & PATIENT SAFETY MANAGEMENT



QUALITY & SAFETY SECTION

SERVICE OVERVIEW

The Rotunda Hospital is committed to the provision of safe, high-quality, patient-centred care. Maintaining and continuously improving the quality and safety of care requires sustained commitment to continuous improvement from everyone in the hospital.

The Quality and Safety Committee, chaired by the Master, provides oversight, guidance and support for organisation-wide performance improvement and patient safety efforts, in accordance with the organisational values, goals and objectives identified in the Strategic Plan. The Committee met on nine occasions during 2020.

CUSTOMER FEEDBACK

The Rotunda Hospital is committed to ensuring that feedback - comments, compliments and complaints - from those using our services is acknowledged, reviewed, acted upon and responded to and that the learning derived from this feedback informs our quality improvement programmes.

Effective handling of service user feedback is fundamental to the provision of a high-quality service. A summary of all patient feedback received is presented at the monthly Quality and Safety Committee meetings.

PATIENT EXPERIENCE SURVEY

The inaugural National Maternity Experience Survey (NMES), a joint initiative by HIQA, the HSE and the Department of Health, offered women the opportunity to share their experiences of Ireland's maternity services. Women who gave birth in October 2019 were invited to participate in the survey, which was completed in Quarter 1 of 2020. The results of the national survey along with individual hospital results were released on the 1st of October.

708 women who gave birth in the Rotunda in October 2019 were invited to participate:

- 355 women completed the survey (47% response rate)
- 36% were aged 30–34 years and 34% were aged 35–39 years
- 51% had no previous births
- Represented 14 counties, with 77% resident in Dublin, and 12% in Meath

A total of 68 questions were asked which captured the entire maternity pathway from antenatal care, through labour and birth, to postnatal care in the community. The report includes women's experiences of the care provided both in the Rotunda Hospital, and by general practitioners and public health nurses in the community.

Overall, 86% of participants rated their experience in the Rotunda Hospital as 'good' or 'very good'. The hospital scored higher than the national standard in the following areas:

- Skin-to-skin contact with their baby shortly after birth – 9.6 out of 10
- Antenatal care – 7.5 out of 10
- Postnatal care in hospital – 7.6 out of 10

Following a comprehensive review of the survey findings, the Rotunda has identified a number of quality improvement initiatives relating to the following areas:

- Providing timely access to antenatal information
- Improving antenatal appointments
- Improving communication
- Optimising staffing levels
- Maximising breastfeeding support
- Improving mental health support
- Correcting deficits in the physical infrastructure

COMPLAINTS MANAGEMENT

Efficient and timely management of complaints is a key component of the Rotunda's strategic initiative of establishing a patient service excellence programme. All complaints are reviewed initially by a member of the Executive Management Team and progress with resolving complaints is discussed at their weekly meetings. Reflecting the commitment of staff throughout the hospital to the timely resolution of complaints, over 95% were closed within 30 working days.

TABLE 1: COMPLAINTS VOLUME TRENDS, 2019-2020

	2019	2020
Complaints received	**138**	**118**
— Written	133	115
— Verbal	5	3
Complaints closed	**134**	**123**
— % closed within 30 days	(99%)	(95%)

Similar to previous years, the most common themes encountered (using the HSE's categorisation system) related to 'communication and information' and 'safe and effective care'. Staff are encouraged to resolve issues of concern locally at the time of occurrence and to seek the assistance of a more senior staff member as appropriate.

OTHER PATIENT FEEDBACK

Other forms of patient feedback including letters, emails and thank you cards are also logged. Comment and feedback forms are available in all clinical areas and are collated on a monthly basis. During 2020, 1,038 items of feedback were logged, of which 1,016 were positive regarding staff and the services provided and 32 identified opportunities for improvement.

SUCCESSES & ACHIEVEMENTS 2020

QUALITY IMPROVEMENT PLANS 2020 (QIPS)

All departments were asked to identify priority actions plans for 2020. The collated list of initiatives was reviewed by the Quality and Safety Committee prior to submission to the General Purposes Committee of the Board of Governors for approval. Initially, 159 initiatives were identified but an additional 28 were subsequently identified in response to the COVID-19 pandemic. By year end, of the 187 total initiatives identified, 119 were completed, 53 were considered to remain work-in-progress and 15 were deferred or cancelled due to COVID-19. This reflects very positively on the commitment of all staff to improving all aspects of the care and services and it demonstrates the responsiveness of staff to ever-changing demands and circumstances.

AUDITS & INSPECTIONS

On the 15th of January, Prof. Martin Cormican, National Clinical Lead for Healthcare-Associated Infections/Antimicrobial Resistance undertook an infection prevention and control assessment in advance of a visit to the Rotunda by Mr. Paul Reid, HSE CEO, Dr. Colm Henry, Chief Clinical Officer and Prof. Martin Cormican. The purpose of the visit was to discuss proposals relating to the development of new infrastructure on the site.

The report on HIQA's unannounced inspection focusing on obstetric emergencies undertaken in January 2019 was released in February 2020.

- Seven standards relating to 'leadership, governance and management' were assessed, with the Rotunda deemed compliant in all
- Three standards relating to 'workforce' were assessed, with the Rotunda deemed compliant in 2, and substantially compliant in 1
- Seven standards relating to 'effective care and support' were assessed, with the Rotunda deemed compliant in 6, and non-compliant in 1, which related to the physical environment. Specifically, the inspection noted that the infrastructure and design of the Delivery Suite, the Operating Theatres and the High Dependency Unit did not meet best practice guidelines. Additionally, the design and layout of the Neonatal Unit did not meet recommended guidelines and increased the risk of cross-infection among neonates
- Four standards relating to 'safe care and support' were assessed, with the Rotunda deemed compliant in all

In March 2020, another HIQA report on the Rotunda was released following an announced inspection relating to medication safety, undertaken in November 2019. The report highlights the Rotunda's well-established medication safety programme, with clear objectives identified and the monitoring of progress with medication safety plans. Implementation of the MN-CMS electronic healthcare record was noted to have greatly facilitated better medication safety intelligence and improved medication safety. The need to work towards establishing medication reconciliation for all women on admission and progress towards the development of this service to include patients on discharge was identified.

The annual Irish National Accreditation Board (INAB) Laboratory inspection was completed remotely in April 2020. New tests were added to our scope of accredited tests. The laboratory remains fully compliant with ISO 15189 and 22870 for point-of-care testing.

PATIENT SAFETY AWARENESS WEEK

Recent and current patient safety initiatives were showcased in the Rotunda Front Hall during the week commencing 9 March 2020. Other events scheduled during the week included additional staff training and education sessions. Unfortunately the Town Hall Session scheduled for the 12th of March had to be cancelled due to COVID-19.

OPEN DISCLOSURE

All staff are required to undertake training on open disclosure every three years. Face-to-face briefing sessions and workshops were curtailed during the year due to COVID-19 restrictions. As an alternative, staff were encouraged to complete the HSeLanD module on 'Communicating effectively through open disclosure.'

ENGAGEMENT WITH PRIMARY CARE HEALTHCARE PROVIDERS

The laboratory provided an invaluable service to our local GPs during the year by providing on-site COVID-19 testing, with same-day reporting of results. A similar service was provided to colleagues in the Dublin Fire Brigade.

An online GP educational evening was held in October 2020, which 115 GPs attended. Topics covered included management of epilepsy in pregnancy, perinatal mental health service, pregnancy termination services and an overview of the resources available for women's health after motherhood. Feedback on the event was very positive.

MATERNITY OPEN WEEK

The virtual Rotunda maternity open week ran from 27 September to 3 October 2020. It facilitated prospective and expectant parents to engage with the hospital's staff to learn more about our services and submit questions. The questions were reviewed by the most relevant healthcare professionals and responses were recorded, posted on social media platforms and viewed over 110,000 times.

AWARDS & ACHIEVEMENTS

At the Irish Healthcare Awards 2020, the Rotunda's successes included:

- Outpatient Initiative of the Year award for the introduction of Ireland's first Manual Vacuum Aspiration (MVA) clinic for the management of early pregnancy loss
- Patient Education Project of the Year – Non-Pharmaceutical award (in collaboration with RCSI and the HRB Mother and Baby Clinical Trial Network) for the Real Talk with Real Mums podcast series. The 10-episode podcast series looked at the issues of everyday pregnancy with medical professionals and women who have gone through the pregnancy journey
- A commendation was received in the NCHD Project of the Year category for the new Virtual Gynaecology Clinic. The telemedicine clinics facilitate gynaecologic consultation and investigation, as well as primary management of gynaecologic conditions, which have resulted in increased access to care and will reduce waiting times for appointments.

PLANS FOR 2021

- Facilitate the ongoing implementation of the national open disclosure policy by ensuring all staff undertake relevant training
- Introduce a new wayfinding system – pilot in the new Rotunda Gynaecology Department and then the main hospital building
- Roll out the National Healthcare Communication Programme
- Participate in the development of the Rotunda's new Strategic Plan 2022–2026, ensuring that the provision of high-quality, patient-centred care remains central to all activities and initiatives in the hospital
- Ensure the timely resolution of complaints, constantly exceeding the HSE's national target of at least 75% being closed within 30 days of acknowledgement

INFORMATION GOVERNANCE SECTION

The key areas of Information Governance at the Rotunda include monitoring data protection compliance, processing and releasing various personal data, advising on data protection issues and handling requests under the Freedom of Information Act.

Information governance within the hospital provides a means of bringing together relevant legislation, guidance and best practice that applies to the handling of information and ensures the implementation of standardised information governance policies as well as compliance with relevant legal requirements.

INFORMATION GOVERNANCE ACTIVITY

TABLE 2: INFORMATION ACCESS TRENDS, 2019-2020

	2019	2020
FOI Requests Received	**300**	**264**
— Personal	273	246
— Non-Personal	27	18
Subject Access Requests	**1,473**	**1,404**

The Freedom of Information Act allows individuals to apply to access their personal data, records of others and corporate records of the organisation. Whilst overall a 12% decrease in requests received was noted in 2020 compared to the previous year, the complexity and scope of requests increased significantly.

The Data Protection Act 2018 provides members of the public with a right to find out, free of charge, if the hospital holds information about them and to be informed about the purpose for holding their personal data. The Data Protection Act 2018 also gives individuals the right to obtain a copy of any information relating to them in electronic or manual format. The two top categories of requesters in 2020 were patients and legal representatives acting on patients' behalf.

DATA PROTECTION

Data protection training is mandatory for all staff. Department-specific training is provided as well as training for all new employees as part of their induction programme. Alternatively, staff can complete the certified HSeLanD module. As of December 2020, data protection training uptake was 77%.

SUCCESSES & ACHIEVEMENTS 2020

- Initial implementation of the hospital's records retention and destruction policy in line with current legislation
- Internal auditors continued to review GDPR compliance
- A presentation was made to the Board of Governors on information governance and overall GDPR compliance
- Successful third-party Brexit contract management
- Support was provided to staff to safely adapt to offsite working in response to the COVID-19 pandemic, while following optimal data protection principles
- Ensured continued and uninterrupted delivery of all services to the public throughout the COVID-19 pandemic

PLANS FOR 2021

- Further assessment of data security and protection training needs across the organisation
- Further review and updating of departmental policies and procedures

Infection Prevention and Control Service

HEAD OF SERVICE

Dr. Joanne O'Gorman, Consultant Microbiologist

STAFF

Dr. Richard Drew, Consultant Microbiologist
Ms. Marian Brennan, Infection Control Midwife
Ms. Alva Fitzgibbon, Infection Control Midwife
Ms. Anu Binu, Infection Control Midwife

SERVICE OVERVIEW

The Infection Prevention and Control Team (IPCT) works with colleagues across all areas of the hospital to ensure the risk of patients acquiring healthcare-associated infection (HCAI) is minimized.

SERVICE ACTIVITY

The team's main workload involves the provision of expert advice on infection prevention and control matters. To this end the IPCT undertake daily ward rounds and participate in a weekly antimicrobial stewardship round. The IPCT contributes to hospital committees including Quality & Patient Safety, Drugs and Therapeutics, and Outbreak Control Teams as necessary. In 2020, the team also provided infection prevention and control advice to the project team overseeing the construction of the new three-storey theatre building.

The IPCT is actively involved in education, training and review of policy, procedures and guidelines. In addition, the service coordinates regular audits of compliance with care bundles for intravascular devices, hand hygiene and the decontamination of medical equipment. In conjunction with laboratory colleagues the team provides ongoing surveillance of key infection-related issues, including maternal bacteremia and multidrug resistant organisms.

The Infection Prevention and Control Team reports to the Rotunda Hospital's Infection Prevention and Control Committee on a quarterly basis.

SUCCESSES & ACHIEVEMENTS 2020

The COVID-19 pandemic represented a major challenge in the delivery of services during 2020, while still maintaining a safe environment and minimizing the risk posed by COVID-19. The Infection Prevention and Control Team was instrumental in supporting the Executive Management Team in responding optimally to the pandemic challenges. This was achieved by:

- Focused education and training around COVID-19 issues, including optimal hand hygiene, social distancing, mandatory mask-wearing while indoors, personal protective equipment (PPE) training for all staff as per HSE Guideline, and education on appropriate COVID-19 testing
- Organisation of front-door screening for all people entering the hospital
- Provision of 'drive-through screening' for asymptomatic elective admissions and for symptomatic staff
- Provision of a COVID-19 telephone helpline to guide patients during the pandemic
- Effective use of social media for education and sharing information about COVID-19
- Implementing appropriate spacing of patient time slots for appointments with adequate social distancing
- Relocation of clinics to enable better social distancing
- Design and distribution of posters and signage as per Health Protection Surveillance Centre guidelines
- Use of new technology for training and education such as an online infection prevention and control video, and virtual arrangements for multidisciplinary team meetings

In addition to COVID-19 protection arrangements, the IPCT also had other notable successes during 2020, including:

- Achieving > 90% hand hygiene compliance in the national hand hygiene audits taking place in May 2020 and October 2020
- Involvement in a multidisciplinary initiative to implement more widespread antenatal Group B Streptococcus screening and supporting the introduction of the neonatal sepsis calculator
- Implementation of a quality improvement Programme, Spread the word, not the bug, to improve communication on the topic of multidrug-resistant organisms (MDRO), as well as raising awareness of the risk of invasive aspergillosis during construction work. This project resulted in the development of a suite of information leaflets, improved staff knowledge and streamlined communication pathways with GP colleagues

CHALLENGES 2020

The major challenges for 2020 revolved around the continuation of the infection prevention and control arrangements for COVID-19, optimising staff training and improving communication of IPC issues across the hospital.

PLANS FOR 2021

- A quality improvement project on the theme of 'Back to Basics' with a renewed focus on hand hygiene, the appropriate use of standard precautions and correct use of personal protective equipment (PPE)
- Continuing COVID-19 education and training, and vaccination programmes for staff and patients
- Further development of a link midwife/nurse programme, and hand hygiene champions via the (RESIST) Train-the-Trainer programme
- Review of a multi-modal risk reduction strategy for the NICU, including structure/process indicators with results reported locally and to the IPCC
- Explore available molecular/rapid detection assays for multidrug-resistant organism (MDRO) screening/identification
- Work towards automated surveillance solutions for the Neonatal Intensive Care Unit (NICU) utilising MN-CMS data
- Retrospective audit of intravascular device–related infection in the NICU in conjunction with the NICU
- Progress independent inter-ward/unit audits with a link midwife/nurse programme
- Continue audit of appropriate patient placement for those at risk of invasive aspergillosis during construction works
- Continue IPCT involvement in capital building projects
- Advocate for further action to address infrastructure deficiencies
- Develop MEG audit tool for the decontamination of near-patient devices in conjunction with Decontamination Co-ordinator
- Liaise with Decontamination Co-ordinator to develop annual quality assurance report for reusable invasive medical devices (RIMD) and near patient devices

Clinical Audit Service

HEAD OF SERVICE

Dr. Sharon Cooley, Consultant Obstetrician Gynaecologist

STAFF

Ms. Mary Whelan, Clinical Audit Facilitator and Assistant Director of Midwifery & Nursing
Dr. Valerie Jackson, Clinical Audit and Surveillance Scientist
Mr. Colin Kirkham, Research Officer

SERVICE OVERVIEW

The Rotunda Hospital Clinical Audit Service was established in June 2011 and has developed significantly since then to support a structured approach to evaluating care against local, national and international standards.

