

# The Rotunda Hospital Dublin

## Annual Report 2022





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## 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 265 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.

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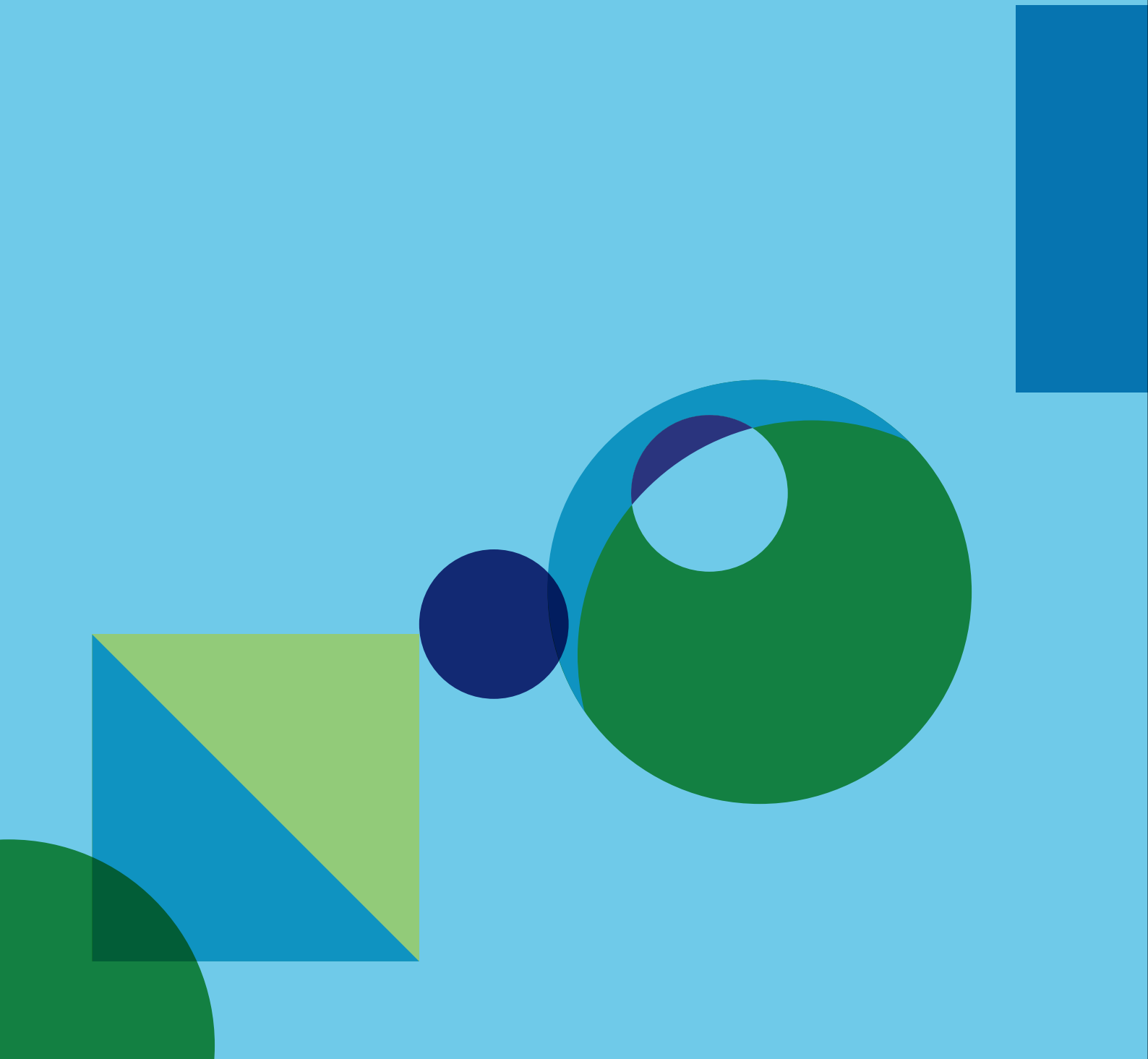
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# Introduction

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# Introduction by the Master

On 31 December 2022, I handed over the role of Chief Executive Officer of the Rotunda to the incoming 40<sup>th</sup> Master since our foundation in 1745, Professor Sean Daly. Following seven years as Master, I am simultaneously delighted and saddened at this planned changeover – delighted to be handing over leadership of the Rotunda at the strongest point in its 278 year history to a very capable new Master, but also saddened at the completion of what has been the most professionally rewarding period of my career to date.

After enduring the challenges of a fire in our neonatal intensive care unit in 2017, the unprecedented upheaval of the COVID-19 pandemic in 2020, and the significant practical disruption of the HSE Cyberattack in 2021, we were grateful for a relatively ‘normal’ and ‘drama-free’ 2022. That being said, 2022 also brought its own individual challenges, not least being the persistently high clinical throughput of a demand-led service, in the setting of ongoing difficulties in recruitment and retention of staff, while delivering services from a physical infrastructure that is no longer fit-for-purpose.

As an independent voluntary hospital, the oldest continuously operating maternity hospital in the world, and the busiest in Europe, the Rotunda is uniquely positioned to positively impact on the lives of generations of families in Ireland. I am proud to confirm that the 1,215 members of staff at the Rotunda have, yet again, accomplished our mission: to excel in the delivery of safe, innovative and responsive services for women and their families.



**“To excel in the delivery of safe, innovative and responsive services for women and their families.”**

CLINICAL ACTIVITY

Over the last seven years we have solidified the status of the Rotunda as the preeminent maternity hospital in the state, not only in terms of clinical activity volumes, but also in terms of visibility and public engagement. Despite a significant drop in birth rates nationally over the last seven years, the Rotunda has uniquely maintained its obstetric clinical activity at between 9,700 and 10,700 mothers delivered each year, which translates into 8,200 to 9,200 babies born annually. During my term as Master, 70,286 women entrusted their pregnancy care to the Rotunda, and 59,677 babies were born. The Rotunda now delivers 20% more babies per annum than our sister Dublin maternity hospitals, the National Maternity Hospital or the Coombe Hospital, with one in every six babies born in the state being a Rotunda baby.

The two most likely reasons for this significant demographic shift towards the Rotunda in the last seven years are the growth in population of young people within our North Dublin catchment area, but also the very significant positive public profile of the Rotunda. With its easily accessible internet presence, its social media offerings on Instagram and Twitter, its television and mainstream media profile, its national advocacy in terms of prenatal diagnosis, maternal vaccination and pregnancy termination choices, and its virtual health services, the Rotunda is increasingly seen by members of the public as an icon of safety, innovation and independence. This translates into significant extra clinical activity when patients have the ability to exercise their right of clinical choice.

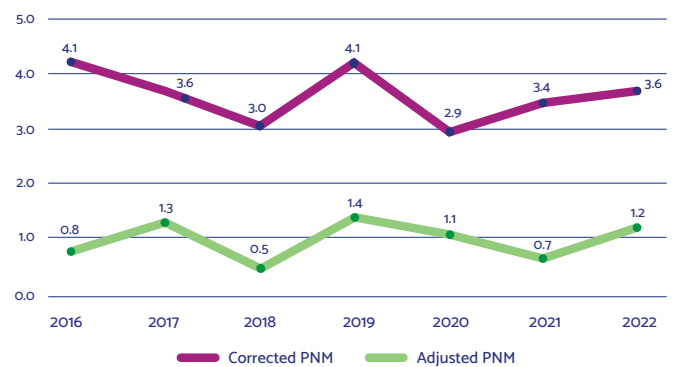
FIGURE 1: ROTUNDA CLINICAL ACTIVITY



Maternity hospitals in Ireland are classic examples of truly demanded services – it is not possible to turn pregnant patients away nor is it possible to put such patients on a waiting list. All pregnant patients who present for care at the Rotunda are seen promptly and without reference to catchment area or public-private status. Despite

successfully managing an increasing proportion of pregnancies in Ireland, over the last seven years the Rotunda has managed to improve its perinatal outcomes, with a mean corrected perinatal mortality rate of 3.5 per 1,000 births (excluding babies with congenital malformations) and a mean adjusted perinatal mortality rate of 1.0 per 1,000 births (excluding premature births <2.5kg).

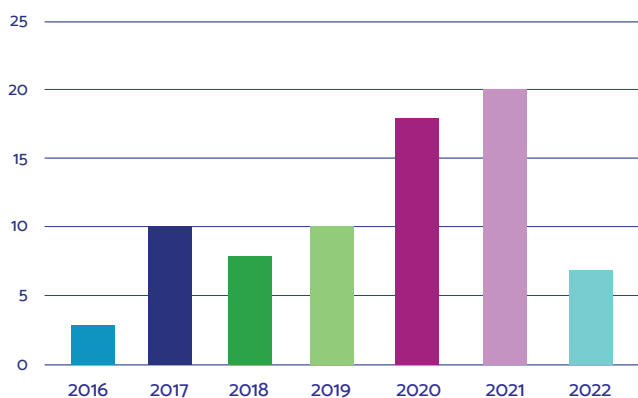
FIGURE 2: ROTUNDA PERINATAL OUTCOMES



In addition to being by far the busiest maternity hospital in Ireland, over the last seven years the Rotunda has markedly increased its gynaecologic workload. Following the opening of two additional state-of-the-art operating theatres and an ambulatory gynaecology unit, including an outpatient hysteroscopy theatre, the gynaecologic waiting list has fallen by over 20% from a peak of 3,399 in 2018 to 2,623 at the end of 2022, accompanied by a 97% reduction in patients waiting more than one year. This reduction in waiting lists has occurred despite the fact that the Rotunda has doubled its rate of new GP referrals from 300 per month in 2018 to over 600 per month at the end of 2022.