SERVICE ACTIVITY

All clinical audit activity within the hospital is monitored and routinely reported. Promoting a high standard of practice among clinical staff and all other healthcare workers undertaking clinical audit is a key objective for the hospital. The core team meets on a weekly basis to discuss and approve audit applications. The Clinical Audit Service provides a forum for the sharing and dissemination of clinical audit work throughout the hospital, which is facilitated by the use of the clinical audit database, the Biannual Clinical Audit and Research Meetings and Interim Results Meetings.

SUCCESSES & ACHIEVEMENTS 2020

ENHANCING PATIENT CARE

- **Register of Clinical Audit**
  In total, 64 clinical audits were registered in 2020 (37 first-time audits and 24 re-audits), representing a decrease of 18% on the number registered in 2019.
  In the same period, 36 clinical audits were completed, 19 fewer than in 2019 (Table 1).

TABLE 1: NUMBER OF COMPLETED CLINICAL AUDITS 2016-2020

Audit type	2016	2017	2018	2019	2020
First audits	38	34	41	38	23
Re-audits	13	15	14	17	13
Total	**51**	**49**	**55**	**55**	**36**

EDUCATION AND TRAINING

The Clinical Audit Team regularly delivers in-house educational sessions on the clinical audit cycle for all disciplines. However, due to the COVID-19 pandemic restrictions, no such sessions were possible during 2020. Instead, virtual meetings (Zoom) were facilitated for obstetrics, paediatrics and anaesthesiology NCHD intakes, as well as for Trinity College Dublin MSc Midwifery students.

While the January 2020 Biannual Clinical Audit and Research Meeting was held successfully, the June meeting was cancelled. Regular Interim Results Meetings were also cancelled, as was the Clinical Audit Team's attendance at external audit meetings and conferences throughout the year.

A number of audits were presented at national meetings in 2020, which included:

1. Audit of Remifentanil Patient Controlled Analgesia (PCA) for Labour analgesia; Saleh Al Nahdi, European Journal of Anaesthesiology
2. Audit on first six months of Manual Vacuum Aspiration service provision in the Rotunda Hospital; Deirdre Hayes-Ryan et al. Junior Obstetrics and Gynaecology Society, November 2020
3. Gynaecology quality improvement: establishment and roll-out of virtual gynaecology clinics; Claire McCarthy. Junior Obstetrics and Gynaecology Society, November 2020
4. The quality of online information for pregnancy women with infectious diseases in Ireland and United Kingdom; Amy Worrall. Junior Obstetrics and Gynaecology Society, November 2020
5. Assessing Standards for Prevention of Early Onset Group B Streptococcal Disease in Ireland; Alex Dakin. Junior Obstetrics and Gynaecology Society, November 2020
6. The readability of online COVID-19 information for pregnant women in Ireland and the United States; Amy Worrall. Junior Obstetrics and Gynaecology Society, November 2020
7. Audit of perinatal morbidity associated with mid-trimester prolonged rupture of membranes; Catherine Rowland. Junior Obstetrics and Gynaecology Society, November 2020
8. Portrayal of labour and delivery on television: a comparative analysis of birth outcomes among documentary-featured deliveries and institutional data; Valerie Julius. Junior Obstetrics and Gynaecology Society, November 2020 (Poster Prize Winner)
9. Prospective study of postnatal debriefing practices after unexpected intrapartum events; Fiona O'Toole. Junior Obstetrics and Gynaecology Society, November 2020
10. Safety audit of Group B streptococcus real-time PCR testing protocol prior to induction of labour; Sumaira Tariq. Junior Obstetrics and Gynaecology Society, November 2020
11. Audit of ISBAR communication between midwives and paediatric SHOs during on-call hours; Danyal Memon et al. Junior Obstetrics and Gynaecology Society, November 2020

CHALLENGES 2020

The main challenge affecting the Clinical Audit Service was the obvious implications of the COVID-19 pandemic, preventing many audit activities from occurring, in particular the dissemination of findings at internal and external meetings. Additionally, team members from the Clinical Audit Service were re-assigned temporarily to other front-line clinical duties to support COVID-19 treatment efforts.

PLANS FOR 2021

It is hoped that an electronic training module will be developed and implemented to support new members of staff completing audit applications remotely.

Clinical Risk and Patient Safety Service

HEAD OF SERVICE

Ms. Siobhan Enright, Clinical Risk and Patient Safety Manager

STAFF

Ms. Eimear Brennan, Clinical Risk Co-ordinator
Ms. Juliana Clarke, Clinical Risk Co-ordinator
Ms. Brid Leahy, Clinical Risk and Claims Administrator
Ms. Orla Brady, Clinical Risk Administrator

SERVICE OVERVIEW

The Clinical Risk and Patient Safety Service is responsible for the ongoing management and development of a comprehensive clinical risk management service across the hospital and the management of claims relating to clinical incidents. The Service manages clinical risks, incidents and responses in compliance with the appropriate legal and regulatory requirements of the State Claims Agency (SCA), HSE and HIQA. This includes requirements for the management and reporting of Serious Reportable Events (SREs).

CLINICAL RISK MANAGEMENT

Risk management is a process of clearly defined steps which serves to support decision-making through improved insights into risks and their impact. Day-to-day management of clinical risk is the responsibility of all staff within the hospital. The Clinical Risk Team work collaboratively with other departmental staff and managers in performing risk analyses using the Rotunda Risk Assessment Form (adapted from the HSE Integrated Risk Management Policy, 2017). The risk evaluation and rating with the strength of the mitigating control measures will determine if the risk needs to be escalated to the Corporate Risk Register. The Clinical Risk and Patient Safety Manager is a member of the Hospital Risk Committee. In 2020, 35 clinical risk assessments were performed and reviewed, with 4 being escalated to the Corporate Risk Register.

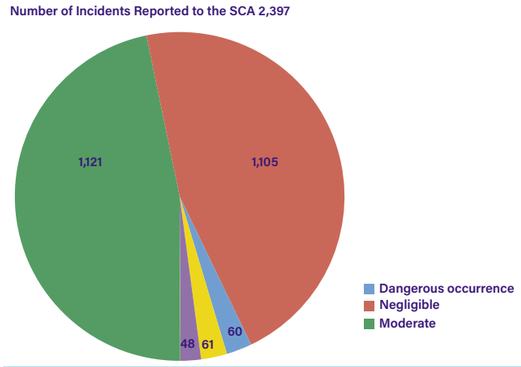
CLINICAL RISK & COVID-19

Notably from March 2020, the advent of the COVID-19 pandemic was a significant new risk that impacted on all patients and hospital staff. Risk assessments performed in all clinical areas outlined identified risk and control measures required to maintain patient and staff safety, reduce the risk of transmission and manage patients that were suspected or confirmed as COVID-19 positive. Infection prevention and control practices were of critical importance in protecting the functioning of services and mitigating the impact on patients and staff. The management of patient care pathways and workflows were redesigned, adapted and reconfigured to support clinicians and multidisciplinary teams.

INCIDENT MANAGEMENT

A clinical incident is an event or circumstance that could have resulted, or did result, in unnecessary harm to a patient during the provision of care. All clinical incidents that fulfil the reporting criteria are recorded on the National Incident Management System (NIMS). Figure 1 provides a breakdown of the number of incidents reported to the SCA through NIMS and the severity category.

FIGURE 1: INCIDENTS REPORTED TO THE STATE CLAIMS AGENCY (SCA)



Examples of incidents and severity categories include:

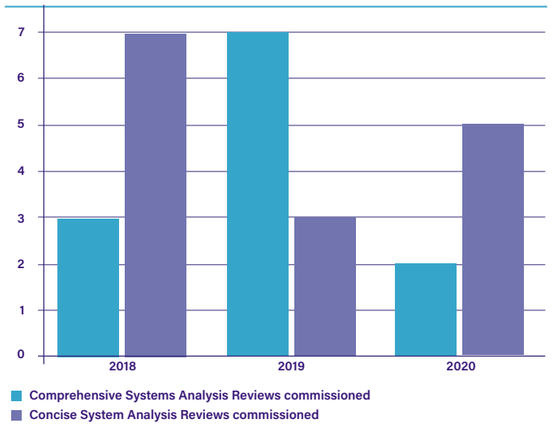
- **Minor:** delay in treatment with no impact on care
- **Dangerous occurrence:** incidents related to failure of equipment, security, resources etc.
- **Negligible:** incident where no intervention was required e.g. medication error
- **Moderate:** intervention was required e.g. medication for PPH
- **Major/Extreme:** intrauterine death/stillbirth with birth weight > 500g

The majority of incidents reported are categorised as negligible or moderate. A small percentage (< 1%) of incidents reported require further review at a weekly Initial Incident Review Meeting (IIRM). The purpose of this weekly meeting is to provide a rapid and timely review of incidents including Serious Reportable Events (SREs) and Serious Incidents (SIs) to find out what happened, why it happened and whether lessons can be learned.

The Clinical Risk Team prepare incident review reports (standard of concise desktop review) for these weekly meetings. The process follows the SBAR (Situation, Background, Assessment, Recommendations) format adapted from the template form in the Incident Management Framework (2018) and includes Scope of Review, Analysis, Findings and Outcome. The meeting is chaired by Prof. Sam Coulter Smith (Consultant Obstetrician Gynaecologist). The other attendees include Ms. Geraldine Gannon (Assistant Director of Midwifery & Nursing), Prof. Fionnuala Breathnach (Consultant Obstetrician Gynaecologist), Dr. Carole Barry (Consultant Obstetrician Gynaecologist), Dr Breda Hayes (Consultant Neonatologist), Dr. Anne Doherty (Consultant Anaesthesiologist), the Assistant Masters and Clinical Risk representatives.

Through systematic analysis of clinical incidents, key learnings are identified and disseminated to clinical staff. In 2020, there were 135 cases reviewed at the weekly Initial Incident Review Meetings. Examples of clinical cases that were reviewed include all cases of stillbirth, significant postpartum haemorrhage, shoulder dystocia, neonatal encephalopathy and unplanned return to the operating theatre. The outcome of these reviews is presented to the hospital's Executive Management Team at their weekly meeting, where timely decisions are taken regarding a need for further review (comprehensive or concise systems analysis) or whether further risk mitigation steps need to be implemented. Figure 2 provides data on the number of systems analyses performed in 2018–2020. The reduction in the number of systems analyses can be attributed to a more robust system for desktop concise review where analysis, findings and recommendations are made.

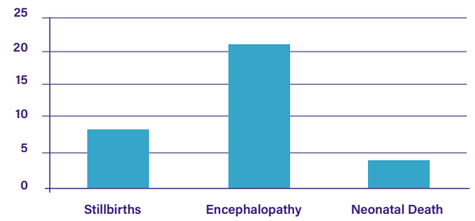
FIGURE 2: COMPREHENSIVE AND CONCISE SYSTEMS ANALYSIS REVIEWS PERFORMED 2018–2020



Feedback on the outcomes and learning from the reviews is provided to individual patients by a senior clinician, and also to all relevant staff. A monthly summary report is provided as part of the CEO's report to the General Purposes Committee of the Board on SREs, new comprehensive and concise system analysis reviews commissioned and the number of Initial Incident Reviews completed. Additionally, a summary of the learnings from SREs and SIs is shared with the Rotunda Hospital Board. In 2020, there was a decrease in the number of stillbirths, however there was an increase in the number of cases of encephalopathy. In response to the increased number of cases of Neonatal Encephalopathy the Executive Management Team commissioned an aggregate review in late 2020, the results of which will be available for implementation in early 2021.

An overview of SREs and SIs is also shared at monthly RCSI Hospitals Group Senior Incident Management Forum (SIMF) meetings to support dissemination of learning from relevant cases across all Group hospitals. The hospital presented 50 cases at SIMF meetings during 2020.

FIGURE 3: SERIOUS REPORTABLE EVENTS 2020



CLAIMS MANAGEMENT

Claims management relating to clinical incidents is also a key function within the Service. The Clinical Risk and Claims Administrator and the Clinical Risk and Safety Manager work collaboratively with the State Claims Agency from initial notification of a new legal claim through to final resolution of cases. The service analyses claims data for future learning and disseminates same to clinical staff. In 2020, there were 10 medico-legal claims settled and 25 new proceedings were served. There were no coroner cases heard in 2020, due to suspension of hearings due to the COVID-19 pandemic.

PATIENT SAFETY

The Service works collaboratively with multidisciplinary teams to improve the patient safety culture within the hospital. This is achieved by working with staff members to identify and improve patient safety issues including providing regular reports on incidents, sharing learning from the causes of incidents after analysis, and sharing examples of good practice as well as successful risk mitigation initiatives.

Patient Safety Awareness Week was held in March 2020. The week served as a dedicated time and platform to promote awareness of patient safety and to recognise the work being done throughout the Rotunda in this area. Posters were displayed in the Front Hall for staff members to view during the week. The posters showcased recent departmental patient safety initiatives that have improved the safety of patient care and enhanced the overall patient experience. Topics presented included medication safety, teamwork, postpartum analgesia, screening for Group B Streptococcus, vaginal birth after caesarean, data protection, walk rounds and infection prevention and control initiatives. It is safe to say that patient safety was to the forefront for all staff as the COVID-19 pandemic unfolded during the course of the week. This meant that some planned initiatives had to be curtailed including a special Town Hall Meeting dedicated to patient safety.

SUCCESSES AND ACHIEVEMENTS 2020

- Clinical review of healthcare records of 95% of incidents reported to Clinical Risk, which was facilitated by the MN-CMS electronic healthcare record
- Patient Safety Awareness Week (March 9th–15th), showcasing departmental initiatives
- Implementation of standards outlined in the Incident Management Framework (2018), including
- standardisation and completion of reviews within the auditable timeframe
- Initiation of 13 quality improvement plans in collaboration with relevant multidisciplinary teams. Examples include neonatal readmissions, management of blood gases, perineal tears, emergency caesarean delivery, and patient communication
- Maximising the learning from incident reviews was facilitated through multidisciplinary team meetings and case presentations at perinatal morbidity and CTG meetings

PLANS FOR 2021

- Implement a new Clinical Risk Data Management System which will provide an improved system for documenting and recording the Corporate Risk Register and clinical incident management process
- Pilot and implement on a phased basis an electronic Clinical Incident Reporting system for clinical staff
- Collaborate with pharmacy and staff in the neonatal unit to introduce an electronic near-miss medication reporting system
- Implement the Incident Management Framework (2020) which includes reviewed templates for incident reviews

Clinical Information Service

HEAD OF SERVICE

Ms. Kathy Conway, Head of Clinical Reporting

STAFF

Ms. Martina Devlin, HIPE Clinical Coder
Ms. Aideen Preston, HIPE Clinical Coder
Ms. Carmen Gabarain, HIPE Clinical Coder
Ms. Mary O'Reilly, HIPE Clinical Coder
Ms. Ruth Ritchie, Clinical Data Validation Officer.
Ms Marian Barron, Vermont Oxford Network Administrator

SERVICE OVERVIEW

The Clinical Reporting Service oversees and validates the production of hospital data reports for internal and external use. Activity is validated between current electronic systems such as the Patient Management System (IPMS), the Maternity and Neonatal Clinical Management System (MN-CMS) and Hospital In-Patient Enquiry System (HIPE). Routine periodic reports are produced for the hospital Executive Management Team, Committee meetings and for Heads of Departments as required. Additionally, reports are exported to the Health Service Executive, RCSI Hospitals Group and other external agencies where appropriate.