In order to maximise the quality of its services, the Rotunda has implemented a rigorous clinical audit and risk management service, with weekly reporting of all serious clinical incidents to the Executive Management Team for consideration. This allows for rapid, targeted management responses to any perceived increase in adverse outcomes. In 2020, our monitoring systems noted an apparent increase in cases of hypoxic ischaemic encephalopathy (HIE), in response to which, the Executive Management Team established a multidisciplinary taskforce in 2021 to analyse potential causes as well as implementing solutions. Potential issues were identified in the Delivery Suite in terms of staffing at night, fetal heart rate tracing interpretation, and consultant supervision. Each of these areas were targeted for correction, and it was most gratifying to note a complete reversal of this trend in 2022. This confirms the accuracy and efficacy of our clinical monitoring systems and responsiveness to any identified trends.

**FIGURE 3: HIE - GRADE 2 OR 3 CASES AT THE ROTUNDA**



## PHYSICAL INFRASTRUCTURE

Since my appointment as Master in 2016, the main practical challenge that we have been attempting to resolve in terms of optimising Rotunda services has been its extremely limited physical infrastructure. With main hospital inpatient buildings unchanged since 1757, our hospital campus is no longer fit-for-purpose for 21st century healthcare delivery. This has resulted in multiple infectious outbreaks due to overcrowding, in particular in our neonatal intensive care unit, which have unfortunately been associated with adverse maternal and paediatric outcomes. During the initial years of my Mastership, we engaged with teams from the HSE and the Department of Health to develop a proposal for a new, relocated Rotunda campus on the site of Connolly Hospital in Blanchardstown, which would have been consistent with Department of Health policy on co-location of the three Dublin maternity hospitals on sites of adult general hospitals. However, it soon became clear that such a relocation project would require significant upgrading of Connolly Hospital to make it safe to look after critically ill pregnant women, and would take at least 20 years to complete, which would represent an intolerable clinical risk for the Rotunda.

We therefore embarked on a new infrastructure optimisation project, namely the building of a five-storey Critical Care Wing on the west side of our Parnell Square campus. This required detailed consultation with the Department of Health, HSE, public representatives and planning authorities and has resulted in agreement in principle to progress the construction of an 8,000m<sup>2</sup> state-of-the-art building to provide at least 80 new beds for the Rotunda. This includes a new neonatal intensive care unit, new delivery suite, new postnatal ward, and new central sterile services department. We are currently working with the HSE to progress this project through the requirements of the DPER Public Spending Code to obtain required approvals, with the expectation that this project should be completed in approximately 3-4 years.

A crucial enabling step for the development of the Critical Care Wing is the requirement to relocate a large number of ambulatory services from the existing single storey outpatient building on the west side of Parnell Square. Working with our partners in HSE Estates, in late 2022 we successfully acquired the Earl Building, a newly constructed, six-storey 3,000m<sup>2</sup> building adjacent to the new Clerys Quarter on O'Connell Street. We are currently fitting-out this building to accommodate a new maternity outpatients department, paediatric outpatients department, colposcopy service, perinatal mental health service, and social work service. This new building will open in the Summer of 2024, thereby vacating the west side of Parnell Square to enable the commencement of planned construction of the 8,000m<sup>2</sup> Critical Care Wing.



The Earl Building at Clerys Quarter - recently acquired for the Rotunda for its inner city Dublin expansion.

After seven years of consultation and collaboration with a range of stakeholders, I am delighted that the medium-term future of the Rotunda has now been secured on its Parnell Square campus by the purchase of the Earl Building, and the progression of the Critical Care Wing project. I am most grateful to our partners in the HSE, and in particular HSE Estates, for their support in optimising the Rotunda's infrastructure, which will greatly improve the care that we can provide to hundreds of thousands of women and families over the coming decades.

In addition to these medium term, major infrastructure developments, over the last seven years we have also completed or commenced the following hospital infrastructure improvements:

- Complete renovation and expansion of the neonatal intensive care unit
- Complete renovation and expansion of the Delivery Suite, to provide 11 delivery rooms and a dedicated operating theatre
- Renovation and extension of the operating theatre suite, including the construction of a fourth operating theatre and new recovery suite
- Development of a state-of-the-art ambulatory gynaecology building, including 10 consultation suites, outpatient hysteroscopy theatre, urodynamics suite, and gynaecologic ultrasound suite
- Renovation and expansion of the fetal medicine and ultrasound suite, including the construction of six ultrasound rooms, consultation rooms, reception and waiting areas
- Renovation and expansion of the Rotunda Private Clinics and Semiprivate Clinics, including installation of two new ultrasound suites
- Renovation and modernisation of the hospital pharmacy, including installation of a state-of-the-art robotic drug dispensary system
- Development of a seven-day per week obstetric Day Assessment Unit
- Expansion of the Emergency and Assessment Unit, with construction of three new clinical assessment bays
- Renovation and expansion of the Sexual Assault Treatment Unit (SATU)
- Relocation and expansion of the Physiotherapy Department
- Creation of a new Perinatal Mental Health Suite (Sheridan Suite)

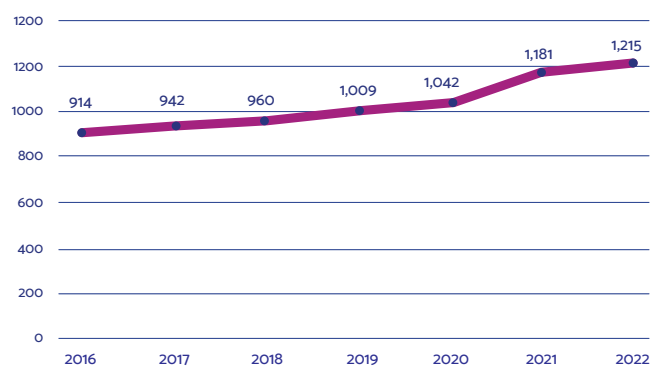
We remain dedicated custodians of the beautiful, Richard Cassells’ designed Rotunda building dating from 1757, which requires extensive efforts to maintain for future generations, including the exquisite Rotunda chapel, stained-glass windows, bell-tower, staircases, gardens and front entrance. The vision for the Rotunda on Parnell Square includes this dual approach of maintaining our architectural history while providing contemporary healthcare to the highest standards in state-of-the-art new buildings on our inner city Dublin campus.

### THE ROTUNDA TEAM

The 1,215 staff of the Rotunda Hospital are rightly considered the hospital’s most prized assets. Of the regular written feedback submitted by patients to the hospital, over 90% is positive, with the vast majority of these comments praising the skill, compassion and dedication of Rotunda employees. However, as with all Irish hospitals, the Rotunda is greatly challenged in both recruiting and retaining staff, with specialist midwives, operating theatre nurses, and neonatal nurses particularly difficult to find. We have also noticed that, since the COVID-19 restrictions of 2020-2021 have eased, many young nurses, midwives and doctors have chosen to start traveling abroad again, further impacting on our ability to optimise staffing.

Despite these challenges, we have been quite successful in maximising Rotunda recruitment, with a 33% increase in overall staffing numbers over the last seven years. This has included a 35% increase in the number of nurses and midwives from 366 to 492, a 70% increase in the number of consultant obstetrician-gynaecologists from 18 to 31, a doubling in the number of consultant anaesthesiologists from six to 12, and a doubling in the number of consultant neonatologists from six to 11, by the end of 2022.

FIGURE 4: ROTUNDA HEAD COUNT



In order to optimise the attractiveness of the Rotunda for recruitment and retention of staff, we have created new programmes for Advanced Nurse Practitioners, Advanced Midwife Practitioners, and a new grade of Physician Associates. Additionally, the Rotunda now has the largest maternal-fetal medicine fellowship training programme in Ireland, which involves an RCOG-approved two-year training programme jointly between the Rotunda and Columbia University Medical Center in New York. The last eight graduates of this programme have all attained senior specialist consultant positions at either the Rotunda or the National Maternity Hospital. We have also established the first American

Association of Gynaecologic Laparoscopy, AAGL-approved, fellowship training programme in Minimally Invasive Gynaecologic Surgery in Europe at the Rotunda. By creating such innovative and novel training opportunities, the Rotunda has managed to recruit the clinical leaders of the future, as well as retaining our most valued existing staff. This ensures that the Rotunda remains a medical institution that is highly attractive to the best and brightest of our healthcare graduates, and reinforces that the Rotunda doesn't recruit just any staff, but the best possible staff.

## OPTIMISING CLINICAL SERVICES

Hospital leadership requires constant repositioning of the hospital's clinical services to reflect the latest developments in modern healthcare. One of the most momentous achievements in the 278 year history of the Rotunda was the conversion of the entire hospital service to a digital hospital in 2017, one of only two entirely digital hospitals in all of Ireland. During this time, the Rotunda has become effectively paperless, with physical charts becoming a thing-of-the-past. All hospital staff now use the Cerner MN-CMS electronic healthcare system for obstetric, gynaecologic, neonatal, anaesthesiology and pathology medical record-keeping, order entry, drug prescribing, laboratory services, fetal heart rate monitoring, and ancillary services documentation. The system supports remote access by staff off-site from the Rotunda, and ensures instant access to all healthcare records at all times. It is now inconceivable to imagine the Rotunda operating as a paper-based hospital ever again.

In 2018, following significant advocacy by Rotunda leaders, the Eighth Amendment to the Irish Constitution was resoundingly repealed following a people's referendum, and resulted in the implementation of a fully integrated termination of pregnancy service at the Rotunda, only eight months later. To commence such a service from scratch, initially without new resources, and remaining sensitive to a small number of staff conscientious objections, required significant leadership and teamwork, for which the Rotunda is well-recognised.

Consultant supervision of healthcare is required now more than ever, in particular in obstetrics and gynaecology services in response to the massive increase in medico-legal costs. Over the last seven years, the Rotunda has led the way in this regard by being the only maternity service that has two consultant obstetrician-gynaecologists on-call on a 24/7 basis. This enables the Rotunda to provide 24/7 laparoscopic surgery for gynaecologic emergencies, not just for its own patients, but for its partner adult general hospitals on the north side of the city. Additionally, a new team-based approach to all inpatient admissions provides a single, named consultant obstetrician-gynaecologist to be available to supervise all inpatients on a week-by-week basis, thereby optimising continuity of care. The Rotunda has also developed Ireland's

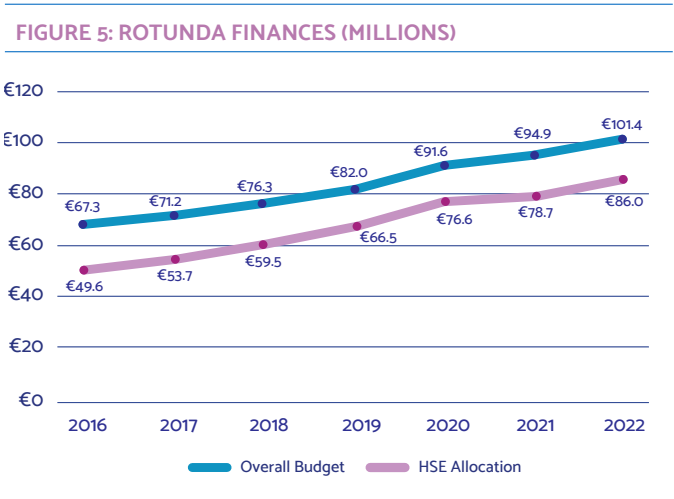
only functioning fetal medicine network, with a team of maternal-fetal medicine consultants appointed across the RCSI Hospitals Group maternity units, enabling bidirectional transfer of patients with fetal abnormalities between the Rotunda, Our Lady of Lourdes Hospital Drogheda, and Cavan General Hospital.

During the last seven years, the Rotunda has also implemented a new, multidisciplinary Perinatal Mental Health Service, an expanded Paediatric Adolescent Gynaecology Service, an expanded multidisciplinary Urogynaecology Service, and a Menopause Service. Other innovations include the Rotunda Board-funded national Irish Medicines in Pregnancy Service, and a Clinical Innovation Unit, which encourages and supports novel clinical ideas from our own hospital staff. Taken together, these underpin the reputation of the Rotunda as Ireland's major innovator in the fields of women's and children's health.

## HOSPITAL GOVERNANCE AND MANAGEMENT

A hallmark of the Rotunda as an independent voluntary hospital is its diverse and dynamic Board of Governors, who monitor the performance and strategic direction of the hospital, while its committed Executive Management Team (EMT) directs day-to-day hospital operations. I am very grateful to current Chair of the Board, Prof. Tom Matthews for ongoing support, as well as to the previous Chairs I have worked with, Dr. Maria Wilson Browne, Prof. Patricia Walsh, and Ms. Hilary Prentice. It would not have been possible to provide such effective hospital leadership without the immense assistance of my EMT colleagues, Mr. Jim Hussey (Secretary/General Manager), Ms. Fiona Hanrahan (Director of Midwifery & Nursing), and Mr. Peter Foran (Director of Finance).

There can be no better evidence of the efficiency of the Rotunda as an independent voluntary hospital than its robust financial performance over the last seven years. We have provided justification to the HSE, based on activity-based funding, to increase our state budget allocation by 74%, from €49.6 million in 2016 to €86.0 million in 2022, bringing the overall annual hospital budget from €67.3 million to €101.4 million. Despite having to function as a purely demand-led service, in which obstetric patients cannot be deferred to a waiting list, we have managed the Rotunda at an effective break-even financial state over the last seven years, with small budget surpluses or deficits of €0.2 to €0.5 million per annum. At the end of my seven-year term of office, following a €585 million budgeted expenditure, we leave a deficit of only €200,000, or 0.03% of budget. Such effective financial performance is most unusual in an Irish context, and confirms the crucial role of the Voluntary Hospital sector in the Irish healthcare environment.



**CRISIS MANAGEMENT**

My term as Master has been challenging, not only in terms of coping effectively with a significantly expanding demand for clinical services, but also in terms of multiple events that required extensive crisis management responses. In 2017, the Rotunda faced the potential nightmare scenario of a fire in the middle of our neonatal intensive care unit, which required the immediate evacuation of a large number of the most vulnerable citizens of the state – prematurely newborn babies, and following which the NICU was closed for a prolonged time period while undergoing a complete renovation. This event was handled with the typical good-natured efficiency and professionalism for which Rotunda staff are known, and resulted in no adverse outcomes for babies, families or staff.

In 2020, in tandem with the rest of the world, the COVID-19 pandemic caused unprecedented challenges for the continued safe functioning of Ireland’s busiest maternity hospital – a clinical service that could not be deferred or reduced in any way. The entire hospital was effectively placed on a ‘war footing’, with all clinical services changed in some way. Immediate physical infrastructure changes were made to keep patients and staff safe, large amounts of personal protective equipment (PPE) were sourced, and methods of working were altered for all clinical and non-clinical staff. We were amongst the first hospitals in Ireland to commence in-house COVID-19 laboratory testing on March 24, 2020, shortly after the pandemic commenced, and were so effective in this regard that we were able to provide this service for many other hospitals in Dublin, for local GP practices, and for the Dublin Fire Brigade’s front-line paramedical staff. We were also amongst the first to roll-out COVID-19 vaccination on 6 January 2021, and rapidly achieved 90% vaccination uptake rates amongst our staff. I am immensely proud of the Rotunda team in managing to keep all mothers, babies and staff safe throughout the pandemic. While we had to provide critical

illness support to a large number of very sick pregnant women, no mother died as a result of the pandemic. There was a massive amount of anxiety amongst patients and staff members about the potential dangers of COVID-19, but this was ameliorated effectively by the Rotunda’s programme of media/social media communications to the public, as well as daily social media communications to staff members.

While still recovering from the impact of the COVID-19 pandemic, in the middle of the night of 14 May 2021 the Rotunda’s IT monitoring systems detected unusual activity which revealed the presence of the Conti ransomware cyberattack, which effectively crippled the nation’s public health services for many weeks. By 07.00am that morning, the Rotunda’s crisis management response team was already in place, enabling us to provide the first information on national media of the likely impact on clinical services, and also triggering the immediate conversion of one of Ireland’s only fully digital hospitals to a paper-based service in a matter of hours. Again, the ability of Rotunda staff to react with speed, agility and professionalism in the face of such a massive and irresponsible external challenge speaks volumes regarding the Rotunda’s resilience and true capabilities.

While we have had countless other more minor challenges when managing the hospital over the last seven years, the response of the Rotunda when faced with these three major crises stands out in my mind as moments to be proud of our team of 1,215 professionals committed to the care of so many women, babies and families.

**THANKS AND APPRECIATION**

Managing such a complex and busy organisation as the Rotunda cannot be done by a CEO working alone. As well as the support of the Board of Governors and Executive Management Team, I am also indebted to our Clinical Director, Prof. Michael Geary, and our Assistant Masters, Drs. Maria Farren, Kate Glennon, Ann Rowan, and Saboohi Tariq, upon whom I have very much depended in 2022 for effective hospital clinical management. I am also particularly appreciative of my two executive assistants, Mary O’Grady and Margaret Griffin, whose professionalism in managing the demands of the Master’s Office knows no limit. In particular, 2022 has been Mary O’Grady’s last full year as Executive Assistant to the Master, a role that she has provided to a total of six Masters. I wish her a long and healthy retirement in 2023, in the knowledge that she has played a vital part in every major management decision in the Rotunda for over 40 years.