INTERNAL REPORTS

- A monthly report with a suite of key performance indicators is produced to enable hospital management to analyse and plan for service activity in all areas. This report is also circulated to the General Purposes Committee of the Board of Governors
- Ad hoc reports on specific activity are produced as required
- Reports for the purpose of audit or research

EXTERNAL REPORTS

- RCSI Hospitals Group Senior Incident Management Forum (SIMF)
- Irish Maternity Indicator System report to the HSE
- Patient Activity Statement to RCSI Hospitals Group and to the HSE as well as being published monthly on the Rotunda Hospital website
- Business Intelligence Unit report to the HSE
- Annual submission of Neonatal Intensive Care Unit data for the Vermont Oxford Network database
- Export HIPE data to the HSE Hospital Pricing Office (HPO)

SUCCESSES & ACHIEVEMENTS 2020

There were 11,455 day cases and 13,181 inpatients coded during 2020. An efficient mechanism was developed to identify infants receiving care and treatment on postnatal wards.

CHALLENGES 2020

The biggest challenge for the service in 2020 was the impact of the COVID-19 pandemic. The HSE required that surveillance data on all COVID-19 infected patients was coded and returned on a daily basis, in an anonymised format. The service was extremely fortunate that none of the team members acquired COVID-19 infection, with a full complement of staff being maintained at all times. There were challenges in meeting coding deadlines due to additional requirements set by the HSE and RCSI Hospitals Group.

The functions and activity of the IT Midwifery role has been incorporated into the Clinical Information Service to provide data validation across all clinical systems. This supports the delivery of optimum healthcare service provision and service initiatives. However, there was a substantial challenge in 2020 in delivering substantiated business intelligence data from the MN-CMS electronic healthcare record, and this continues. There have been ongoing challenges in developing and rolling-out reports from MN-CMS. Without the backup of other systems, such as HIPE & IPIMS, it would have been impossible to provide the information required for external and internal reports.

PLANS FOR 2021

- To ensure that all reports are appropriately validated before issuing internally or externally
- To continue to ensure that reports are produced in a timely fashion
- To ensure that all HIPE deadlines for coding are achieved
- To fully integrate the MN-CMS and Vermont Oxford Network (VON) systems to facilitate the automated extraction of data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Academia

“In continually striving for better health outcomes, the Rotunda proudly nurtures an academic environment dedicated to the pursuit of research excellence.”

Prof. Fionnuala Breathnach,
Consultant Obstetrician Gynaecologist

Department of Research

HEADS OF DEPARTMENT

Dr. Joanna Griffin, Director of Research and Clinical Innovation (Rotunda)
Dr. Liz Tully, Director of Obstetrics and Gynaecology Research, National Clinical Network Manager (RCSI)

STAFF

Mr. Cormac McAdam, Communications Manager
Ms. Alma O'Reilly, Operations Manager
Mr. Mark Kerins, Graphic Designer
Ms. Niamh Redmond, Research Manager
Ms. Lucy Murphy, Research Coordinator
Ms. Ashwini D'Souza, Research Coordinator
Ms. Christine Dalton, Research Coordinator
Ms. Elisa Belmonte, Communications Officer
Mr. James Keyes, Operations Assistant
Ms. Amy Phelan, Research Assistant
Ms. Emer Martin, Outreach Coordinator
Ms. Hollie Byrne, Research Administration Assistant

SERVICE OVERVIEW

The Department of Research is jointly run operationally with our major academic partner the Royal College of Surgeons in Ireland. We continue to expand and develop a portfolio of research studies and clinical trials along with outreach and research dissemination. This includes an extensive suite of randomised clinical trials (RCTs) and other observational and pilot studies.

RESEARCH PORTFOLIO 2020

- IRELAND – multicentre RCT investigating the role of Aspirin in pregnancy outcomes of women with pre-gestational diabetes launched in November 2020 in the Rotunda Hospital, the Coombe and the National Maternity Hospital. Since then, it has expanded to include Our Lady of Lourdes Hospital in Drogheda, Galway University Hospital and Cork University Maternity Hospital
- HOME IND – This is a study to assess outpatient induction of labour and compare efficacy of Propess versus Dilapan for induction of labour at 39 weeks gestation in normal risk nulliparous women
- HIGHLOW – RCT comparing different doses of LMWH to prevent recurrence of potentially life-threatening blood clots in pregnant women. The Coombe, National Maternity Hospital and Limerick sites were launched in 2020
- MINT – pilot study to assess the feasibility of a multicentre definitive intervention trial of milrinone therapy in newborns with persistent pulmonary hypertension (PPHN) continued to recruit in both the Rotunda and Cork in 2020
- H2020 Big Medilytics – This pilot assesses the merit of a self-management programme for women with newly diagnosed gestational diabetes
- UMBER – A study set up to build on previous umbilical cord research, to create a fully functioning biological and biochemical heart valve substitute

HRB MOTHER AND BABY CLINICAL TRIAL NETWORK IRELAND

Headquartered at the Rotunda-RCSI Research Department, the HRB Mother and Baby Clinical Trials Network Ireland (HRB MB-CTNI) is a unique partnership between the two successful perinatal research entities, Perinatal Ireland and the SFI-funded INFANT centre in Cork, which further solidifies the existing collaboration and partnership between the seven largest academic obstetrics units on the island. The HRB Mother and Baby CTNI has a well-established track record in collaborative research and in conducting large-scale, multicentre, randomised controlled trials, with a core focus on the conduct of clinical trials of novel interventions and diagnostics in pregnancy and neonates.

The HRB Mother and Baby CTNI showcase event occurred on 4th of March 2020, where patients, doctors, nurses, and researchers gathered together to celebrate the first five years of the Network. Delivering Ireland's Future, with a booklet showcasing the Network's research outputs and projects being released at the event.

CLINICAL INNOVATION UNIT (CIU)

In 2020 the Clinical Innovation Unit oversaw the running of the CAST study in association with industry partners Trinity Biotech. The CAST study presented important data on healthcare worker infection during the first pandemic peak and includes information on infection rates, clinical symptoms and the importance of robust serological screening methods. The study also included the clinical validation for FDA and EMA applications for approval of a novel COVID-19 antibody test.

2020 also saw the signing of the licensing agreement for Umbifunnel with KEY Plastics. The unit worked with Key Plastics to develop a marketing plan for Umbifunnel and continue to partner with them in the ongoing commercialisation of this medical device.

Research outputs on latest developments in Women's Health using artificial intelligence

- An interpretation algorithm for molecular diagnosis of bacterial vaginosis in maternity hospitals using machine learning: proof of concept study was developed by Dr. Richard Drew
- Predicting bacteraemia in maternity patients using full blood count parameters: A supervised machine learning algorithm approach, was funded by a grant from the HSE Spark Innovation Fund
- The importance of cycle threshold values in interpreting molecular tests for SARS-CoV-2, was developed by Dr. Richard Drew

SUPPORTING HIGHER DEGREES & TRAINEES RESEARCH TO IMPROVE PATIENT CARE

The CIU has supported higher degrees which are aimed at improving the care for our patients. It currently supports a PhD aimed at improving care for babies with late onset sepsis in the NICU using molecular techniques and procalcitonin.

RESEARCH COMMUNICATIONS

In 2020, the Research Department continued the management and development of the Rotunda Hospital website. Rotunda.ie had over 1.5 million page views in 2020 and over 530,000 unique users. In 2020, the Research Department expanded the social media reach of the Rotunda Hospital, with social media being an especially useful tool for communicating with patients over the course of the COVID-19 pandemic. The Rotunda Hospital gained over 1,300 new followers on Twitter, with a peak in March–April 2020 of 514 new followers gained that month. The Rotunda Hospital Facebook community grew by over 3,500 users in 2020, resulting in a total of 12,111 followers. The Rotunda Hospital Instagram channel, set up in 2019, has expanded by over 6,700 followers, with a total of 9,023 followers at the end of 2020. March/April 2020 had the largest follower gain on Instagram, with over 2,300 new followers that month. These large increases in followers coincided with the onset of the COVID-19 pandemic and illustrate the key part that social media played in communicating changing information to our patients and their families.

RESEARCH EVENTS

Research events came to a standstill from March 2020 because of the pandemic, with the research team pushing many events back because of lockdowns in hopes that the easing of restrictions would enable the holding of in-person events in the near future.

DELIVERING IRELAND'S FUTURE

Our first booklet showcased the Network's research outputs and projects. We also screened a short video, which offered an overview of the Network and our achievements to date. These include the successful recruitment of almost 5,000 patients to more than 10 studies, and the introduction of a variety of public engagement projects.

DEBUNKING THE MYTHS

These workshops inform young people about sexual health and well-being. We held two workshops at The Rotunda Hospital before the pandemic began. The feedback from each school highlighted the success of the workshops, and a new phase will be launched in 2021.

BREAKFAST CLUB COMIC

The Breakfast Club is a graphic novelette about women with diabetes in pregnancy, to educate those with the condition and the public. In 2020 interviews were finalised, each story was shared on social media and on the website. A paper booklet was also created for public consumption to give to patients in the Rotunda and nationwide.

VIRTUAL MATERNITY OPEN DAY

In 2020, due to the Pandemic, the Annual Maternity Open Day changed to an online event hosted on The Rotunda Hospital Instagram. Videos of Rotunda experts answering questions from the public were recorded. It was very successful, allowing the hospital to reach many more people than an 'in-person' event, and it is planned to stay with the online format for the future.

VIRTUAL EDUCATION MATERIALS & STAFF TRAINING

Due to the COVID-19 Pandemic, all in-person parent education classes were put on hold. The Research Department assisted with the filming of parent education videos. The Rotunda website hosted videos, presentations and useful links, in order to inform parents of a range of healthcare concerns. Moreover, we continued to post updates on social media and on www.rotunda.ie to keep our audience informed and up to date with the changing visiting arrangements. Video presentations were posted on our YouTube channel for staff training.

FUNDING SUCCESS

The Rotunda's communications programme secured more than €12,000 from both the HRB Conference and Events Scheme and the HRB Knowledge Exchange and Dissemination Scheme to enable the continuation of the Department's outreach initiatives. This funding contributed to the delivery of the BIAS: Inequality in Women's Healthcare in Research programme during Science Week 2020, and to the Novel Ways to Communicate Research Conference, planned for 2021.

IRISH HEALTHCARE AWARDS

Real Talk with Real Mums, a podcast series about pregnancy and birth won the 2020 Patient Education Project of the Year — Non-Pharmaceutical.

GDMapp, an Artificial Intelligence solution to gestational diabetes care as part of the Big Medilytics consortium was nominated for the 2020 Outpatient Initiative of the Year.

The Breakfast Club Comic, the story of diabetes in pregnancy in Ireland was shortlisted for the 2020 Patient Lifestyle Education Project of the Year.

CHALLENGES 2020

- The COVID-19 Pandemic created many logistical and communicative challenges
- Ongoing challenge of maintaining and growing diverse funding streams
- Research and office space while maintaining social distancing guidelines continues to pose a challenge for the Department
- Establishing new and effective communication channels with staff, press, industry and the public during the COVID-19 pandemic

PLANS FOR 2021

- Continue to support PhD project examining late onset sepsis in the NICU
- Publish whole genome sequencing project which covers 10 years of data from the Rotunda, in partnership with Oxford University
- Publish the findings of a project looking at different antibiotic options for women with preterm premature rupture of the membranes
- Continue collaborative projects around hepatitis C screening in pregnant women, early onset E.coli bacteraemia in women and babies, as well as exploring artificial intelligence–derived risk calculators for infection
- Introduce rapid point-of-care COVID-19 testing
- Implement a further phase of Debunking the Myths – The Science Behind Women's Health sexual health workshop for teenagers

Research Ethics

HEAD OF COMMITTEE

Prof. Michael Geary, Chairman.

COMMITTEE MEMBERS*

Dr. Helena Bartels
Dr. Sharon Cooley
Prof. David Corcoran
Prof. Déirdre Daly
Dr. Anne Doherty
Dr. Emma Doyle
Dr. Richard Drew
Dr. Richard Duffy
Dr. Joanna Griffin
Ms. Fiona Hanrahan
Mr. Colin Kirkham
Prof. Fergal Malone
Ms. Anna Mooney
Dr. Claire Murphy
Prof. Fionnuala Ní Áinle
Mr. John O'Loughlin
Dr. Liezl Weinand
Ms. Mary Whelan
Ms. Margaret Woods

(*with administrative support provided by Ms. Margaret Griffin)

SERVICE OVERVIEW

The Research Ethics Committee (REC) was established in 1995 as a hospital committee with overall responsibility to approve any research conducted in the hospital (or related to the hospital) by Rotunda staff or external staff members.

ACTIVITY

In 2020, there were 35 REC applications considered, 30 of which were approved to commence. Five applications required amendments and further review.

There were 37 additional applications considered by the Research Advisory Group (RAG) and brought to the attention of the REC, 36 of which were approved to commence. In contrast to full REC applications, the RAG focusses on review and approval of clinical audit proposals, although these proposals are also ultimately reviewed and approved also by the REC.

In 2020, two new members joined the Committee, Dr. Liezl Weinand, a Clinical Psychologist, and Dr. Aisling Smith, a non-consultant hospital doctor, who replaced Dr. Claire Murphy, as the Paediatric Fellows representative.

At the end of 2020, Prof. Michael Geary stepped down from his role as Chairman. Dr. Sharon Cooley and Prof. David Corcoran have taken over as co-chairs from January 2021.

CHALLENGES 2020

In 2020, the biggest challenge facing the REC was maintaining an active and safe research programme at the Rotunda during the limitations of the COVID-19 pandemic. Preserving a reasonable degree of prioritisation for clinical research was difficult. However, it soon became clear that research in the area of COVID-19 infection during pregnancy would be critically important. For a number of months, the REC continued to meet, but did so virtually via Zoom, with a significant number of research projects being reviewed and approved. Many of these research proposals were related to COVID-19, with a significant quantity of COVID-19 related research being completed. A number of these studies have been published in high impact journals, with Rotunda research contributing significantly to the world literature on COVID-19. In the latter part of the year, the REC continued with a hybrid series of meetings where a number of members met in person with the appropriate social distancing and mask wearing, while some of the group joined meetings virtually via zoom.

PLANS FOR 2021

Given the success of the appointment of a clinical fellow representative from paediatrics, the REC plans to appoint a clinical fellow representative from obstetrics and gynaecology. It is also hoped to appoint an additional obstetrician with a specific academic/research expertise.

Royal College of Surgeons in Ireland
Department of Obstetrics and Gynaecology

HEAD OF DEPARTMENT

Prof. Fergal Malone, Professor and Chairman

STAFF

Prof. Fionnuala Breathnach, Associate Professor
Dr. Karen Flood, Senior Lecturer
Dr. Naomi Burke, Senior Lecturer
Dr. Ronan Gleeson, Senior Lecturer
Dr. Niamh Daly, Senior Lecture
Prof. Paul Byrne, Honorary Clinical Associate Professor
Prof. Sam Coulter-Smith, Honorary Clinical Professor
Prof. Michael Geary, Honorary Clinical Professor
Dr. Carole Barry, Honorary Senior Lecturer
Dr. Kushal Chummun, Honorary Senior Lecturer
Dr. Sharon Cooley, Honorary Senior Lecturer
Dr. Jennifer Donnelly, Honorary Senior Lecturer
Dr. Sahar Elhadi Ahmed, Honorary Senior Lecturer
Dr. Maeve Eogan, Honorary Senior Lecturer
Dr. Conor Harrity, Honorary Senior Lecturer
Dr. Mary Holohan, Honorary Senior Lecturer
Dr. Edgar Mocanu, Honorary Senior Lecturer
Dr. Hassan Rajab, Honorary Senior Lecturer
Dr. Rishi Roopnarinesingh, Honorary Senior Lecturer
Ms. Claire Thompson, Honorary Senior Lecturer
Dr. Ann McHugh, Maternal Fetal Medicine Subspecialty Fellow
Dr. Sieglinde Mullers, Maternal Fetal Medicine Subspecialty Fellow
Dr. Catherine Finnegan, Specialist Registrar / Tutor
Dr. Orla Smith, Specialist Registrar / Tutor
Dr. Suzanne Smyth, Specialist Registrar / Tutor
Dr. Sarah Nicholson, Specialist Registrar / Tutor
Dr. Dan Kane, Honorary Clinical Lecturer
Ms. Ann Fleming, Midwife Sonographer
Ms. Claire O'Rourke, Midwife Sonographer
Ms. Sheila Briody, Sonographer
Ms. Emma Malone, Research Phlebotomist
Ms. Grainne McSorley, Research Nurse
Ms. Michelle Creaven, Administration
Ms. Suzanne Kehoe, Administration
Ms. Suzanne King, Administration

SERVICE OVERVIEW

PATIENT SERVICES

The RCSI Fetal Medicine Centre continues to provide select advanced fetal medicine services for patients of the Rotunda Hospital, as well as those referred from throughout Ireland. During 2020, a total of 4,011 fetal ultrasound examinations were performed at the Centre.