Ultimately, the Rotunda can only be as good as it is because of the tireless efforts of each and every one of its 1,215 staff members. I am both proud and privileged to lead such a superb team of consultant obstetrician-gynaecologists, neonatologists, anaesthesiologists, pathologists, radiologists and other medical subspecialists, assisted

by very hard-working non-consultant hospital doctors. These medical staff are supported by nearly 500 of Ireland's best nurses, midwives and care assistants, all in turn supported by a great team of allied health professionals and administrative staff.

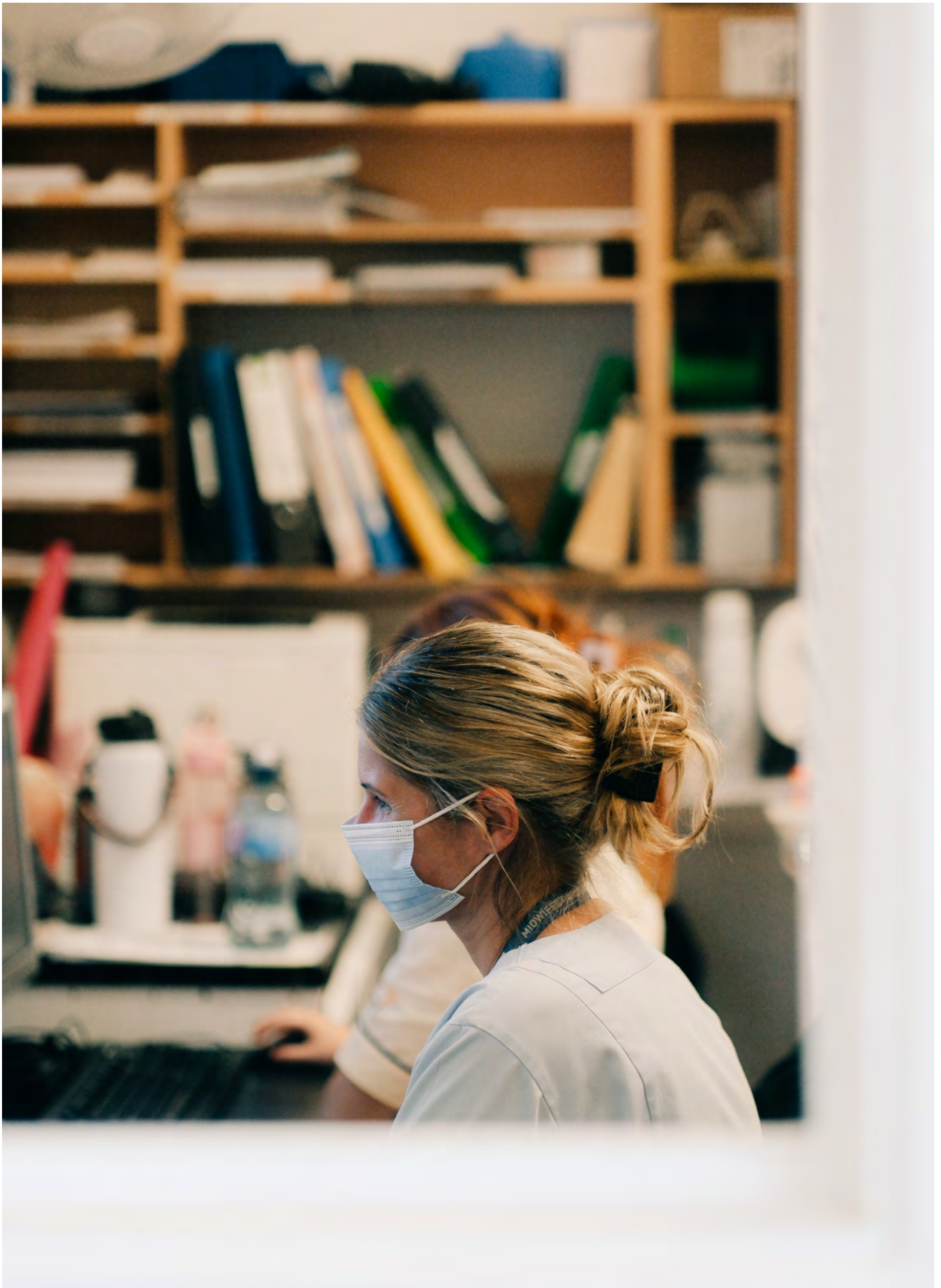
It has been my honour and privilege to lead the Rotunda for these last seven years, having been chosen in 2016 to carry on the original work of Bartholomew Mosse, as traced back to his original vision in 1745. Mosse's motto for the Rotunda was 'Solamen Miseris', which means 'Solace to the Suffering'. We can be confident that over the last 278 years, the Rotunda has evolved into so much more than simply providing solace to the suffering, but is instead one of the most forward-thinking, innovative, and efficient modern healthcare institutions in the country, with a well-deserved international reputation. I look forward to seeing the Rotunda continue to grow from strength to strength as I now hand over the reins and wish every good luck to Prof. Sean Daly, as the new 40<sup>th</sup> Master of the Rotunda.

**Professor Fergal Malone**

Master of the Rotunda Hospital







# Introduction by the Chairperson

The Rotunda Hospital, the oldest functioning maternity hospital in the world, was founded in 1745 by Bartholomew Mosse with a mission to alleviate the suffering of Dublin's poor pregnant women and their infants. The hospital's legal status was defined in 1756 by a Royal Charter issued by King George II of Great Britain, France, and Ireland. The Board of Governors are the Guardians of the hospital responsible for ensuring that a framework exists to promote good clinical and corporate governance, thereby enabling the achievement of its strategic goals and the promotion of values intrinsic to its mission.

I was elected Chair of the Hospital Board of Governors in February 2022 and wish to thank all Board members for their support and advice, but with special thanks to the Board Vice Presidents: Dr. Maria Wilson-Browne, Ms. Margaret Philbin, Mr. Ian Roberts and Dr. James Gardiner. As a voluntary hospital the Rotunda's Board of Governors provides a wide range of skills, experience and knowledge freely to the hospital, epitomising the best of voluntarism, for which I as Chairman, representing staff and patients, am truly grateful.

The Board delegates the operational running of the hospital to the Executive Management Team (EMT), which includes the current Master, Prof. Fergal Malone, the hospital's Secretary/General Manager Mr. Jim Hussey, the Director of Midwifery/Nursing Ms. Fiona Hanrahan, and the Director of Finance Mr. Peter Foran, while the Board retains overall responsibility. I cannot adequately express my gratitude and appreciation to the EMT for their tireless work to fulfil Bartholomew Mosse's original mission on behalf of its patients and staff. I would also like to acknowledge Ms. Claire Murphy, secretary to the Board, for the effortless and helpful efficiency with which she supports all Board-related business.

The Board of Governors confirms an annual compliance with their statutory requirements under the Ethics in Public Office Act 1995 and the Standards in Public Office Act 2001. The Board receives required information from the EMT relevant to the operational management of the hospital's affairs, with much of this work being assessed via Board sub-committees, including:

- Quality Safety and Risk Committee (Chair, Ms. Margaret Philbin)
- Finance and Audit Committee (Chair, Mr. Denis Reardon)
- Governance Committee (Chair, Mr. David Abrahamson)
- Performance and Remuneration Working Group (Chair, Mr. Denis Reardon)

In 2022, 8,292 babies were born in the hospital, making the Rotunda the busiest maternity hospital in Ireland. Thankfully, the Rotunda managed to reduce most of the COVID-19 restrictions which had been imposed since 2020 to cope safely with the pandemic. Throughout this time, Board meetings continued regularly, through a blend of in-person and virtual meetings, which ensured a high attendance at the eight Board meetings held during 2022.

One of the most important functions of the Board included the appointment of its 40<sup>th</sup> Master for a seven-year term due to commence in January 2023. Interviews were undertaken in March 2022 under the supervision of the Board's Governance Committee, consistent with established Public Sector Appointments processes. The interview panel unanimously recommended the appointment of Prof. Sean Daly, with this decision being ratified by the Board at its Annual Charter Meeting in November 2022.

The Board held its annual 'Away Education Day' in May 2022, allowing an in-depth discussion of the hospital's strategic plan, with particular emphasis on efforts to improve the hospital's venerable, but decidedly ageing infrastructure. The limited inpatient accommodation weighs heavily on Governors' minds. Consequently, it was heartening to hear of the herculean efforts of the Master, Prof. Fergal Malone, in advancing the hospital's development plans and his skill in navigating the complexity of the public planning and procurement process. The Board supports these endeavours and wishes success to all involved in this important objective of the hospital's ability to adequately provide for pregnant mothers and their babies.

I also wish to thank the Rotunda Foundation, and its Chair Dr. Mary Holohan, for their unceasing fundraising efforts on behalf of the hospital and for the many research projects and initiatives which they support for the betterment of all patients.

A Board-funded expansion of the hospital's operating theatre capacity to four theatres produced significant positive impacts in 2022 with a dramatic reduction in the gynaecology waiting lists. Paradoxically, this improved service provision has seen a significant increase in gynaecology referrals, reflecting an unmet service need for benign gynaecology in the Rotunda's catchment area. A dedicated menopause service was officially launched at the Rotunda by the Minister for Health, Mr. Stephen Donnelly, in 2022. The Board also supported a hospital-wide quality improvement programme, with over 300 initiatives being submitted from a range of staff, of which 70% were fully completed in 2022, and included a series of planned events to bolster staff morale. Another Board-funded initiative has been the continuation of the national Irish Medicines in Pregnancy Service, a truly noteworthy strategic achievement to be celebrated. The Board also supported

plans for infrastructural improvements in the medical residence, the hospital pharmacy, the Lillie suite and in the provision of on-site living accommodation for hospital staff.

Sadly 2022 saw the death of Dr. Melissa Webb, one of our longest serving Governors who always had the welfare of mothers and babies foremost in her thoughts and actions. We will truly miss her. Additionally, 2022 also saw the retirement from the Board of Ms. Hilary Prentice and Dr. Cliona Buckley, both loyal servants of the hospital in many different Board roles over years (including Board and Sub-Committee Chairs), fonts of wisdom and wise advice who had Bartholomew Mosse's mission as their guiding light.

Looking to the future, Bartholomew Mosse's original challenge for the Rotunda remains to develop world-class care for mothers and babies, including optimal infrastructure with the best possible staff, encompassing doctors, midwives, nurses, allied health professionals, catering, household, and administration. Attracting and retaining world-class staff in the face of a national accommodation crisis, a new Sláintecare public-only consultants' contract, and a potential underground rail-link route going directly under hospital lands, represent only some of the challenges to be faced into the future.

Finally, I want to thank all of the hospital staff whose enthusiasm, energy and commitment makes the Rotunda a joyful and rewarding workplace, while providing high-quality, safe and compassionate care to our many patients.

**Professor Tom Matthews**

Chairman

# Clinical Director's 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 consultant staff and non-consultant hospital doctor (NCHD) staff to deliver safe, effective, and efficient care.

## ACTIVITY

The Clinical Director's Office role was supported by Ms. Olga Pearson and Ms. Olivia Boylan in 2022. Active communication with the lead NCHD, Assistant Masters, and the NCHD Committee has been key to continuously driving numerous clinical innovations by medical staff. Dr. Sarah Nicholson was the lead NCHD until July 2022, following which co-lead NCHDs, Dr. Aisling Smith and Dr. Amy Worrall, were appointed for the remainder of 2022.

## CONTINUING PROFESSIONAL DEVELOPMENT

Attendance at Continuing Medical Education events is a professional registration requirement and the CD 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, which has become more demanding as the number of mandatory training components increases year-on-year. It remains challenging on how to provide dedicated, ring-fenced time for hospital staff to complete these requirements.

## HUMAN RESOURCE (HR LIAISON)

Medical manpower is a valuable resource provided by the hospital. The CD Office provides a direct link with HR for the purpose of assistance in clarification with all elements and provisions of the consultants' contract and the NCHD's contract. Service planning, manpower requirements and recruitment are also facilitated by the office, and regular employment control meetings are held.

## TRAINING SITE ACCREDITATION

The Rotunda is a recognised training site for medical training in a number of disciplines. The Medical Council sets out the requirements for recognition. Regular internal assessment of the ability of the hospital to provide a quality training environment is conducted by the CD Office, which is performed in conjunction with specialty training leads. The hospital has been in compliance with the most recent Medical Council inspection recommendations, as required since 2019. The European Working Time Directive (EWTd), imposes strict controls on duration

of NCHD shifts, and it is reassuring to confirm that the Rotunda again reached almost 100% compliance with this legislation. The small number of minor breaches that occurred occasionally in 2022 related typically to unexpected sick leave or urgent family leave issues.

## SUCCESSES & ACHIEVEMENTS 2022

### MEDICAL EXECUTIVE COMMITTEE

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 2022. This continues to provide a valuable additional forum to the Hospital Medical Board for communication between hospital management and senior medical staff.

### NEW CONSULTANT ON-CALL ROTA

In 2021, the hospital implemented a new consultant rota, which included the introduction of a second consultant on-call at night, with 2022 being the second full year of this innovative rota. It has improved senior support within the hospital for on-call emergencies, and in particular for gynaecology. This new system effectively confirms that a consultant obstetrician, as well as a consultant gynaecologist, are separately available on a 24-hour per day, seven-days per week basis at the Rotunda, such that all aspects of emergency obstetrics and emergency gynaecology care can be provided at all times, not only at the Rotunda itself, but also as a backup to the affiliated adult general hospitals on the north side of Dublin. These include the Mater Misericordiae University Hospital, Connolly Hospital, and Beaumont Hospital. Importantly, it ensures that emergency laparoscopy can be provided at the Rotunda and its north Dublin partner hospitals on a 24/7 basis, which is a unique model of care nationally, led by the Rotunda as part of the RCSI Hospitals Group.

### ELECTRONIC TMS SERVICE

The electronic time management system (TMS) has been used to ensure successful compliance with EWTd legislation for many Rotunda staff, in particular for NCHDs. This service ensures that all NCHDs are paid appropriately for their actual hours worked. A new upgraded and personalised TMS system was trialled in 2022, whereby individual NCHDs can see their hours online and their reimbursement.

### COVID-19 PANDEMIC

During 2022, the hospital continued to be confronted with further challenges related to the uncertainty of the COVID-19 pandemic, as different variants of COVID-19 developed over time. The HSE COVID-19 Vaccination Programme was supported throughout 2022, by providing booster vaccinations to all consenting hospital staff.

In response to the identification of COVID-19 placentitis in 2021, which was shown to be associated with intrauterine death, the Rotunda introduced a policy of induction of labour by term for women who had

experienced COVID-19 during their pregnancy, particularly in the third trimester. This caused significant additional Labour Ward capacity challenges, as the induction of labour rate increased substantially, towards 40% in 2022. Subsequently, the recognition that the Omicron variant of COVID-19 did not appear to be as associated with stillbirth, a further policy change was implemented, whereby it was deemed no longer necessary to recommend induction of labour by term for these cases.

### HIE TASK FORCE

In the last quarter of 2020, the Rotunda's internal clinical risk monitoring systems observed a spike in cases of moderate to severe hypoxic ischaemic encephalopathy (HIE). A HIE task force was immediately convened by the executive management team, which resulted in a series of recommendations for clinical practice changes, and these were implemented throughout 2021. This included an additional consultant-led structured ward round every evening at 23.00pm, during which the consultant obstetrician on-call participates virtually from home, using the MN-CMS Fetal Link System to enable the remote review of CTG tracings. Additionally, when there is a suspicion of a pathological CTG, it is now required that both registrars on-call review all such tracings together. All staff must become K2 certified in CTG interpretation, which is now mandatory at the Rotunda, with current compliance rates throughout 2022 being over 90%. It is gratifying to note that these measures have resulted in a significant reduction in HIE cases during 2022.

### POSTPARTUM HAEMORRHAGE (PPH) TASK FORCE

The rate of PPH has increased steadily at the Rotunda over the last number of years, a finding that has been confirmed both nationally and internationally. In response, the Rotunda applied the same methodology that was successful in resolving HIE cases, by creating a PPH taskforce and implementation group. Monthly meetings commenced in April 2022, which resulted in a number of interventions to better risk-assess patients' PPH risk at the time of delivery. A number of training meetings took place throughout 2022, and resulted in a significant drop in the PPH rate. However, this initial improvement was not sustained towards the end of 2022, and it is therefore planned to further expand its recommendations during 2023.

### INFRASTRUCTURE

A significant improvement in operating theatre capacity occurred following the construction of a third and fourth state-of-the-art operating theatre in 2021, although the full advantage of this additional surgical capacity could not be achieved due to limited nursing staffing. However, in 2022, significant additional theatre nursing staff were recruited, such that all four operating theatres were brought on-stream in 2022, which has resulted in a marked improvement in gynaecologic surgical capacity. Additional funding for another consultant anaesthesiologist was secured, and it is hoped that this will result in an

appointment in 2023, thereby further improving the ability of surgical teams to work to optimal capacity.

### CHALLENGES 2022

As in prior years, the main clinical challenge in 2022 relates to the ability to manage an extremely busy obstetric service, which is demand-led, resulting in 8,151 mothers delivering 8,292 babies. While the improvement in physical infrastructure and the normalisation of COVID-19 impacts has improved the hospital's ability to cope with high clinical volumes, the Rotunda remains under-resourced to optimally care for its clinical demand.

Another major clinical challenge is to continue to recruit and retain excellent staff at the Rotunda. Now that the COVID-19 pandemic travel restrictions have abated, there is a real risk that experienced Rotunda staff may consider the option of travelling abroad to work and gain international experience. The hospital remains committed to recruiting and retaining the highest quality staff to cope with any and all such staffing challenges.