First trimester screening using nuchal translucency with serum markers is now rarely used in our practice due to the popularity of non-invasive prenatal testing (NIPT) risk assessment. Most patients now select NIPT-based screening at 9–10 weeks gestation, with nuchal translucency provided as a stand-alone separate test at 11–13 weeks gestation to screen for additional fetal malformations.

TEACHING

172 medical students participated in the RCSI Obstetrics & Gynaecology core seven-week clinical teaching rotations. The RCSI Department of Obstetrics and Gynaecology has a leadership role in providing teaching and assessment for undergraduates at the Rotunda Hospital, National Maternity Hospital, Our Lady of Lourdes Hospital Drogheda, Midland Regional Hospital Mullingar, St. Luke's Hospital Kilkenny, Waterford Regional Hospital, and Cavan General Hospital. These students participated as sub-interns on the hospital wards and in clinics, contributing significantly to the mission and function of the hospital, while providing increasingly positive feedback on their learning experiences.

Additionally, the Department continued to participate in training Physician Associates, under the direction of the RCSI School of Medicine.

RESEARCH

The RCSI Department of Obstetrics and Gynaecology continued its strong collaborative relationship with our hospital research partners during 2020. This included further integration of our shared research endeavor with the Rotunda Hospital, encompassing perinatal research at both a local site and national level. Please see the section on the Rotunda/RCSI Research Department for further information.

SUCCESSES & ACHIEVEMENTS 2020

In 2020, the Department published 20 scientific articles in international publications with major scientific impact and was one of the more prominent international participants at the world's largest obstetric research meeting, the Society for Maternal Fetal Medicine, held in Dallas, Texas, where eight scientific projects were presented.

Five postgraduate research theses were in progress in 2020. One MD and one PhD were awarded in 2020, with an additional three PhD projects underway.

A dedicated Research Ultrasound Suite (The SoundStart Suite) continued its successful operation in the RCSI Department with support from MIS Healthcare Samsung. New technologies in advanced Fetal Echocardiography are being evaluated in this facility.

The 'Robert F Harrison Medal' was awarded to Margot Henkhaus, a Senior Cycle 2 medical student for the annual Departmental essay competition, which is an annual event run through the RCSI Biological Society.

CHALLENGES 2020

The main challenge for the Department in 2020 remained trying to maintain high standards of clinical teaching for undergraduate medical students despite ever-increasing numbers of students needing to be taught the core specialty of obstetrics and gynaecology. The quality of teaching has been maintained through the recruitment of additional academic staff and dynamic tutor registrars. The Department has access to a state-of-the-art simulation centre at the RCSI York Street building which has allowed the implementation of new teaching and assessment techniques, which focus on improving communication and clinical skills.

PLANS FOR 2021

- Expansion of the use of the York Street Simulation Centre to RCSI faculty and students attending our allied teaching centres at National Maternity Hospital, Regional Midlands Hospital Mullingar and Our Lady of Lourdes Hospital Drogheda
- Progression of high-quality research portfolio undertaken by RCSI Department, including Initiation of Horizon 2020–funded Innovation project exploring telemedicine-focused artificial intelligence solutions to gestational diabetes management, a national randomized control trial of aspirin use in diabetes pregnancy, and a randomized trial that seeks to establish the optimal method for induction of labour

Library and Information Service

HEAD OF SERVICE

Ms. Anne M O Byrne, Head Librarian

STAFF

Ms. Elaine Peppard, Senior Library Assistant

SERVICE OVERVIEW

The Library and Information Service (LIS) of the Rotunda Hospital provides reference/study facilities, electronic access and computer facilities to all staff of the hospital. In addition, it provides facilities for medical students from the Royal College of Surgeons in Ireland, who use the facilities as part of their residency programmes. Trinity College Dublin's midwifery students may also use the facilities during their courses of study.

Facilities include the following services:

- study facilities (20 study spaces)
- networked computer access (6 personal computers) and Wi-Fi access
- 24-hour reading room facilities
- book return facilities
- integrated print and photocopy services
- access to electronic journals and medical databases through the Rotunda Discovery Platform
- remote access with ATHENS registration

The LIS has qualified library staff to assist in the dissemination of Library and Information Services to users and training on evidence-based resources.

SUCCESSES & ACHIEVEMENTS 2020

In March 2020 the hospital and the world were impacted by the advent of the COVID-19 pandemic which brought major changes to our working and personal lives. By early March, as part of public health measures, the existing RCSI medical student rotation, which had commenced on January 6th, were removed from active duty in the hospital and the upcoming student rotation planned for April was cancelled.

This was unique in the history of our relationship with the RCSI and medical education.

From a physical space perspective, measures were immediately implemented to protect LIS staff and users from infection, while continuing to provide services. The principles of social distancing had to be adhered to and directional advice made available in our reference and reading rooms. The 24-Hour Reading Room, while offering many advantages to staff and students, was particularly challenging in this context. We reluctantly made a decision to reduce the number of study spaces and computers available in order to appropriately adhere to social distancing. The development of a 'safe space' for users together with appropriate signage gradually initiated LIS users into the 'new COVID-19 norm.' In general, these principles were met with respect from all users and we appreciate their co-operation and understanding. To increase access to services, we increased the loan facilities to staff and ensured our users had optimal access to our electronic platforms. The latter became invaluable in providing access to users working out of hours and remotely. Resources accessed electronically continued to be provided to users and to support the research requirements of the hospital.

275TH ANNIVERSARY

The Rotunda Hospital was founded in 1745, with 2020 being the designated 275th Hospital Anniversary. In continuance with the current Rotunda Strategic Plan, the Librarian continued to chair the Historical Committee to co-ordinate planning for the 275th anniversary in March 2020. To mark the 275th anniversary of the foundation of the Rotunda, a series of events had originally been planned. The Historical Working Group had secured a concert for March 28th, hosting the 'Musical Medics' under the leadership of the conductor Proinnsias Ó'Duinn. The venue was to have been the historic Pillar Room of the Rotunda. Due to restrictions to numbers and group gatherings, the event had to be cancelled in the interests of public health safety.

Work on the placement of a commemorative plaque on the site of the first hospital building (which was at the planning stage) had to be postponed due to the resultant lockdown.

The cancellation of these events was unavoidable but remains in the hearts of the planners and performers. A gradual acceptance became the order of the day.

CULTURE NIGHT SEPTEMBER 18 2020

As with other group gatherings, the annual Culture Night event at the Rotunda became impossible to host in its physical form. However, due to the enthusiasm of the organisers as a venue we were invited to contribute to a 'Virtual Culture Night' planned for September 18. We gladly contributed and both the Librarian and Prof. Geary provided recordings of their presentations. These were recorded in the historic Rotunda Chapel on July 30 and were released online on September 18.

CHALLENGES 2020

Despite the restrictions imposed on our daily working lives, our creativity was increased during 2020 and we found new ways of communicating and delivering information. We embraced virtual Zoom meetings for training and communication. As we could no longer meet in large groups for staff, student, midwifery and NCHD induction, by Autumn 2020 we had become proficient in recording our induction programmes. We kept in contact with peers through online training initiatives, including Systematic Review Webinars, SAP procurement training, and OVID PICO, to name but a few. Virtual Town Hall Meetings kept staff abreast of organisational issues. Ultimately, we were the first Hospital to welcome back residency students in August 2020.

PLANS FOR 2021

Feeding into the Hospital's current Strategic Plan, the Historical Committee, chaired by the Librarian, is planning to revisit events to commemorate the Hospital's 275th Anniversary in 2021. Further to this, the Rotunda hopes to complete an appropriate submission to Dublin City Council and the Plaques Committee. The site of the original Rotunda Lying-in Hospital has been identified and work has commenced on getting relevant permissions in place.

The musical event originally planned for March 2020 will also be revisited when it is timely and safe to do so.

We hope to contribute to the next Rotunda Strategic Plan (2022–26) in terms of LIS service planning and delivery.

The Rotunda Foundation

HEAD OF DEPARTMENT
Ms. Sheila Costigan, General Manager

STAFF
Mr. Chetan Chauhan, Marketing & Business Development Executive
Ms. Emer Martin, Communications Executive

BOARD OF DIRECTORS
Dr. Mary Holohan, Secretary/Director
Ms. Marie Malone, Director
Ms. Margaret Philbin, Director
Mr. Mark Simpson, Director
Ms. Frances Barron, Director

OVERVIEW
The Rotunda Foundation is the official fundraising arm of the Rotunda Hospital and operates as a registered charity (CHY20091). It was established in 1971 under the name of *'Friends of the Rotunda'* and incorporated *as a Limited Company by Guarantee and Not Having A Share Capital.* The Foundation is registered with the Charities Regulatory Authority (CRA 20079529).

The Charity has a firm commitment to transparency, accountability and adherence to good governance, best practice and performance. It publishes annual accounts with the Charities Regulatory Authority (CRA) audited by KSi Faulkner Orr Accountancy.

The Foundation relies on revenue it generates annually from fundraising activities, corporate sponsorship and donations. No State funding has been received.

SUCCESSES & ACHIEVEMENTS 2020
New research funding initiatives were significantly curtailed in 2020 due to the impact of the COVID-19 pandemic. Instead, the Foundation ensured that no-cost extensions were awarded to research projects that were originally funded in 2019. These included:

- Determination of the Infrared Thermographic response to Neuraxial Anaesthesia in Obstetrics
- Safeguarding the brain of our smallest children – Infrared Spectroscopy monitoring versus treatment as usual in Premature Infants
- Debunking the Myths, The Science Behind Women's Health – 2020 Programme
- NICU Antimicrobial Stewardship – Identifying diagnostic markers & risk factors to aid in antimicrobial selection & duration of therapy in late-onset sepsis
- HOME Induction Trial – A Comparison of Induction Methods at 39 Weeks in the Outpatient Setting, Year 1 – January 2020
- Medication Safety in Neonatal Care

In addition, funding was received from a variety of donations, and used to provide equipment for a wide range of services, totalling almost €120,000, including:

NEONATAL INTENSIVE CARE UNIT
- Echocardiography Machine
- Blanket Cosy Cabinets
- IntelliVue Microstream Extension End Tidal Monitors
- Brainz Monitor for seizure prediction
- BaByel Travel System and Car Seat
- Premature 'Anne' Manikin Twin Pack for Neonatal Resuscitation Programme Training
- Newborn 'Anne' Manikin for Neonatal Resuscitation Programme Training
- SoundEar 3-300 Equipment for Noise Reduction
- Electric & Manual Breast Pumps
- Promotions and postage in celebration of World Prematurity Day
- Patient Photo Gallery Frames
- *"Beads of Courage"* Initiative – Annual Restock of Beads
- *"Tentacles for Tinies"* Initiative – Annual Restock of Cotton

LABOUR WARD
- Philips Efficia CM100 Patient Monitors

COMMUNITY MIDWIFERY TEAM
- Billimeter

BEREAVEMENT SUPPORT SERVICES
- Calligraphy Services and Calligrapher's Gift Card
- Candles
- Tiny Baby grows and Embossed Blankets
- Mortuary Chapel Flower Displays and Exterior Planting
- Bereavement Support Staff Study Day
- *"Aidan & Donnacha's Wings"* Initiative – Print Production and Postal Courier Services
- In Lieu of 2020 Remembrance Service – Bespoke Bookmark, Leaflet, Cards, Envelopes and Postage
- 'In Memory of', 'Thinking of You' and Pastoral Care Stationery

LACTATION SERVICES
- Promotion and packaging in celebration of World and National Breastfeeding Days

MEDICAL SOCIAL WORK
- Car Seats
- Moses Baskets & Mattresses
- Families in Need - Gift vouchers as support at Christmas

FETAL ASSESSMENT UNIT
- *The Journey Initiative:* Suncatcher Angels, Crystal Beads and Birthstones

FUNDRAISING AND EVENTS
The Foundation suffered a significant loss of revenue at year end due to the negative impact of COVID-19 and the closure of commercial business in the Rotunda's Pillar Room. However, the impact was mitigated by the enhanced presence of the Foundation on new fundraising platforms and its engagement across all social media channels.

At the start of the pandemic in March 2020, the Foundation had to diversify its approach to find new income streams. All 'in-person' fundraising activity had ceased with the enforced lockdown periods and was gradually replaced by 'virtual' events. The Foundation's infrastructure was strengthened, with improvements in communications which has resulted in noticeable growth in donation giving.

The Foundation wishes to thank all of our fundraisers together with our charity partners for their continued financial support and in particular Lord Abbett USA, Park Rite Parnell Street Car Park, Aldi, Tesco Community Fund, Dublin Bus Community Spirit Award, RKD Architects, Ulster Bank, Central Bank of Ireland and the National Lottery.

MERCHANDISING
To increase fundraising opportunity, the Foundation merchandises:

- *Tentacle for Tinies* Hand-Crocheted Octopus Keyrings
- Re-usable shopping bags
- Rotunda Art
- Rotunda Knitters & Crocheters Baby Knitwear Packs

PLANS FOR 2021
The Foundation will maintain close liaison meetings with the Hospital Executive and, working closely with the Hospital Board, looks forward to meeting the challenges of increased funding demands in 2021, with measured confidence.

The Charity aims to increase its fundraising activity to support the Rotunda's 2021 wishlist of additional equipment and services to enhance patient care throughout the hospital.

A new website is being developed for the Foundation that will include an e-commerce platform. Additionally, a separate website is being constructed for the management of conferences / events at the Pillar Room Complex.

It is hoped that commercial business in the Pillar Room will resume in early September 2021.

Corporate Services

“The Rotunda Hospital is a community in itself with the patients’ welfare at the core of every decision made.”

Peter Foran,
Head of Finance and Procurement

Human Resources Department

HEAD OF DEPARTMENT

Mr. Kieran Slevin, Human Resources Manager

STAFF

Ms. Cathy Ryan, Deputy Human Resources Manager
Ms Catherine Keating, Senior Human Resources Officer
Ms. Teresa Grace, Human Resources Business Partner
Ms. Anne Leen, Human Resources Business Partner
Mr. Anton Nesterenko, Human Resources Business Partner
Ms. Fiona Ryan, Human Resources Business Partner
Mr. Ciarán Dunleavy, Human Resources Business Officer

SERVICE OVERVIEW

The Human Resources Department continued to provide HR corporate services throughout 2020, during a time when the COVID-19 pandemic was having a significant impact on how all aspects of maternity services were being delivered. During this time, the primary focus of the Human Resources Department was business continuity and ensuring that all COVID-19 public health guidelines and protocols were being followed, ensuring the safety of all of our staff. The Department supported managers in the implementation of a range of alternative work practices, including the maximisation of IT, remote working and rostering arrangements to ensure staff from Medical, Midwifery/Nursing, Allied Health Professional, Management/Administrative and Support Services staff would have continual access to HR services and support.

The Human Resources Department continued to uphold the principles of Accountability, Confidentiality and Trust.

The figure below provides and overview of the functions/services provided by the Human Resources Team and these include such services as Employee Engagement, Recruitment, Training and Development, Employee Relations and Change Management.

KEY METRICS 2020

- Recruitment competitions: 116 recruitment competitions completed (internal/external)
- Staff headcount: 929 WTE at end of December 2020
- Average employee absence: 3.6%

RECRUITMENT

The Human Resources Team throughout 2020 continued to attract highly talented professionals to the Hospital across all disciplines. The shortage of qualified midwives, nurses and doctors continued to be a challenge and, in an effort to address these challenges, HR continued to implement initiatives to improve the recruitment process.