### PLANS FOR 2023

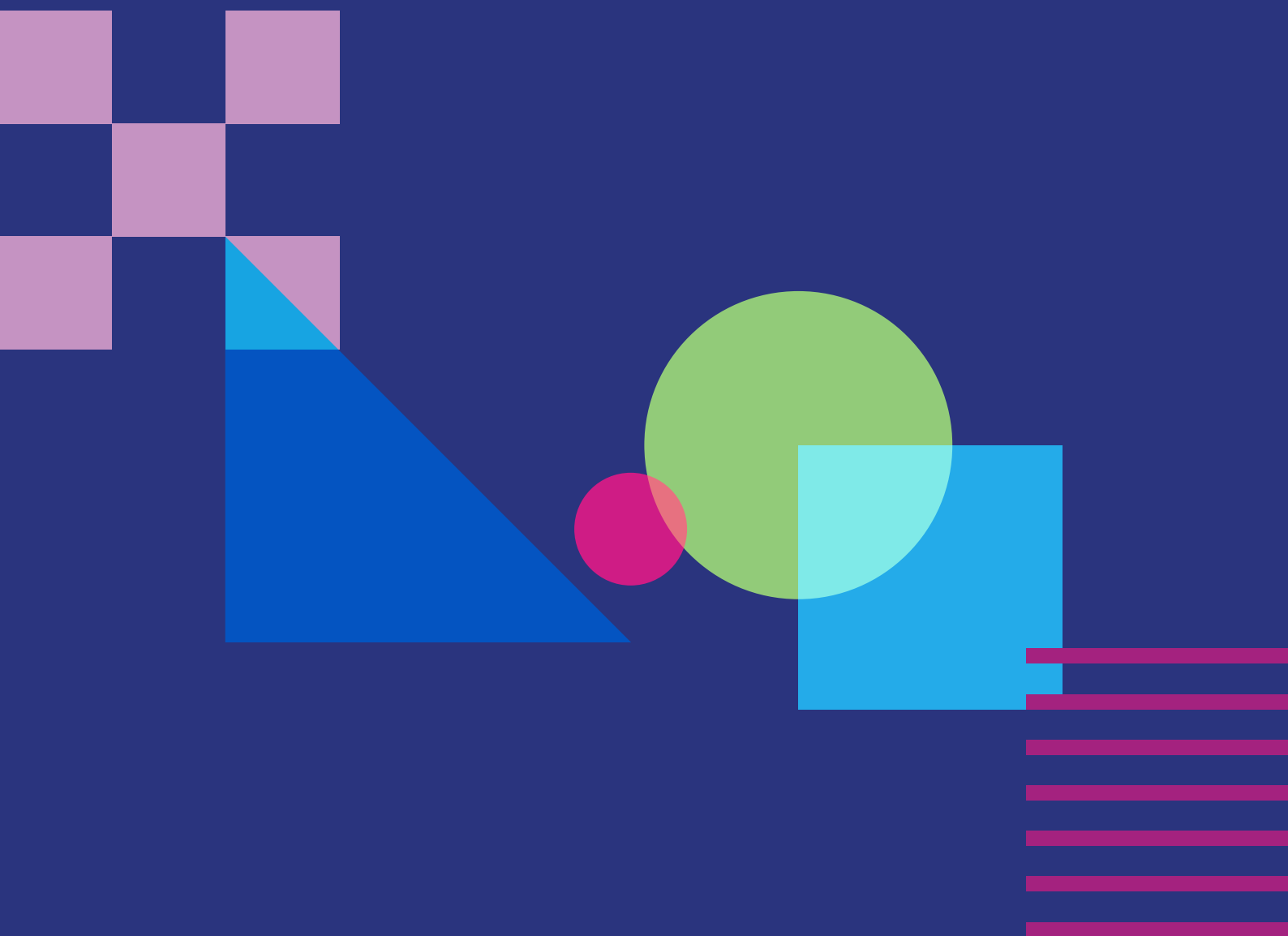
Since the introduction of the MN-CMS electronic health record, it has remained challenging for the hospital to ensure that new medical staff are familiar with the system every six months. The Rotunda continues to assist in the development of a national on-line training module to facilitate this training, in particular given that only four of the 19 maternity units in Ireland currently use this system. The Rotunda has been advocating for a more stream-lined 'sign-on' system for the MN-CMS system since its inception in 2017. It is hoped that eventually this system, known as 'Imprivata', will be extended to the Rotunda in 2023, after its initial trials at Cork University Maternity Hospital in 2022. This will allow staff to swipe on with their hospital ID badge, and to access the MN-CMS system within a matter of seconds.

The Rotunda continues to recruit at consultant level across a number of specialities and has been fortunate in having a strong field for all competitions during 2022. The spectre of a new 'Sláintecare' consultant contract being implemented in 2023 may cause additional recruitment challenges for the Rotunda, as it may significantly restrain consultants from working to their maximal capacity. It remains unclear how this contract will be perceived by new consultant candidates, in particular given the internationally competitive environment in which the Rotunda must attempt to recruit the best consultants.

The superb contributions of Ms. Olga Pearson and Ms. Olivia Boylan, who provided support to the Clinical Director's Office throughout 2022 is sincerely acknowledged. Similarly, the commitment and work of the lead NCHDs, Dr. Sarah Nicholson, Dr. Aisling Smyth, and Dr. Amy Worrall, is also appreciated, as well as that of the Assistant Masters and all members of the NCHD Committee.

# Clinical Services

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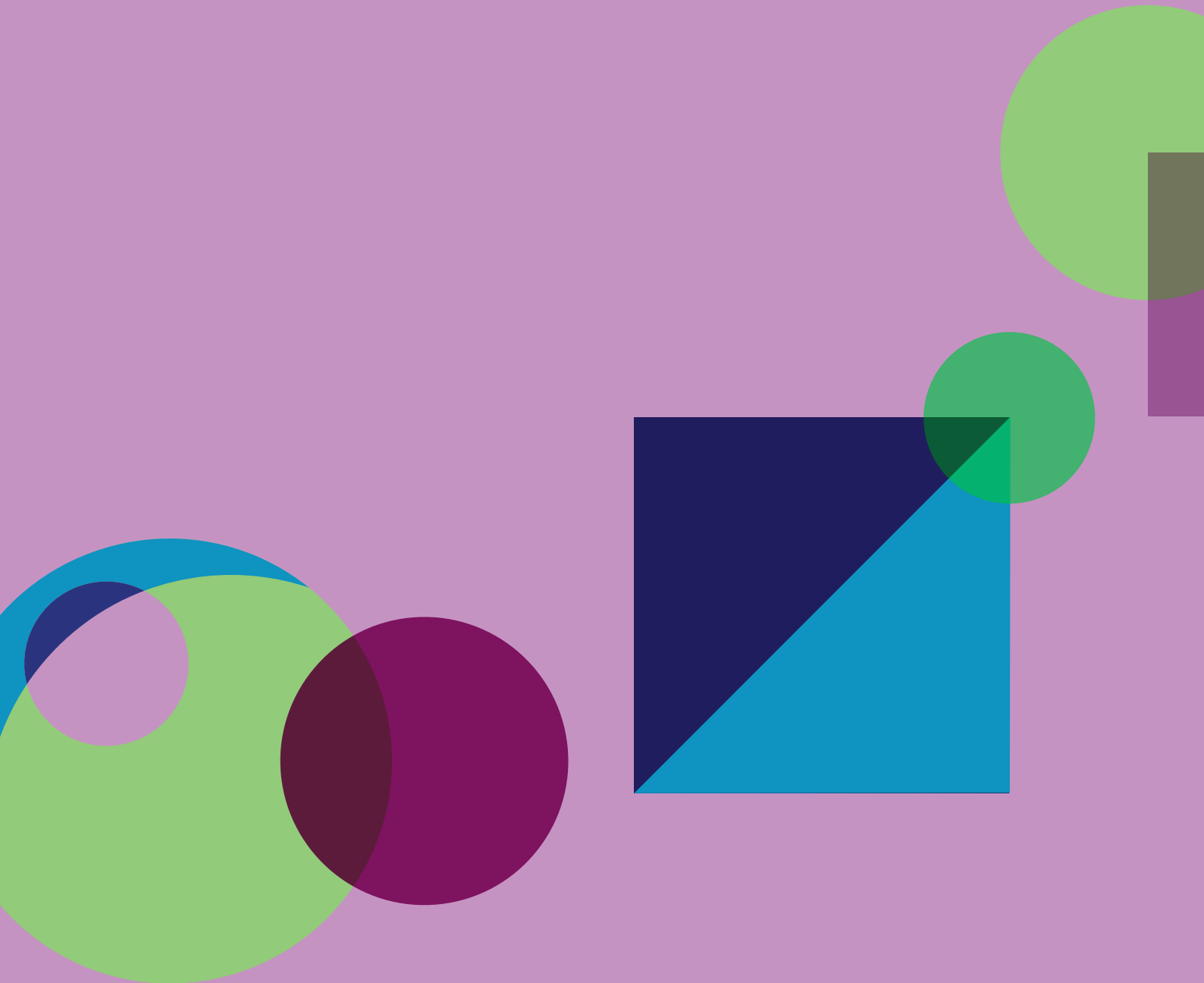






# Maternity

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# Department of Midwifery and Nursing

## HEAD OF DEPARTMENT

**Ms. Fiona Hanrahan**, Director of Midwifery and Nursing

## ASSISTANT DIRECTORS OF MIDWIFERY AND NURSING\*

**Ms. Anu Binu**

**Ms. Suzanna Byrne**

**Ms. Mary Deering**

**Ms. Geraldine Gannon**

**Ms. Marie Keane**

**Ms. Aideen Keenan**

**Ms. Janice MacFarlane**

**Ms. Annmarie Sliney**

**Ms. Mary Whelan**

**Ms. Patricia Williamson**

\*Supported by 519 committed midwives, nurses, and student midwives.