RECENT IMPROVEMENTS IN RECRUITMENT PROCESS

- Increased slots on the IrishJobs website to match increased activity, enabling faster advertising
- The bedding-in of the Recruitment Portal to ensure we continued to streamline and automate the recruitment and selection process
- Enhanced branding of The Rotunda Hospital via increased social media activities
- An improved career page on The Rotunda Hospital website outlining benefits and hospital culture
- Encouraged internal candidates to apply for senior opportunities
- Managing Manpower/Succession Plan Development to have a talent pipeline
- Interviewed candidates via Zoom/Microsoft Teams to expedite recruitment competitions

ABSENTEEISM

The average absence rate in 2020 was 3.6%, a reduction from the previous year, which was a remarkable level of attendance when taking into account that at times over 1% of all Rotunda staff were absent on leave due to COVID-19. This demonstrates the overall commitment of staff and continuous effective management of absence, which can only be described as an exceptional achievement.

CHANGE MANAGEMENT

An essential challenge for the HR Team during the COVID-19 pandemic was ensuring that changes to human resource services could be provided while ensuring that COVID-19 protocols were strictly followed. This required the HR Team to focus on change projects that reflected safer better healthcare and on the services that are perceived as of significant value by our staff. The focus was on the following technology projects and platforms – TMS and Q-Pulse. Using the latest technology options has helped to increase efficiency and progress practices.

RCSI PEER REVIEW

The RCSI HR peer review in the 3rd quarter of 2019 established the foundations of new structures and roles within the HR Department for 2020 and assisted the HR Department in repositioning itself to ensure it provides additional strategic value to the hospital. A new Grade V Business Partner commenced in Q1 2020 with responsibility for reporting and analytics. The HR department was restructured in Q1 2020 in line with the RCSI Peer Review recommendations. Individual business partners became responsible for different departments to meet the needs of the service users.

EMPLOYEE DEVELOPMENT

While training and development programmes were curtailed during 2020, to ensure employees and management were equipped with the skills and abilities to achieve the hospital's strategic goals there was a greater reliance placed on online training. Below are some of the training and development opportunities offered to employees in 2020:

- Mandatory training – hand hygiene, fire safety and manual/ patient handling
- Policy and procedure training – such as dignity at work, attendance management, grievance and disciplinary management
- Employee wellness initiatives
- Interview techniques training was developed and rolled out with great success to encourage our employees to interview for internal promotional opportunities
- New health and safety training requirements due to COVID-19

In December 2020 a Training Needs Analysis Survey was undertaken, which resulted in the development of a training plan on the basis of the feedback received.

SUCCESSES & ACHIEVEMENTS 2020

- Seamless continuity and delivery of human resources services during the COVID-19 pandemic
- Permanent contracts offered to all our graduate midwives
- Interpretation, advice and the dissemination of over 74 HSE HR circulars and 27 HSE HR memos to management and staff, in comparison to 2019 when there was 37 HSE circulars. A significant proportion of these circulars contained advice/ actions required to be taken as a direct consequence of the National Public Health Emergency Team's COVID-19 measures
- Optimal use of the Recruitment Portal
- The Hospital has one of the lowest rates of absence within the RCSI Hospitals Group
- 100% Garda vetting compliance
- Introduction of preventative measures in relation to bullying and harassment
- Professional development of staff through HSeLanD e-learning
- The production of the Rotunda Delivery Newsletter

PLANS FOR 2021

Through the Peer Review process and other audits undertaken over the past 2 years, the strategic focus of the HR Department has been fundamentally reset. In 2021, the HR Team will constantly evolve to ensure that these objectives are achieved to ensure the ongoing delivery of a professional HR service to our internal and external clients. Below are some planned actions for 2021:

- Continue to reconfigure the department to implement business partnerships for all
- Aim to improve staff engagement and information provision to our employees
- Collaborate with the IT Department to enhance ICT
- The development of a strategy for the Hospital to ensure that this drives organisational learning and development
- Continued participation in Town Hall Meetings to support communications Hospital-wide
- Development of medical manpower function, analytical and reporting functions
- Active participation and input into the development of the Rotunda Hospital Strategic Plan
- To develop an automated post management and census automation database for the hospital by the end of 2021
- To integrate absence records between MegaHR and TMS

Finance and Procurement Department

HEAD OF DEPARTMENT

Mr. Peter Foran, Head of Finance and Procurement

STAFF

Mr. Alan Holland, Finance Manager
Mr. Yoichi Hoashi, Procurement and Supplies Manager
Ms. Pauline Brady, Payroll Manager
Mr. Edward Smith, Patient Accounts/Accounts Receivable Manager
Mr. Philip Ryan, Pensions Manager
Ms. Denise Rogers, Accounts Payable Supervisor
Ms. Vivienne Fitzpatrick, TMS Project Implementation Lead

SERVICE OVERVIEW

The Finance Section of the department is responsible for financial and budgetary management, treasury management, financial reporting and control in the Rotunda Hospital.

The Procurement Section is responsible for sourcing and supplying non-pay consumables, equipment and services for the hospital and providing general procurement support to other hospital departments.

In 2020, the Finance Department continued to develop as a service department for users within the hospital in all matters pertaining to finance and procurement. This was actioned despite the challenges faced by the department and hospital relating to COVID-19.

The department introduced new innovations in service delivery to staff as well as embedding new innovations that had been first introduced in 2019. The department continuously strives to improve its controls, reporting outputs and service offering to the hospital.

SUCCESSES & ACHIEVEMENTS 2020

FINANCIAL/MANAGEMENT ACCOUNTING

The hospital achieved a financial surplus in 2020 of €0.3m thus eliminating the hospital's cumulative carry-forward deficit. This was achieved through prudent budgetary management, value for money initiatives and good cost-control practices. We also worked collaboratively with the RCSI Hospitals Group to address budget shortfalls and source additional funding. The financial impact of the COVID 19 pandemic at the Rotunda was comprehensively collated and reported in a timely transparent fashion to the RCSI Hospitals Group. This ensured that we were successful in being reimbursed or funded for all additional costs incurred due to COVID-19. Financial breakeven was achieved without impacting on quality and safety of patient services, which is critical in a demand-led service.

TABLE 1: FINAL BUDGETARY OUTTURN 2020

Category	€'000
Deficit Carried Forward	(226)
Pay	73,039
Non-Pay	18,587
Income	(15,352)
Net Position for year	**76,274**
HSE Budget	(76,583)
Surplus/(Deficit) in Year	**309**
Cumulative Surplus/(Deficit) at Year End	**83**

The hospital continued to work with the RCSI Hospitals Group and the National Women and Infants Health Programme to source funding to augment current services and for service developments. In 2020, new service enhancements were funded with regard to our Ambulatory Gynaecology Service and secondary-level infertility services.

The management accounting function, which first introduced devolved budgeting to the hospital in 2019, continued to develop in 2020. It was particularly efficient in monitoring and reporting on the additional expenditure incurred in the hospital due to COVID-19.

EMPLOYEE PAY AND RELATIONS (PAYROLL/PENSIONS/TMS)

In 2020, the payroll section continued to develop under the management of Ms. Pauline Brady. Challenges relating to the COVID-19 pandemic were faced whilst also augmenting the service offering to all staff.

The pension function continued to operate as normal during 2020. Increased regulatory requirements from the Department of Public Expenditure and Reform were a feature of 2020. There are plans being progressed to continue to develop this important employee relations function.

In 2020, the Time Management System (TMS) continued to be rolled out throughout the hospital; including medical, nursing and midwifery, support and administrative areas. In all areas where TMS has been implemented, significant advantages have accrued to employees, enabling greater transparency on pay, rotas and attendance.

FINANCE OPERATIONS (PATIENT ACCOUNTS/ACCOUNTS PAYABLE)

The Accounts Receivable function (Patient Accounts) is responsible for ensuring the maximum level of patient-related income is generated and collected by the hospital. At a macro level, insurance income has declined in the past few years making it more essential that the hospital captures all possible income sources.

In 2020, the Patient Accounts function set up a cross-functional multidisciplinary forum to review billing processes and improve how the hospital collaborates together to ensure that our internal processes are as straightforward and effective as possible.

The Accounts Payable function saw significant improvements in 2020 with the continuing roll-out of the purchasing system, SAP Concur. A lot of hard work was put into its implementation, as well as its integration into prior systems. This work was overseen by Mr. Alan Holland and is envisaged to drastically increase our responsiveness to supplier invoicing. Whilst there has been an improvement in our responsiveness to our suppliers, the Finance Team is continuing to develop further our relationships with key critical suppliers.

PROCUREMENT AND SUPPLIES

In 2020, under the management of Mr. Yoichi Hoashi, the Finance Team responded to a huge increase in demand for supplies to support the hospital's response to COVID-19. The hospital had to function in a very competitive environment to source sufficient personal protective equipment (PPE) for staff. This was achieved with determination and resourcefulness. Thankfully, the HSE were able to assist us in meeting these demands later in the pandemic.

During 2020, a Corporate Procurement Strategy was developed by the Finance Department. This strategy sets out the way forward for the hospital in ensuring the hospital is compliant with regard to procurement regulations, as well as providing value for money and optimal service to our hospital colleagues.

CHALLENGES 2020

INADEQUATE CAPITAL FUNDING

The Rotunda Hospital campus is a site with a significant heritage value. Along with age comes a constant requirement to maintain facilities and ensure they meet current modern standards for healthcare service provision. In 2020, the hospital received increased capital funding from the HSE with regard to capital works in relation to the new Operating Theatre and Labour Ward development, as well as capital works relating to COVID-19 infection prevention and control requirements. However, there still are significant unmet capital funding requirements for the hospital in relation to its serious infrastructural risks.

MEDICAL EQUIPMENT REPLACEMENT PROGRAMME (MERP)

In 2020, the hospital received additional funding for MERP, as well as additional funding for equipment purchased in response to the COVID-19 pandemic. While this is welcome, there remains a significant requirement to replace aging equipment.

ACHIEVING EVIDENCE-BASED VALUE FOR MONEY

As with any organisation, there are always opportunities to review expenditure and make savings to divert money to higher value activities. The team in Procurement has begun reviewing high-value contracts with local area management to see if support can be given to run tenders for these services. The hospital's Procurement Committee is actively considering a wide range of alternative products to existing products to assess possible financial efficiencies and achieving better value for money. As part of the corporate procurement strategy, the successful recruitment of a tendering manager was a key objective to assist in the achievement of the plan's key objectives.

CASH FLOW MANAGEMENT

Increased funding for the hospital and better internal procedures around cash flow has meant that cash flow is not as critical an issue as it has been in the past. However, this is an issue that the hospital must always be acutely aware of and escalate to its funders in a timely fashion if and when required.

FINANCIAL RISKS IN 2020

As a demand-led service, a funding shortfall continues each year, in particular as the hospital's clinical volume continues to increase. Initial budgets provided by the HSE through the RCSI Hospitals Group were inadequate for our clinical volume, although the hospital continues to work well with the RCSI Hospitals Group to address this shortfall.

The lack of adequate funding for capital works or medical equipment replacement remains a major ongoing financial risk.

PLANS FOR 2021

- Ensure appropriate funding to provide safe quality services
- Ensure sufficient cash flow to meet all financial obligations
- Source funding for essential medical equipment replacement and a minor capital works programme
- Manage capital budgets including cash flow for major capital works
- Develop finance systems to enable a more responsive and timely service provision
- Develop business intelligence from finance systems to enable devolved budget management
- Integrate sub-ledgers to the hospital's Finance Management System to produce more timely and relevant information
- Progress the hospital's pension function to deliver timely and accurate information to all staff
- Progress the roll-out of the Time Management System (TMS) to as many staff as possible

Information Technology Department

HEAD OF DEPARTMENT

Mr. Cathal Keegan, IT Manager

STAFF

Mr. Derek Byrne
Mr. Eoin Garland
Mr. Gerard Payne
Ms. Fiona Quill
Mr. Martin Ryan
Mr. Anthony Shannon

SERVICE OVERVIEW

The Information Technology Department (IT) supports the development and maintenance of the IT function throughout the hospital. To facilitate this, the team provides Helpdesk support for over 800 users, and manage an estate of over 1,500 connected devices. Whilst our main activity is the support of our users, we are divided into a number of functional areas, namely Infrastructure Management, Project Management and Service Support. We continuously review industry best practice to provide optimal service reliability and monitor technological advancements to see how best they can be leveraged to improve our service. Data security is essential in a healthcare setting and we have worked closely with the HSE to strengthen our position from both an administrative and clinical device perspective. All staff employed in the hospital are reminded of the vital role that they play in IT data security.

SUCCESSES & ACHIEVEMENTS 2020

January 2020 saw Microsoft end the support for the Windows 7 and Windows Server 2008 Operating Systems, which had been in service for over 10 years. Whilst a systematic upgrade of client workstations to Windows 10 had been underway for a number of months, we encountered a significant number of devices which could not be upgraded due to application dependency. We anticipate upgrade pathways for these national systems during 2021 which will facilitate our remaining devices being upgraded to Windows 10.

The emergence of the COVID-19 pandemic in early March put the health service into a period of uncertainty and change. Some new projects and day-to-day operations were put on hold, with immediate efforts being re-directed towards helping the hospital prepare for dealing with the pandemic. Some of the contingencies implemented included:

- Sourcing, procuring and installing computer equipment in areas that were converted to COVID-19 isolation wards
- Re-configuring computer equipment in a number of offices and departments to assist with social distancing guidelines
- Employing additional SMS messaging capabilities to cater for increased patient communications
- Assisting in the implementation of the V-Create system to facilitate virtual visits of premature babies admitted in the NICU
- Implementing medical grade keyboards and mice in all clinical areas and areas of shared use, to facilitate the use of antibacterial wipes and cleaners
- Conversion of the Rotunda Pillar Room into an outpatient clinic to facilitate greater social distancing of patients
- Working with the HSE and partners to test and validate remote consultation software for virtual patient visits (including Attend Anywhere, BlueEye Iris, Microsoft Teams, etc)
- Sourcing and implementing a solution to replace our administrative\clinical in-person meetings
- Upgrading client desktops with cameras and speakers to facilitate participation in these meetings, including Zoom, WebEx, and Microsoft Teams
- Upgrading of our Firewall and SSLVPN services to facilitate working from home where feasible
- Configuration, training and support of our remote workforce

As the year progressed the impact of COVID-19 remained but the remediation efforts required began to stabilise. The IT service and the hospital as a whole adapted to this new way of working, and a number of implementation and hospital infrastructure projects re-commenced. Work on the three-storey theatre and delivery refurbishment recommenced with IT involved in a detailed scoping of services and equipment required. In early December, we engaged with an external partner to perform a comprehensive internal\external penetration test of our network infrastructure and firewall configuration. A detailed report was returned with a number of recommendations to enhance our security posture.

PLANS FOR 2021

Quarter one of 2021 will see the previous HARI buildings being vacated by an external tenant and available for occupation by Rotunda services and personnel. This building is to undergo a suite of works to make it suitable for use as a dedicated ambulatory gynaecology department. As with other works, IT will be involved in the scoping of IT services\infrastructure requirements and their procurement, installation and support.

This year will also see the completion of a number of hospital infrastructure projects culminating in the opening of a new theatre and recovery space, each of which will have major IT requirements.

It is hoped that the constraints around working with COVID-19 will ease and allow us to return to a number of IT projects that were temporarily put on hold. Specifically, this will include the upgrade of our core Storage Area Network to meet with the demand for new servers and services. Our existing infrastructure dates back to 2011–2013 and provides the backbone to our disaster recovery solution through SAN-to-SAN replication and failover capability. It is hoped to upgrade this solution to utilise the newer solid-state technology available and to facilitate a number of year's storage growth.

Support Services Department

HEAD OF DEPARTMENT:
Mr. Ray Philpott, Support Services Manager

SERVICE OVERVIEW
The Support Services Department at the Rotunda Hospital is responsible for ensuring that the physical infrastructure of the hospital, as well as key non-clinical teams, are optimised to enable the Rotunda to provide care to all of its patients.

The following departments are under the remit of the Support Services Department:

- CAPITAL PROJECTS OFFICE
- CATERING DEPARTMENT
- CLINICAL ENGINEERING DEPARTMENT
- CENTRAL STERILE SERVICE DEPARTMENT
- HEALTH AND SAFETY
- HOUSEHOLD DEPARTMENT
- HOUSEHOLD LINEN DEPARTMENT
- NON-CLINICAL CLAIMS MANAGEMENT
- PORTERING DEPARTMENT
- TECHNICAL SERVICES DEPARTMENT
- TELECOMMUNICATIONS SYSTEMS
- WASTE MANAGEMENT SERVICES

TECHNICAL SERVICES DEPARTMENT

HEAD OF DEPARTMENT
Mr. Brendan Memery

SERVICE OVERVIEW
The Technical Services Department is responsible for ensuring all hospital buildings are maintained in a fit-for-purpose state, including being closely involved in all new infrastructure construction projects on the Parnell Square campus.

SUCCESSES & ACHIEVEMENTS 2020
THREE-STOREY OPERATING THEATRE CONSTRUCTION
During 2020, the three-storey operating theatre building project was brought to nearing completion. This includes a ground floor extension to the Emergency and Assessment Unit, a third operating theatre on the first floor contiguous with the existing main operating theatres and a fourth operating theatre on the second floor contiguous with the Delivery Suite. This new build also includes a complete refurbishment of the Delivery Suite, increasing the number of individual delivery rooms to 11.

- The advent of the COVID-19 pandemic placed significant urgent demands on the Technical Services Department during 2020, including the redevelopment of most offices to allow for social distancing
- The installation of screens, sub-dividing offices/wards, the organisation of isolation rooms for COVID-19-positive patients including fitting large numbers of additional hand-gel dispensers throughout the hospital
- The development of a rapid-access 'drive-through' COVID-19 testing area near the rear car park entrance

Other projects completed by the Technical Services Department in 2020 included:

- Restoration of the Chapel Windows
- Redevelopment of the Master's Garden
- Landscaping in the front car park
- Fire Alarm connectivity to Mental Health and Physiotherapy Portakabins
- Emergency and Assessment Unit and front-reception air ventilation replacement
- Medical Residence electrical board replacement
- New kitchen fitted and tiled in the NICU
- The replacement of two heating boilers
- Removal of paper-insulated cabling throughout the hospital campus
- Refurbishment of the Soiled Utility Area in the NICU to comply with HIQA standards
- Two new tiled kitchens developed in the Nurses Home
- Four new bathrooms renovated in the Nurses Home
- Dividing wall erected in the Laundry Room

During 2020, the Technical Services Department received and completed requisitions excluding requests via telephone or in person. The breakdown of the various requests is as follows:

TABLE 1: TECHNICAL SERVICES DEPARTMENT REQUISITIONS 2020

Carpenter	341
Plumber/Fitter	950
Electrician	1,030
General Operative	1,398
TOTAL	**3,719**

CHALLENGES 2020
The main challenge in 2020 involved continuing to progress and develop a wide range of infrastructure maintenance projects in a live environment with an extremely busy hospital, functioning in buildings as old as 275 years.

PLANS FOR 2021
It is hoped to complete the Three-Storey Operating Theatre Construction project in 2021, thereby increasing the number of fully compliant operating theatres to four, as well as increasing the number of individual delivery rooms to 11. It is also hoped to complete the replacement of existing air chillers in the Operating Theatre, replacing the roof of the administration building, and upgrading of new servers.

CATERING DEPARTMENT

HEAD OF DEPARTMENT
Ms. Deborah Cullen

SERVICE OVERVIEW
The Rotunda Catering Department is committed to providing fresh, wholesome, nutritious food to all its service users. This year the catering department produced over 135,000 meals for both patients and staff. 2020 was a challenging year for the department due to the COVID-19 pandemic. All services were reviewed to ensure that the provision of meals was carried out safely for the protection of both patients and staff. Food Safety and Health and Safety training are key operational priorities and the Catering Department is committed to providing the highest standard of food hygiene, in accordance with IS:340:2007 standards. Hayley Dignam joined the Catering Management Team as Deputy Catering Manager.

SUCCESSES & ACHIEVEMENTS 2020
- Maintained a distinction in the Food Safety Assurance Award accreditation system, operated by the Food Safety Professionals Association, for our Food Safety Management System
- Continued to receive large amounts of positive feedback from patients through our catering comments email *cateringcomments@rotunda.ie*, as illustrated by:

'I spent 3 days in the Rotunda Hospital; the catering staff and the food were excellent, I wanted for nothing.'

'The food was also absolutely delicious, so thank you for helping make an emotional and quite difficult time so much better.'

'I wanted to compliment the catering staff on the amazing quality and variety of food in the Rotunda. I am a coeliac and nothing was too much trouble.'

- Food safety and standard operational procedures manuals were developed and introduced
- Provided a socially distanced, sit-down Christmas lunch for all hospital staff over a two-week period in December 2020, serving 730 individual three-course meals

CHALLENGES 2020

The COVID-19 pandemic provided many challenges for the Catering Department including:

- A large reduction in the seating capacity in the staff restaurant due to social distancing measures required to allow staff to eat and take breaks in a safe manner
- Revision of the catering service provided to both patients and staff to ensure compliance with all infection prevention and control guidelines
- Introduction of an overflow seating and vending area for catering in the Rotunda Front Hall
- Additional ongoing staff training on all procedures relating to the provision of services to patients who were found to be infected with COVID-19
- Reduced staff numbers due to the requirement for staff to isolate at home, either due to COVID-19 infection or becoming close contacts of a COVID-19 case

PLANS FOR 2021

- The catering department will continue to provide a high-quality catering service, with a view to continuously developing and becoming more environmentally sustainable
- The provision of healthy, wholesome, nutritious food for both patients and staff will remain our primary focus

CLINICAL ENGINEERING DEPARTMENT

HEAD OF DEPARTMENT

Mr. Henry Gelera

SERVICE OVERVIEW

The Clinical Engineering Department manages all medical equipment in the hospital. A significant number of new medical equipment replacements were sourced as follows:

- 22 blood pressure monitors
- 20 intravenous infusion pumps
- 2 operating theatre tables
- 6 bilimeters
- 1 high-end radiology ultrasound machine
- 13 phototherapy units
- 9 defibrillators
- 2 high-end obstetric and gynaecological ultrasound machines
- 2 cerebral function analysing monitor units
- Various laboratory equipment

SUCCESSES & ACHIEVEMENTS 2020

- The National Equipment Replacement Three-Year Programme (NERP) was updated in 2020 and submitted for funding allocation in 2021 by HSE National Equipping
- The HSE National Equipment Management System became fully operational

CHALLENGES 2020

The main challenge for 2020 again proved to be the requirement to manage large amounts of medical equipment in the setting of limited Clinical Engineering resources. Each year, the funding provided by the HSE under its Medical Equipment Replacement Programme is only a fraction of that required to replace and upgrade aging or obsolete medical equipment.

PLANS FOR 2021

- To continue to provide an efficient and reliable service within its current resources
- To fully implement an internet-based work requisition system across the hospital
- To continuously seek more funding from the HSE to upgrade or replace critical medical equipment

CENTRAL STERILE SERVICES DEPARTMENT

HEAD OF DEPARTMENT

Mr. John Oyedeji

SERVICE OVERVIEW

The Central Sterile Service Department (CSSD) is the core department within the hospital in which reusable medical devices, both sterile and non-sterile, are decontaminated.

The staff employed in CSSD work in the areas of controlling and monitoring medical devices, infection control and the administration of safety practices that benefit healthcare workers and the public at large. The team provides cleaning and disinfection, inspection and sterilisation of all reusable invasive medical devices (RIMD). The department assists hospital purchases and healthcare practices by holding responsibility for ensuring that patient equipment is available and sterile for use at all times.

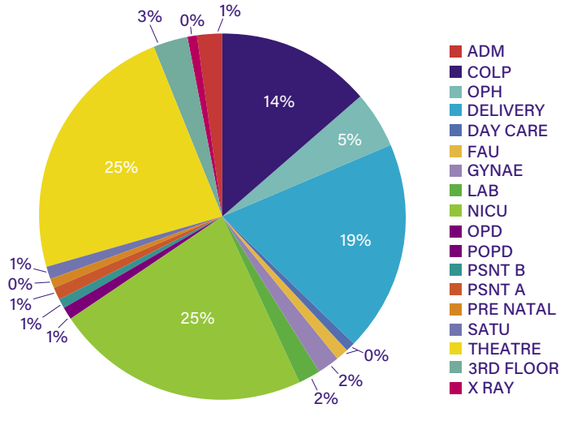
SUCCESSES & ACHIEVEMENTS 2020

The department reprocess RIMDs for both on-site and external Rotunda Clinics.

By the end of 2020, 55,033 reusable invasive medical devices were reprocessed, 25,727 trays and 29,306 single RIMDs in the department.

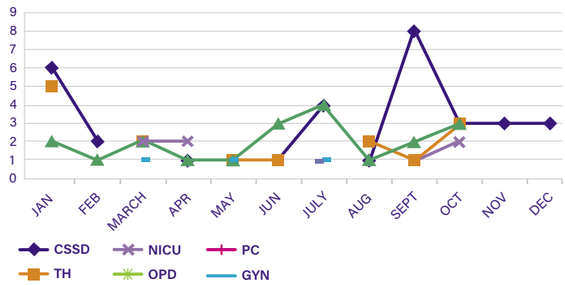
Below is the graphical representation of activities from all clinical areas.

FIGURE 1: CSSD ACTIVITY SOURCE LOCATIONS



All decontamination equipment was validated and periodically tested by qualified external contractors, and all validation reports were audited on a quarterly basis. A total of 78 non-conformances were recorded, which is consistent with recommendations from the HSE Code of Practice. Follow-up action was taken for each non-conformance and all issues raised were resolved.

FIGURE 2: TREND OF NON-CONFORMANCES IN 2020



CHALLENGES 2020

The COVID-19 pandemic caused a significant challenge for the CSSD Team in 2020, due to the requirement to change rotas from eight-hour shifts to 12-hour shifts, with the entire CSSD Team divided in two to accommodate social distancing within the department.

PLANS FOR 2021

Our plan in the coming year is to continue providing the highest possible quality standard of practice in the decontamination and sterilisation of re-usable invasive medical devices, while continuing to provide a service that is consistent with the highest possible standards.

HEALTH AND SAFETY DEPARTMENT

HEAD OF DEPARTMENT
Mr. Les Corbett

SERVICE OVERVIEW
The Rotunda Hospital is committed to ensuring compliance with the Health, Safety and Welfare Act, 2005 within a busy healthcare environment. The Rotunda's Safety Statement is updated annually and is linked to the HSE Corporate Safety Statement. The facilities of the Rotunda Hospital are routinely examined and changes are implemented if necessary. Despite the age of the building and many building projects, high levels of safety were observed as we continue to develop a safer environment for all hospital end users.

COVID-19
The year was dominated by the COVID-19 pandemic and the focus of this department was on the protection of staff, patients and other service users. Workplace risk assessments were carried out as per the guidelines provided to ensure statutory compliance with the evolving regulations.

HEALTH & SAFETY COMMITTEE
The Health and Safety Committee members meet every second month to discuss the hospital's health and safety management systems and to make recommendations for improvement. A number of committee workplace inspections were conducted with recommendations for improvement.

FIRE PREVENTION
A new fire safety register was introduced to record all activity associated with the management of fire safety, such as fire alarm testing, fire doors, evacuation routes, fire safety equipment and fire panel activations.

Fire safety awareness training is an important preventative mitigation measure, with regular training sessions taking place throughout the year. The list and location of X-ray equipment was sent to the Dublin Fire Brigade in November as per our obligations under legislation in relation to radioactive sources.

SECURITY
Weekly meetings were held with the SAR Group Operations Manager to ensure the provision of a quality service. The hospital introduced 'Targeted Patrols' based on risk, with these patrols being recorded on the SAR virtual platform which the hospital can access for analysis/investigative purposes.

INCIDENT INVESTIGATION
The hospital welcomes the reporting of all incidents and near misses, with the hospital operating a 'just culture' where reporting is encouraged in a no-blame manner to help prevent recurrences. During 2020, 130 non-clinical incidents were recorded, with four of these incidents being reported to the Health and Safety Authority. All incidents were discussed at the Health and Safety Committee and the Quality and Safety Committee meetings.

CHEMICALS
Dangerous Goods Safety Adviser (DGSA) audits were conducted by an external agency, EcoOnline, which identified some areas requiring corrective action. This was reported to the Health and Safety Committee and the Quality and Safety Committee. The 'SafeDoc' chemical management risk assessment database is continually being updated.

SUCCESSES & ACHIEVEMENTS 2020
- Managing the competing demands associated with COVID-19
- Review of all safety policies was completed
- Updating of all CAD drawings for the campus was completed

CHALLENGES 2020
- The obvious challenge of the COVID-19 pandemic created significant demands on the Health and Safety Department, including the need to provide individualised risk assessments of a large number of clinical and non-clinical environments
- Lack of storage space resulting from COVID-19 restrictions, refurbishment projects and general footfall impacting on circulation areas
- A Three-storey Operating Theatre construction project created additional health and safety challenges given the busy hospital work environment being so closely impacted by construction zones

PLANS FOR 2021
- Develop and document a COVID-19 response plan, set up a Lead Worker Representative (LWR) group and develop an end-user-friendly LWR inspection app
- Move refresher Fire Awareness Training to a web-based platform which should optimise the number of credentialed staff
- Re-commence fire evacuation drills, which had been paused during the COVID-19 pandemic
- Conduct regular, scheduled health and safety inspections for wards and other areas
- Introduce a Fire Safety Committee
- Create a separate Health and Safety Risk Register
- Introduce the HIRA methodology for activity-based risk assessments
- Develop policies for Asbestos and Confined Space management
- Create a health and safety training needs analysis matrix and associated policy

HOUSEHOLD DEPARTMENT

HEAD OF DEPARTMENT
Ms. Catherine L'Estrange

SERVICE OVERVIEW
The Household Department plays a key role in ensuring that the Rotunda Hospital achieves the highest possible hygiene standards required of a healthcare environment. A robust auditing programme is in place. The C4C Credits for Cleaning programme is used daily, with supervisory audits being undertaken which ensure that a standard check is performed in all areas on a frequent basis, resulting in a higher consistent standard throughout the hospital. The average score achieved was 95%. The 'actions required' reports are circulated to the appropriate household staff members and, once completed, they are signed and returned to the household supervisor.

STAFFING
The Household Department staff complement improved slightly to 50.6 whole-time equivalents during the year, with 12 new starters covering vacant positions. The COVID-19 pandemic produced additional pressures within the department, often making it difficult to maintain adequate shift rosters. It has been very difficult to recruit staff over the past couple of years, with the Household Department frequently struggling to facilitate all clinical and non-clinical areas.

TRAINING & DEVELOPMENT INITIATIVES
In-house training was carried out in the Household Department for all new staff, with refresher training being provided for all other staff; including 'Clean Pass', HIQA, infection control and all health and safety guidelines. Household management supervisors carry out their own hand hygiene training, with some of the management team becoming qualified 'train-the-trainers.' All household have completed hand hygiene training for 2020.

CHALLENGES 2020
2020 proved to be a particularly challenging year for all Household Staff. Household staff hours needed to be re-structured to keep in line with service needs, such as increased clinics, late clinics and the development of red, yellow, and orange zones for COVID-19 infection risk. These areas had to be deep-cleaned at short notice throughout the hospital on a 24-hour basis. Household management supervisors ensured that staff had all required PPE to carry out duties in a safe manner. This also involved ensuring staff were trained on how to put on and take off PPE in a safe and appropriate manner. Despite it being such a challenging year for the Household Department, the team remains committed to continuous improvement of service delivery while keeping abreast of developments in line with best practice recommendations.