## INTRODUCTION

2022 was another year of challenges and triumphs for the Rotunda Hospital, which remained the busiest maternity hospital in Ireland, providing care for a quarter of the State's neonatal intensive care cohort while also meeting the ever-increasing demand for gynaecologic services. Midwives, Nurses and Maternity Care Assistants (MCAs) are pivotal to the provision of high quality, safe and effective care across all services. While COVID-19 continued to cast a shadow over all activities throughout 2022, thankfully it decreased in intensity as the year progressed and the world adjusted to a new normal of 'living with Covid'.

Following the Russian invasion of Ukraine at the end of February 2022, the Rotunda expected that this humanitarian crisis would result in a demand for maternity services from women fleeing Ukraine and arriving in Ireland at all stages of pregnancy. As the nearest maternity hospital to Dublin airport, the Rotunda immediately implemented capacity plans to respond to this need. A number of the Rotunda's existing staff who are from Ukraine, worked with hospital management to develop information on maternity services in Ukrainian. A rapid access multidisciplinary clinic was set up for women arriving from Ukraine to provide immediate assessment, referral and care. The HSE requested the Rotunda to become involved in the national preparedness for this crisis, and in response hospital staff attended and contributed to many planning meetings with the HSE crisis teams. I want to thank members of our multidisciplinary teams who gave so willingly of their time and expertise to provide care and services to wrap around this most vulnerable cohort of women in their time of need.

As with all health service providers in Ireland in 2022, the Rotunda continued to be challenged in terms of recruitment and retention of qualified nursing and midwifery staff. With the post-pandemic reopening of international travel, it was not surprising to see a significant number of midwives and nurses leaving the Rotunda to travel overseas, some taking leave of absence and some resigning. We wish all these staff all the best and hope that they will return to us here at the Rotunda in the future.

Inevitably in 2022, we celebrated long careers of staff who retired from the Rotunda Hospital. Each of these staff members have provided unique and unmatched service to the women and babies of the Rotunda. The staff who left us for retirement this year had an average of 24 years' service, with such long service being a sign of the huge loyalty that staff have to the Hospital:

- Ms. Joyce Boland, Senior Enhanced Midwife, Adult OPD
- Ms. Caitriona Cannon, CMM3, Postnatal
- Ms. Evelyn Connor, Senior Staff Midwife
- Ms. Ann Cornyn, Senior Staff Midwife, Private Clinics
- Ms. Anne Corrigan, CMM1, Delivery
- Ms. Yap Siew Hong, Senior Staff Midwife, Delivery
- Ms. Iwona Large, Senior Enhanced Nurse, NICU
- Ms. Christine McDermott, Advanced Nurse Practitioner, NICU
- Ms. Orla O'Byrne, CMM3, NICU
- Ms. Ann O'Gara, Senior Staff Midwife, Adult OPD
- Ms. Joan O'Neill, Senior Enhanced Midwife, Paediatric OPD
- Ms. Carol O'Rourke, CMM2, Colposcopy
- Ms. Rose Thorne, CMM2, Colposcopy

2022 saw the end of Prof. Fergal Malone's seven-year tenure as Master/CEO of the Hospital. I want to pay tribute to Prof. Malone who has led the Hospital through some particularly challenging times. Fergal was and is an incredible leader and the driving force at the helm of the Hospital. He gave of his time and energy unstintingly with the desire to pursue the strategic goals of the Rotunda at the forefront of all that he did. On behalf of the Department of Midwifery and Nursing, and the wider Rotunda teams, thank you Fergal and I wish you every success in your future endeavours.

I want to thank all the midwives, nurses, MCAs and students who worked so diligently throughout 2022. I particularly want to thank

my team of Assistant Directors of Midwifery and Nursing (ADOMs). The ADOMs are a constant presence in the Hospital, available on a 24/7 basis to manage all operational and staff issues and dealing with emergencies.

## SUCCESSSES & ACHIEVEMENTS 2022

### ADVANCED MIDWIFE PRACTITIONER PROGRAMMES

The Rotunda continues to champion enhancing roles for midwifery practice as part of a number of Advanced Midwife Practitioner (AMP) programmes. A candidate AMP in Supported Care has progressed in 2022 with the second year of their MSc programme by creating clinics with integrated pathways in the following areas:

- Postdate pregnancies
- Next Birth After Caesarean (NBAC) Assisted Care Clinic
- Previous large for dates baby
- Advanced maternal age
- Previous third-degree tear
- Grand multiparous women (>5)

The candidate AMP in Supported Care is currently completing a third trimester ultrasound course, which ultimately will increase the opportunity to offer community-based care to a wider cohort of women.

In collaboration with midwives providing midwifery-led care and midwifery management, it is envisaged that from 2023, a wider cohort of women will be able to avail of midwifery-led care through the AMP in Supported Care programme. The inclusion criteria will expand to include integrated care pathways for women with advanced maternal age (<42 years), grand multiparity, previously large for gestational age babies, and raised maternal BMI (<34kg/m<sup>2</sup>). These women will avail of midwifery-led care with targeted appointments with the AMP and referral pathways into obstetric-led care if required. Consultant Obstetrician Gynaecologist, Prof. Sam Coulter-Smith has been key in collaboration with this evolving service.

Throughout 2023, the AMP will explore how advanced midwifery skills can support and enhance midwifery-led care, with the aim of midwives using their collective skills and experience to provide safe, high-quality care to a wider cohort of women, blending the supported and assisted care pathways from the 2016 National Maternity Strategy.

### NEXT BIRTH AFTER CAESAREAN (NBAC)

The NBAC service provides a midwife-led care pathway for women who have had one previous caesarean section, with 196 NBAC support visits being allocated in 2022. During the support visit, women discuss their previous caesarean delivery and consider options for their next birth. Written information is provided on the risks and benefits of vaginal birth after caesarean (VBAC) compared with elective repeat caesarean section (ERCS). Eligible women attending the NBAC clinic continue to attend with an AMP and community-based midwifery clinics, following which a consultant obstetrician review is provided at 36 weeks' gestation if the woman's choice is for ERCS, and at 39 weeks if the choice is for attempted VBAC.

### BIRTH REFLECTIONS SERVICE

The Birth Reflections Service was first established in 2021, as a dedicated midwifery-led debriefing and listening service for women who have given birth at the Rotunda Hospital and wish to reflect on their birth experience, particularly in circumstances where their experience was not what they had initially expected. The clinic offers a one-to-one appointment to help support women to reflect and gain closure with their birth or pregnancy experience based on empathy and compassion. A total of 309 women availed of the service in 2022, covering antenatal, intrapartum and postnatal experiences. The Birth Reflection Service was awarded an Irish Healthcare Award in 2022.

### COMMUNITY MIDWIFERY SERVICES

The Community Midwifery Team (CMT) continued to offer midwifery-led care, choice and continuity to normal-risk pregnant women in North Dublin City and County. Nine external antenatal clinics are based in the outlying North Dublin community Primary Care Centres (PCCs), and one clinic within the Rotunda Hospital itself which facilitates women living or working in the inner-city area (Table 1).

**TABLE 1: ROTUNDA COMMUNITY MIDWIFERY CLINICS IN 2022**

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

A new pregnancy booking clinic commenced at the Balbriggan Primary Care Centre in February 2022. This service allows women to attend for their full booking visit in a location closer to their home, including initial ultrasound confirmation of pregnancy performed by a CMT midwife qualified in early pregnancy ultrasound. A total of 185 women availed of this new service in Balbriggan in 2022, with this model of care meeting the needs of pregnant women aligned with the principles of Sláintecare. This is a service that will be replicated in other areas during 2023.