PLANS FOR 2021
- Plan to introduce new household cleaning schedules and cleaning frequencies keeping in line with HIQA infection control standards
- Recruit household staff to cover the new Three Storey Theatre Building as well as recruitment of staff to cover the new Ambulatory Gynaecology Building, both scheduled to open in 2021
- Introduction of a new household auditing system in 2021, named MICAD, similar to the C4C Credits for Cleaning system

HOUSEHOLD LINEN DEPARTMENT

HEAD OF DEPARTMENT
Ms. Catherine L'Estrange

SERVICE OVERVIEW
The Household Linen Department plays a key role in ensuring that all linen items are stored, handled and laundered to the highest standard, in line with national hygiene standards. The priority is to ensure that the risk of infection is minimized by implementing best practice recommendations in relation to linen services. In 2020, a system was implemented to ensure the surgical scrubs were ordered sufficiently in advance to ensure supplies were always adequate.

SUCCESSES & ACHIEVEMENTS 2020
The Household Linen Department undertook a comprehensive schedule of daily and weekly audits, which included the following:

- Linen delivery truck
- Green linen delivery bins
- Quality and cleanliness of linen deliveries and linen rejects
- Linen trolleys used for transportation of linen around the hospital
- Linen storage presses and trolleys in clinical areas

The linen audit tools and audits and checklist were updated, with all supervisors being trained in the management of the department, thereby ensuring continuity of linen services.

PLANS FOR 2021
The Household Linen Department will endeavour to ensure a high quality of service is maintained and ensure ongoing efficiencies throughout the campus, in line with HIQA infection control guidelines.

PORTERING DEPARTMENT

HEAD OF DEPARTMENT
Mr. Paul Shields

SERVICE OVERVIEW
The Portering Services Department provides patient transport services throughout the hospital. There has been a significant increase in demands for portering services due to increased clinical activity.

SUCCESSES & ACHIEVEMENTS 2020
Management of waste streams has resulted in excellent levels of recycling and composting, which is due in large part to in-house training. The average recycling rate remains approximately 80%.

CHALLENGES 2020
The portering department experienced some significant staffing issues due to COVID-19 pandemic impacts.

PLANS FOR 2021
- Further attempts will be made to increase the current waste recycle rate and further reduce waste going to landfill. This will be achieved through 'waste awareness days', as well as introduction of an online course
- An increase in headcount is anticipated to service the increasing clinical volume

Patient Services Department

HEAD OF DEPARTMENT
Ms. Niamh Moore, Patient Services Manager

TEAM LEADERS*
Ms. Jacinta Core, Deputy Patient Services Manager
Ms. Susan Daly, Deputy Patient Services Manager
Ms. Yvonne Burke, Colposcopy Unit
Ms. Denise Gleeson, Adult Outpatients
Ms. Kathy Hayes, Paediatric Outpatients
Ms. Yasmin Mc Evoy, Paediatric Outpatients
Ms. Julie Mc Evoy, Admissions/Reception Ms. Caroline Bosse, Laboratory Medicine
Ms. Louise O'Hara, Healthcare Records and Ward Clerks
Ms. Moira Carberry, SATU
Ms. Rita O'Connor, SATU
Ms. Catherine Finn, Anaesthesiology and Maternal Medicine
Ms. Lorraine Hanley, Radiography

*The team leaders oversee administrative assistant staff across the spectrum of clinical services in the Rotunda Hospital.

SERVICE OVERVIEW
The Patient Services Department provides frontline receptionist and administrative support to ensure the smooth operation of scheduled and non-scheduled patient appointments. The service is also responsible for the admissions of all patients and management of their medical records and information. This includes twenty-four-hour support at the main hospital reception and switchboard, as well as all scheduled clinical appointments and medical typing. Patient Services also provide administrative support to all allied health professionals in the hospital.

SUCCESSES & ACHIEVEMENTS 2020
2020 was a particularly challenging year for the entire Patient Services Department due to the COVID-19 pandemic. However, the entire team, as always, pulled together and worked efficiently to keep all services functioning successfully and safely.

The gynaecology services went fully live with the MN-CMS electronic healthcare record in 2020. This was a strategic initiative of the Patient Services Department, and has proven to be a great success for the Patient Services Team in assisting with the smooth running of gynaecology services. Remaining paper-based gynaecology charts are being archived, with the goal of becoming a paper-free hospital. To ensure smooth access to the Gynaecology Service, the triaging of referrals has been streamlined, with two dedicated consultants who triage all referrals weekly and delegate them to the relevant waiting list. This ensures a safe, more efficient and timely pathway for referrals.

Patient Services is now fully compliant with the Time Management System for staff attendance. Continued close cooperation with the Finance Department will ensure the system is being fully utilised with a view to optimising payroll functions.

The Colposcopy Service successfully opened a third clinical examination room which enabled the Patient Services team to more optimally schedule and provide a more efficient service to its cohort of patients.

In 2020, the Patient Services Team continued to work with colleagues in the National Treatment Purchase Fund (NTPF) to validate gynaecology waiting lists. This work took two months to complete, and resulted in the appropriate removal of 30% of patients from these waiting lists. In each instance of patient removal from a waiting list, the Patient Services Team wrote directly to the referring GP to inform them of the step, but also in enabling re-instatement of patients at their request, if deemed necessary. This approach meant that the good working relationships between our GP colleagues and the Rotunda were maintained throughout the process.

CHALLENGES 2020
The COVID-19 pandemic was the biggest challenge of 2020, with a huge effect on the Patient Services Team. Significant additional work was required in cancelling and re-scheduling clinics, often at short notice. Excellent communication was key in ensuring patients were fully informed and updated regarding changes to their appointments. Patient Services staff continued to present to work and provide necessary frontline service to all service users despite the uncertain times, with staff going above and beyond usual efforts to ensure all challenges from COVID-19 were resolved.

The gynaecology outpatient waiting list still proves to be a challenge with additional delays caused by the COVID-19 pandemic.

PLANS FOR 2021
It is planned to use the administrative capacity gained by full optimisation of the hospital databases to assist with the implementation of the inpatient gynaecology waiting lists across the hospital in 2021.

Training is a key factor in keeping staff motivated and aware of the evolving changes in the services provided and in clinical service developments. It is hoped to further develop training and development opportunities with colleagues in human resources in this regard.

A new digital telephony system will be rolled out throughout the hospital campus in 2021, including the main reception desk. This will remove the old switchboard, which will be replaced by a fully digital system. Once implemented, this will provide the opportunity of transferring the answering of the switchboard to a location away from main reception during core hours and improve the customer service experience for patients at the main reception desk.

Further validation of gynaecology waiting lists will again be performed with NTPF colleagues in 2021.

Governance

“The staff of the Rotunda Hospital were outstanding in their commitment to their patients, service users and fellow staff in ensuring business continuity and that services were maintained safely for all. As a Board we will always be most grateful to them for their unfailing commitment to the Rotunda Hospital and its patients.”

Dr. Maria Wilson Browne,
Chairman

Board of Governors

The Board of Governors is an independent group established by the Royal Charter of December 1756, and has overall responsibility for the governance of the Rotunda Hospital. The Board meets 10 times per year and it ensures that each Governor has equal responsibility in their respective roles while contributing as a unit to a single voice for the Hospital.

It is the Board's duty to set the tone for the Hospital, both ethically and culturally, and to provide strategic direction for the Executive Management Team. The Board reviews, approves and monitors annual business plans, as well as reviewing financial performance against targets. It also monitors legal risk, ethical risk and environmental compliance. It is within the Board's remit to appoint the Master. The Board approves the appointment of other senior management and consultants and also monitors the performance of the Executive Management Team to ensure that Board policy is implemented. The Board of Governors ensures that financial risks are audited and that an annual report is produced for the Rotunda Hospital.

The Board manages its functions through a number of committees:

- General Purposes Committee
- Risk Committee
- Property Advisory Committee
- Performance and Remuneration Committee
- Governance Audit Committee

ROTUNDA HOSPITAL BOARD OF GOVERNORS 2020

Dr. Maria Wilson Browne Chairman
Dr. David Abrahamson
Mr. David Browne
Dr. Cliona Buckley
Mr. Cedric Christie
Dr. Sam Coulter Smith
Mr. John Diviney
Dr. Fred Falkiner
Ms. Niamh Gallagher
Dr. James Gardiner
Prof. Michael Geary
Mr. Barry Holmes
Dr. Mary Keenan
Prof. Tom Matthews
Mr. Richard Nesbitt
Ms. Kristina Odlum
Ms. Margaret Philbin
Ms. Hilary Prentice
Mr. Denis Reardon
Mr. Ian Roberts
Mr. Stuart Switzer
Dr. Melissa Webb
Mr. Michael Wickham Moriarty
Ms. Lucinda Woods

EX-OFFICIO OFFICERS

His Excellency, The President of Ireland
Most Reverend Dr. Michael Jackson
The Dean of St. Patrick's The Very Rev. William W. Morton
The Venerable David Pierpoint
The Lord Mayor of Dublin
Cllr. Darcy Lonergan, Dublin City Council Nomination

Appendices

Appendix 1

ROTUNDA HOSPITAL CLINICAL SUMMARY DATA 2020

1. Total Mothers Attending	Totals
Mothers who have delivered babies weighing >500g	8,147
Mothers who have delivered babies weighing <500g {including miscarriages}	1,624
Hydatidiform Moles	24
Ectopic Pregnancies	120
Total Pregnancies	**9,915**

2. Maternal Deaths	Totals
Maternal Deaths	**0**

3. Births	Totals
Singletons	7,985
Twins	330 (165 sets)
Triplets	9 (3 sets)
Quadruplets	4 (1 set)
Total Babies delivered weighing 500g or more	**8,316***

*Some multiple pregnancies resulted in the birth of one fetus who weighed <500g and did not survive. Total adjusted accordingly.

4. Obstetric Outcome	%	Totals
Spontaneous Vaginal Delivery*	47%	3,827
Forceps	5%	384
Ventouse	11%	901
Caesarean Section	37%	3,035
Induction of Labour	38%	3,076

*Breech Deliveries included in spontaneous vaginal delivery

5. Perinatal Deaths	Totals
Antepartum Deaths	32
Intrapartum Deaths	0
Stillbirths	32
Early Neonatal Deaths	18
Late Neonatal Deaths	8
Congenital Anomalies	26

6. Perinatal Mortality Rate (per 1,000 births)	Totals
Overall Perinatal Mortality Rate	6.0
Perinatal Mortality Rate Corrected For Lethal Congenital Anomalies	2.9
Perinatal Mortality Rate Including Late Neonatal Deaths	7 .0
Perinatal Mortality Rate Excluding Unbooked Cases	6.0
Corrected Perinatal Mortality Rate Excluding Unbooked Cases	2.9
Perinatal Mortality Rate in normally formed babies >2,500g	1.1

7. Age of Women				
	Nulliparous	Multiparous	Total Mothers Delivered >500g	%
<20 yrs	142	22	164	2%
20-24 yrs	484	241	725	9%
25-29 yrs	814	717	1,531	19%
30-34 yrs	1,339	1,421	2,760	34%
35-39 yrs	722	1,567	2,289	28%
40+ yrs	194	484	678	8%
Total	**3,695**	**4,452**	**8,147**	**100%**

8. Parity	Totals	% from Total Mothers Delivered >500g
Para 0	3,691	45%
Para 1	2,739	34%
Para 2-4	1,626	20%
Para 5+	91	1%
Total	**8,147**	**100%**

9. Country of Birth / Nationality (from Mothers Delivered >500g)	Totals	%
Irish	5,203	64%
EU	1,302	16%
Non Eu	1,582	19%
Unknown	60	1%
	8,147	**100%**

10. Birth Weight	Totals	%
< 500 g	1*	0.1%
500 - 999 g	47	0.6%
1,000 - 1,499	56	1%
1,500 - 1,999	105	1%
2,000 - 2,499	336	4%
2,500 - 2,999	1,083	13%
3,000 - 3,499	2,805	34%
3,500 - 3,999	2,825	34%
4,000 - 4,499	933	11%
4,500 - 4,999	122	2%
>5,000	4	0.5%
Total	**8,316**	**100.0%**

*Survived

11. Gestational Age				
	Nulliparous	**Multiparous**	**Totals**	**%**
<26 weeks	12	16	28	0.5%
26 - 29 weeks + 6 days	17	21	38	1%
30 - 33 weeks + 6 days	60	46	106	1%
34 - 36 weeks + 6 days	225	218	443	5%
37 - 41 weeks + 6 days	4,139	3,359	7,498	92%
42 + weeks	2	32	34	0.5%
Total	**4,455**	**3,692**	**8,147**	**100.0%**

12. Perineal Trauma after Vaginal Deliveries				
	Nulliparous	**Multiparous**	**Totals**	**%**
Episiotomy & Extended Episiotomy	1,322	369	1,691	33%
First Degree Laceration	194	550	744	14%
Second Degree Laceration	521	900	1,421	28%
Third Degree Anal Sphincter/Mucosa	80	35	115	2%
Fourth Degree	5	4	9	0.2%
Other: Includes all Lacerations/Grazes	81	308	389	8%
Intact	124	680	804	15%
Totals	**2,327**	**2,846**	**5,173**	**100%**

CS Deliveries not included in the above. Total Vaginal deliveries: 5,112.
Some 3rd & 4th degree tears are included in Extended Episiotomy.

13. Third or Fourth Degree Tears*			
	Nulliparous	**Multiparous**	**Totals**
Occurring Spontaneously	36	34	70
Associated with Episiotomy	51	7	58
Associated with Forceps	21	3	24
Associated with Vacuum	17	0	17
Associated with Vacuum & Forceps	12	2	14
Associated with O.P. position	9	4	13
Total 3rd & 4th Degree Tears	**85**	**39**	**124**

14. Perinatal Mortality in Antepartum Normally formed Infants			
	Nulliparous	**Multiparous**	**Totals**
Placental Causes	5	5	10
Cord Accident	3	2	5
Infection	0	1	1
Abruption	0	1	1
Prematurity	2	4	6
Unexplained	0	1	1
Total	**10**	**14**	**24**

15. Perinatal Mortality in Congenitally Malformed Infants			
	Nulliparous	**Multiparous**	**Totals**
Genetic	4	8	12
CNS Lesions	1	5	6
Cardiac	1	2	3
Renal	1	2	3
Diaphragmatic Hernia	0	2	2
Other	0	0	0
Totals	**7**	**19**	**26**

16. Early Neonatal Deaths in Normally Formed Infants			
	Nulliparous	**Multiparous**	**Totals**
Congenital	2	11	13
Prematurity	2	3	5
Infection	0	0	0
Totals	**4**	**14**	**18**

17. Hypoxia Ischaemic Encephalopathy*		
Grades	**Grade 2**	**Grade 3**
	14	4

*Inborn babies only

18. Severe Maternal Morbidity	
	Totals
Massive Obstetric Haemorrhage	26
Emergency Hysterectomy	6
Severe Sepsis	5
Acute Renal or Liver Dysfunction	3
Pulmonary Embolus	3
Pulmonary Oedema/Acute Respiratory Dysfunction	2
Cardiac Arrest	2
Uterine Rupture	1
Eclampsia	1
Coma	1
Transfer to ICU/CCU	18

19. Body Mass Index (kg/m²)				
	2017	**2018**	**2019**	**2020**
Underweight: <18.5	169 (2%)	98 (1%)	156 (1%)	125 (1%)
Healthy: 18.5 - 24.9	4,224 (51%)	2,674 (32%)	4,328 (47%)	4,425 (45%)
Overweight: 25 - 29.9	2,333 (28%)	1,669 (20%)	2,751 (30%)	2,986 (30%)
Obese class 1: 30 - 34.9	989 (12%)	671 (8%)	1,181 (13%)	1,302 (13%)
Obese class 2: 35 - 39.9	309 (4%)	259 (3%)	467 (5%)	468 (5%)
Obese class 3: >40	120 (2%)	115 (1%)	177 (2%)	208 (2%)
Unrecorded	82 (1%)	2,873 (34%)	91 (1%)	401 (4%)
Total Deliveries/Bookings	**8,226**	**8,359**	**9,151**	**9,915**

Appendix 2

COMPARATIVE TABLE FOR 10 YEARS

Years	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Babies born	9,319	9,041	8,841	8,980	8,538	8,589	8,409	8,514	8,410	8,316
Perinatal Deaths	59+2*	66+2*	63+6*	68+2*	71	54+5*	51+1*	45+1*	59+6*	50
Perinatal Mortality Rate	6.5	7.5	7.8	7.7	8.3	6.9	6.2	5.4	7.7	6.0
Corrected Perinatal Mortality Rate	3.7	4.9	4.5	4.5	4.8	4.1	3.6	3.0	4.1	2.9
Mothers Attending	10,547	10,397	10,314	10,814	10,078	10,024	9,915	9,760	10,200	9,915
Maternal Deaths	3	2	3	2	1	0	0	0	0	0
Caesarean Section %	29	29	31	31	32	35	34	34	35	37
Forceps/Ventouse %	19.4	18	17	17	17	16	16	16	16	16
Epidural %	46	48	47	47	47	45	48	45	48	49
Induction %	29	28	29	30	29	29	31	31	35	36

* Unbooked

Appendix 3

PERINATAL DEATHS

GESTATIONAL AGE AT DELIVERY (WEEKS)

Stillbirths		
20 0/7 - 23 6/7	3	9%
24 0/7 - 27 6/7	8	25%
28 0/7 - 31 6/7	6	19%
32 0/7 - 36 6/7	8	25%
37 0/7 - 39 6/7	4	13%
>/= 40 0/7	3	9%
Total	**32**	**100%**

Early Neonatal Deaths		
20 0/7 - 23 6/7	4	22%
24 0/7 - 27 6/7	0	0%
28 0/7 - 31 6/7	1	6%
32 0/7 - 36 6/7	6	33%
37 0/7 - 39 6/7	3	17%
>/= 40 0/7	4	22%
Total	**18**	**100%**

WEIGHT AT DELIVERY (GRAMS)

Stillbirths		
500 - 999g	11	34%
1000 - 1,499g	5	16%
1500 - 1,999g	5	16%
2000 - 2,499g	4	13%
2500 - 4,999g	7	22%
>/= 5,000g	0	0%
Total	**32**	**100%**

Early Neonatal Deaths		
500 - 999g	5	28%
1000 - 1,499g	1	6%
1500 - 1,999g	3	17%
2000 - 2,499g	3	17%
2500 - 4,999g	6	33%
>/= 5,000g	0	0%
Total	**18**	**100%**

Appendix 4

OUTPATIENT ACTIVITY DATA 2020

Outpatient Activity Data - 2020				
Description	**New Attendences**	**Return Attendences**	**Total**	**Telemedicine**
Antenatal & Postnatal	14,905	32,724	47,629	5,900
Gynaecology	2,706	4,901	7,607	1,073
Colposcopy & Smear Clinic	1,484	3,853	5,337	0
Paediatrics	4,434	3,197	7,631	286
Endocrinology	185	1,725	1,910	123
Gastroenterology	20	9	29	15
Haematology	95	171	266	303
Anaesthetics	1,037	12	1,049	121
Nephrology	189	502	691	0
Psychiatry	792	856	1,648	2,383
Dove Medical	133	131	264	42
Allied Health Clinics	2,250	3,076	5,326	1,639
Diagnostic Clinics *	4,420	16,081	20,501	0
Total	**32,650**	**67,238**	**99,888**	**11,885**

*Diagnostic Clinics include Ultrasound, EPAU and FAU - Radiology clinics excluded

Appendix 5

FINANCIAL INFORMATION

THE ROTUNDA HOSPITAL, DUBLIN

NON CAPITAL INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 31 DECEMBER 2020

	2020 €'000	2019 €'000
PAY		
Salaries	**65,764**	60,506
Pensions	**7,275**	4,854
	73,039	65,360
NON-PAY	**7,847**	6,826
Direct patient care	**7,507**	6,343
Support services	**3,233**	3,485
Financial and administrative	**18,587**	16,654
TOTAL EXPENDITURE FOR THE YEAR	**91,626**	82,014
Income	**(15,353)**	(15,915)
NET EXPENDITURE	**76,273**	66,099
HSE Funding for year	**(76,583)**	(66,538)
SURPLUS / (DEFICIT) FOR THE YEAR	**310**	439
DEFICIT CARRIED FORWARD	**(226)**	(665)
SURPLUS BROUGHT FORWARD	**84**	(226)

Appendix 6

COMPLETED AUDITS 2020

Title of Audit
Anaesthesiology
Fibrinogen supplementation in obstetric haemorrhage in the context of OBS-2 (Defining the threshold for fibrinogen replacement therapy in obstetric haemorrhage @ likely 2 g/L. RCT. Collins PW, Br J Anaesthesia 2017).
An audit of postpartum anaemia following postpartum haemorrhage in the Rotunda HDU.
Clinical Nutrition
Audit to identify patients who met dietetic referral criteria but were not referred and to establish an improvement plan to increase accessibility.
Patients diagnosed with GDM receiving education and clinical postnatal outcomes.
Gynaecology
Audit of insertion of Word catheters in Day Assessment Unit and Emergency Assessment Unit.
An audit of ovulation induction medications prescribed in a subfertility clinic.
Increased rate of blood product transfusion during/after ERPC.
Medical Management of Miscarriage in EPAU 2020.
Mental Health
Re-Audit of Completion of EPDS (Edinburgh Postnatal Depression Scale) on discharge.
Women in the Travelling Community's engagement with perinatal mental health services.
Neonatology
Clinical audit to determine whether current patient problems are being appropriately documented in the "Consolidated Problems" list by the Neonatology Department.
Analysis of intubations: A re-audit of intubations in the NICU and the factors associated with unsuccessful intubations.
Care of late preterm infants at the Rotunda.
Empirical antibiotic use in infants born at <32weeks in The Rotunda NICU.
Use of emergency O Rh negative blood in a tertiary NICU.
Nursing/Midwifery
FBC monitoring at 28-32 weeks gestation in Community Midwifery Teams.
The demand for breast pumps on wards and returns received from CSSD over a four-week period and associated infant /mother dependence.
Obstetrics
The medical management of second trimester miscarriage.
Initial steps in PPROM (preterm prelabour rupture of membranes) management.
Management of fetal loss and stillbirth from 24 weeks' gestation onwards.
Review of the management of pregnancy of unknown location.
Orders for blood products for adult patients.
FBC monitoring at 28-32 weeks gestation in subsequent antenatal clinic visits.
Audit of maternal morbidity associated with mid-trimester prolonged rupture of membranes.
Medical management of miscarriage in the EPAU.
A re-audit of the use of methotrexate in the management of ectopic pregnancy.
Re-audit SBAR assessment of pager communication between midwives and paediatric SHO's during on-call hours for attending deliveries.
Audit of first six months of Manual Vacuum Aspiration (MVA) service provision.
Audit of the use of serum bHCG levels in early pregnancy in the Rotunda.
Pathology
An audit of the quality of perinatal and neonatal autopsies in the Rotunda Hospital.

Title of Audit *(continued)*
Pharmacy
Drug chart compliance with medication management guidelines in the NICU.
Postnatal analgesia.
Radiology
Reject analysis in digital radiography.
SATU
The percentage of cases who had a legal report completed within 8 weeks of a forensic clinical examination being carried out.
Option 3 'Storage of evidence' cases.
The classification and documentation of wounds/injuries during forensic clinical examinations carried out in the Sexual Assault Treatment Unit (SATU).

Appendix 7

STAFF RESEARCH PUBLICATIONS 2020

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Appendix 8

STAFF LIST

MASTER
Prof. Fergal Malone

CLINICAL DIRECTOR
Dr. Michael Geary

SECRETARY/GENERAL MANAGER
Mr. Jim Hussey

DIRECTOR OF MIDWIFERY & NURSING
Ms. Fiona Hanrahan

CONSULTANT OBSTETRICIAN GYNAECOLOGIST
Dr. Carole Barry
Dr. William Boyd
Prof. Fionnuala Breathnach
Dr. Naomi Burke
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Ms. Eleanor Power

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Ms. Cinny Cusack (Senior Physiotherapist)
Ms. Sinead Devitt (Head Medical Social Worker)
Ms. Laura Kelly (Head of Clinical Nutrition)
Mr. John O'Loughlin (Laboratory Manager)

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Ms. Kathy Conway (Clinical Reporting)
Ms. Siobhan Enright (Clinical Risk Manager)
Mr. Cathal Keegan (IT Manager)
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Mr. Henry Gelera (Clinical Engineering Manager)
Ms. Catherine L'Estrange (Household Manager)
Mr. Brendan Memery (Technical Services Manager)
Mr. Ray Philpott (Support Services Manager)
Mr. Paul Shields (Head Porter)

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Rev. Alan Boal
Ms. Ann Charlton
Ms. Susan Dawson
Rev. David Gillespie
Rev. Dr. Laurence Graham
Fr. John Walsh O.P.

Appendix 9

ORGANISATIONAL STRUCTURE

BOARD OF GOVERNORS

GENERAL PURPOSES COMMITTEE | PROPERTY COMMITTEE | GOVERNANCE/AUDIT COMMITTEE | RISK COMMITTEE

EXECUTIVE MANAGEMENT TEAM

DIRECTOR OF MIDWIFERY & NURSING

CLINICAL MIDWIFERY & NURSING
- Maternity
- Gynaecological
- Neonatal

MIDWIFERY & NURSING EDUCATION
- Undergraduate Training
- Postgraduate Training

MATERNITY CARE ASSISTANTS
- Education & Training
- Clinical Placement

PRACTICE DEVELOPMENT
- Ongoing Education & Training
- Clinical Practice Development

BEREAVEMENT SUPPORT
- Inpatient Support
- Outpatient Follow Up

QUALITY, SAFETY & RISK
- Infection Prevention & Control
- Health Promotion
- Clinical Risk

ALLIED HEALTH & SOCIAL CARE PROFESSIONALS
- Medical Social Work
- Clinical Nutrition
- Physiotherapy

MN-CMS
- Project Management
- Operational

MASTER

OBSTETRIC & GYNAECOLOGIC CARE
- Outpatient Services
- Emergency Services
- Operating Theatres
- Inpatient Services
- GP Liaison

LABORATORY
- Haematology & Transfusion
- Biochemistry
- Microbiology
- Histopathology
- Virology/Serology

ANAESTHESIOLOGY
- Pre-Anaesthetic Assessment
- Anaesthetics/Recovery
- High Dependency Unit

NEONATAL SERVICES
- Inpatient Neonatal Care
- Outpatient Care
- Neonatal Transport

DIAGNOSTIC IMAGING
- Radiology
- Ultrasound
- Fetal Medicine

SEXUAL ASSAULT TREATMENT
- Forensic Examination & Follow-Up

COLPOSCOPY
- National Cervical Screening Service

ALLIED HEALTH & SOCIAL CARE PROFESSIONALS
- Perinatal Mental Health
- Chaplaincy
- Radiology

ACADEMICS
- Undergraduate & Postgraduate Training
- Research Projects, Initiatives & Ethics
- Innovation Hub
- Research & Innovation

QUALITY & SAFETY
- Clinical Audit
- Clinical Risk

SECRETARY/GENERAL MANAGER

FINANCE
- Financial Control & Management
- External Audit
- Procurement
- Insurance
- Asset Register

SUPPORT SERVICES
- Household
- Portering
- Technical
- CSSD
- Clinical Engineering
- Catering

HUMAN RESOURCES
- Employee Selection & Recruitment
- Training & Development
- Occupational Health

INFORMATION TECHNOLOGY
- System Support & Administration
- Systems Development

PATIENT SERVICES
- Administration & Support
- Healthcare Records
- Library & Information Service
- Information Provision, Promotion & Dissemination

CLINICAL ACTIVITY REPORTING
- Clinical Management Information
- Internal & External Reports

ALLIED HEALTH & SOCIAL CARE PROFESSIONALS
- Pharmacy
- Radiography

QUALITY, SAFETY & RISK
- Health & Safety
- Quality Improvement
- Patient Experience
- Information Governance

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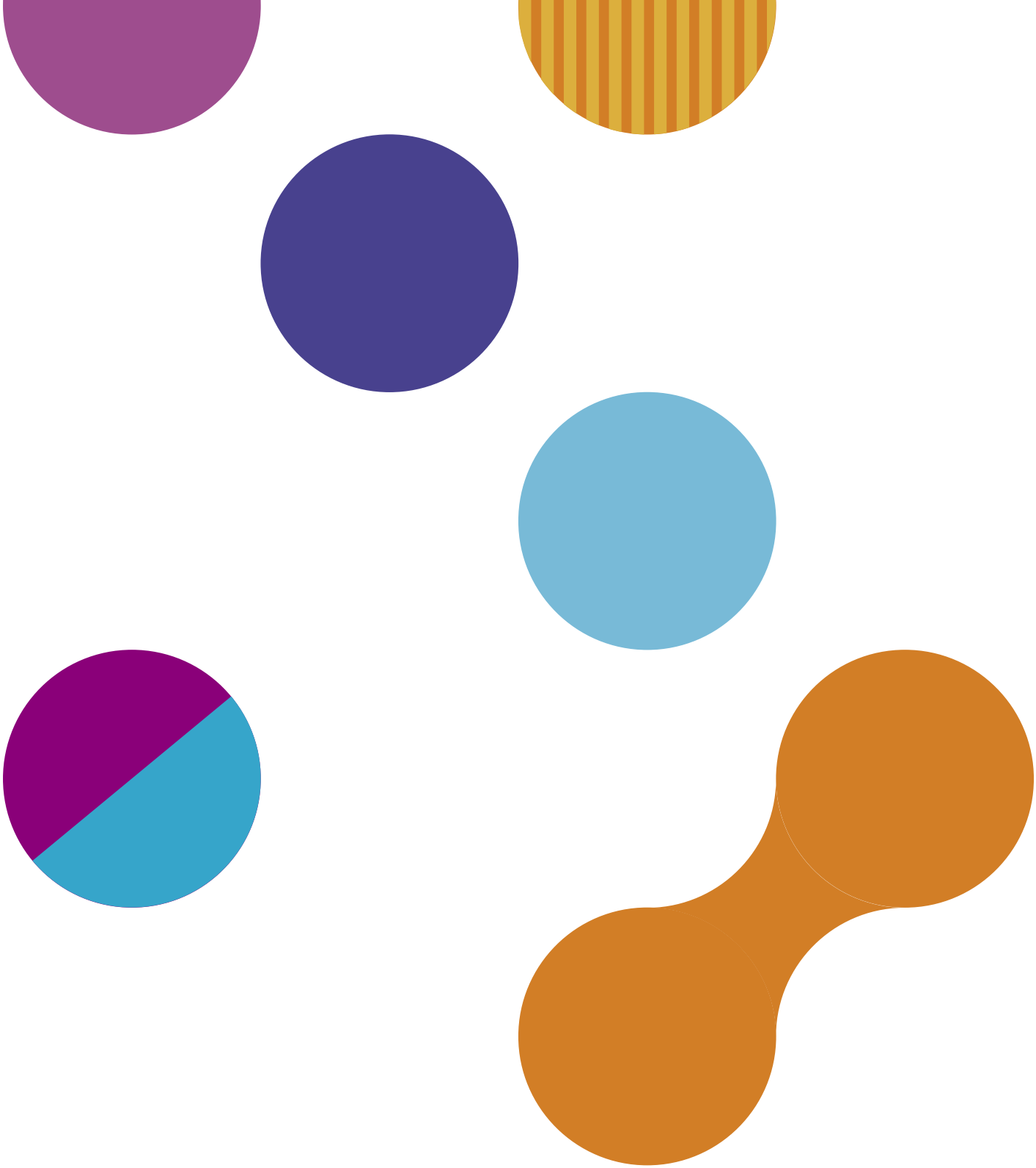
The Rotunda Hospital,
Parnell Square,
Dublin 1,
DO1 P5W9

Tel: 01 817 1700
www.rotunda.ie
@RotundaHospital



The Rotunda Hospital,
Parnell Square,
Dublin 1,
DO1 P5W9

Tel: 01 817 1700
www.rotunda.ie
@RotundaHospital