During 2022, almost one third of women (1,872) booking for care through the public system at the Rotunda attended CMT for their antenatal care. Of these, 1,651 were referred from the general antenatal outpatient service after being found to be suitable for CMT-provided care following initial booking assessments. A total of 6,824 subsequent antenatal appointments were provided for women in the various Rotunda outlying clinics. Care for 80 (4%) women was transferred back to hospital-based obstetric teams during their later antenatal care, for the following reasons:

- High maternal body mass index (21)
- Uterine fibroids (13)
- Fetal growth restriction (7)
- Moved out of Rotunda CMT catchment area (7)
- Gestational diabetes (6)
- Persistent placenta praevia after 32 weeks (4)
- Suspected fetal macrosomia (4)
- Gestational hypertension requiring medication (4)
- Fetal malformation (3)

- Preterm premature rupture of membranes (2)
- Other (9)

All women who attend CMT antenatal clinics are offered early transfer home (ETH), typically between six and 48 hours following delivery, in which mother and baby care is provided in the patient's home setting in the first week. A total of 3,140 women, representing 39% of all Rotunda births, availed of this service in 2022. The Community Midwifery Team carried out a total of 6,726 postnatal visits with each woman receiving an average of two visits in their home.

Patient education continues to be an important role for CMT in empowering and informing women regarding pregnancy. Virtual hypnobirthing classes were facilitated throughout 2022 to allow women to continue these classes, consisting of a series of four classes run over a four-week period.

## LACTATION SERVICE

The team of Lactation Clinical Midwife Specialists (CMS) continues to support individuals and families on their breastfeeding journey, with the Rotunda having introduced a number of service developments during 2022. Following the appointment of two new full time lactation specialists in 2022, the Lactation team now comprises four CMS, and provides over 400 consultations monthly, as well as over 60 monthly attendees at antenatal breastfeeding workshops.

A CMT Clinical Midwife Specialist in Lactation role was established during 2022, with the aim being to enhance breastfeeding support for women by bridging care across the hospital and community. New initiatives with this role include provision of a breast pump loan system on a short-term basis. One-to-one antenatal consultations have been introduced for women attending CMT care who are identified as being at risk for breastfeeding challenges. As a result, there was a 39% increase in capacity for consultations with patients in 2022. Where appropriate, the CMS supports eligible women to harvest colostrum antenatally. Postnatally, the CMT midwives identify women prior to discharge who require additional breastfeeding support at home and link them with the CMS. The CMS visits women in the community and provides ongoing support for women up to six weeks postpartum by either virtual or home visits.

In addition, the Lactation CMS provides care to women who have been temporarily transferred for postnatal care to neighbouring adult general hospitals, including the Mater Misericordiae University Hospital (MMUH), Beaumont Hospital, and Connolly Hospital, typically in an ICU or HDU setting. The CMS also provides education for general hospital ICU and HDU staff around breastfeeding and how to use the breast pumps.

In May 2022, a Lactation CMS specific to the Neonatal Intensive Care Unit (NICU) was appointed, which has resulted in a 36% increase in NICU consultations for mothers whose infants are admitted to the NICU.

Other achievements in 2022 for the Lactation Service include:

- Breast-pump loan scheme to provide additional support for mother/baby dyads identified by the lactation team as needing short term help to overcome challenges that arise in the early days of breastfeeding
- A total of 27 new bedside cots and seven reclining chairs were procured to make parents more comfortable when breastfeeding in the hospital
- Provision of additional freezer capacity to accommodate storage of antenatally-collected colostrum
- Procurement of educational props for teaching of practical breastfeeding skills
- Rotunda-MMUH outreach lactation service to support critically ill women in MMUH who opt to provide breastmilk to their infants in the NICU. This initiative was the winner of a NWIHP competition, Charter Day award, and was shortlisted for an Irish Healthcare Award in 2022
- New referral pathway launched between the Rotunda and the MMUH Breast Clinic to facilitate women with suspected breast abscess to ensure prompt assessment and treatment
- Ultrasound therapy service developed for women with breast engorgement in collaboration with Rotunda physiotherapists
- Postnatal breastfeeding support groups re-commenced weekly following prior cessation due to COVID-19 restrictions
- New referral pathway launched with CHI-Temple Street for timely assessment of potential 'Tongue-Tie', with Prof. Colleen Heffernan, ENT Consultant
- An additional five staff members were accredited as International Board Certified Lactation Consultants (IBCLC) in 2022, bringing staff members with this qualification to over 20
- CMS Ms. Marina Cullen successfully completed the UCD Professional Postgraduate Certificate in Breastfeeding and Lactation, which is the first university-accredited course in Lactation. This included a project to highlight management

of breast engorgement, which was awarded first prize at the Innovation for Successful Breastfeeding Conference at Trinity College Dublin

- Student midwives are now allocated for a week-long placement with the Lactation Service as part of their specialist training programme

### PRACTICE DEVELOPMENT UNIT (PDU)

The Practice Development Unit (PDU) at the Rotunda provided ongoing support in 2022 to 90 midwifery students undergoing undergraduate and postgraduate training programmes. In addition, the team supported 318 multidisciplinary student nurses, including 186 General Nursing Students (DCU), 34 Combined Children's and General Integrated Degree programme students (TCD), six Public Health Nursing Students (UCD), and two International Erasmus Students from the University of Malta (TCD).

The Clinical Skills Facilitators (CSF) continued to support over 54 existing Rotunda staff in enhancing their practice development and upskilling. Orientation programmes supported by the CSFs enhance a smoother transition to practice for staff. When staff have been initiated into their new roles and complete their probation, they are encouraged to participate in postgraduate education to enhance their professional development through further educational pursuits. This has included the following areas:

- Advanced Practice in Midwifery and Nursing
- Advanced Clinical Leadership
- Bereavement and Loss
- Healthcare Law and Ethics
- Infection Control Leadership
- Midwifery Practice
- Perinatal Mental Health
- Quality and Safety
- Specialist Nursing for Future Healthcare

Additional Level 9 courses were completed in the areas of Prescribing, Breastfeeding and Lactation, and Neonatal Intensive Care Nursing.

In addition, a number of national audits were completed, relating to the Irish Maternity Early Warning System, and the five-yearly Nursing and Midwifery Board of Ireland audit. Feedback received to date has been very positive and action plans have been generated.

## OCCUPATIONAL HEALTH SERVICE

The Occupational Health Service is responsible for the healthcare needs of the entire staff working at the Rotunda, and is provided under the direction of Dr. Dominick Natin, Consultant in Occupational Health Medicine. Dr. Natin provided 216 consultations for staff throughout 2022.

As the COVID-19 pandemic declined in its impact in 2022, a reorganisation of Occupational Health responsibilities in this regard was implemented. Swabbing of staff and tracking cases ceased.

Occupational Health Service nurses provided 180 pre-employment assessments for vaccinations and immunity follow-up. The influenza vaccination campaign was again successful in 2022, with 48% of staff availing of this vaccine. It is not surprising that this reflects a continued drop in vaccination rates from 82% in 2020, to 65% in 2021, reflecting decreased concern for influenza in the setting of the COVID-19 pandemic with mandatory face-covering practices at the Rotunda.

During 2022, the Occupational Health Service provided support for 27 needle-stick injuries and three splash exposures. All staff were successfully followed, with all cases being closed without adverse outcome.

While 374 pre-employment health questionnaires were processed by the Occupational Health Service in 2022, a large number of additional pre-placement evaluations were also processed for student midwives and medical students prior to commencing their clinical training rotations at the Rotunda.

New initiatives for 2022 included drop-in staff blood pressure monitoring clinics, mindfulness meditation sessions twice weekly, and coordination of staff wellbeing events focusing on yoga, Pilates and sleep optimisation.





# Emergency and Assessment Service

## HEAD OF SERVICE

**Dr. Meena Ramphul**, Consultant Obstetrician Gynaecologist

## STAFF\*

**Ms. Fiona Walsh**, Clinical Midwife Manager 3

**Ms. Debra England**, Registered Advanced Midwife Practitioner

**Ms. Bernadette Gregg**, Registered Advanced Midwife Practitioner

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

## SERVICE OVERVIEW

The Emergency Assessment Service is a unique setting in the Rotunda which provides antenatal, intrapartum, postpartum, gynaecologic, and neonatal services 24 hours per day, and is the first setting in which patients encounter Rotunda services in an emergency. The year 2022 was particularly busy at the Rotunda Emergency Assessment Service, with the staff working extremely hard through difficult times yet consistently providing high standards of emergency care. Staffing is provided by two registered advanced midwife practitioners (AMP), clinical midwife managers, staff midwives, and maternity care assistants, as well as obstetric and neonatal senior house officers on a 24-hour basis, with the support of relevant 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 midwives to assign clinical priority and determine the urgency of patients' needs. The AMP or on-call doctor performs an initial review, before a diagnosis and management plan are confirmed. 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

	2020	2021	2022	2021 V 2022 Variance
Obstetrics	21,963	24,059	23,584	-2.0%
Gynaecology	1,183	1,308	1,589	21.5%
Paediatrics	320	359	359	0.0%
<b>Total</b>	<b>23,466</b>	<b>25,726</b>	<b>25,532</b>	<b>-0.8%</b>

## SUCCESSES & ACHIEVEMENTS 2022

A number of staff became Registered Midwife Prescribers, thereby providing clinical autonomy to the role of the midwife in prescribing select medications in clearly defined clinical pathways. Several midwives have also commenced and completed various Master's programmes to further enhance their clinical skills.

## CHALLENGES 2022

The biggest challenge faced by the Emergency Assessment Service in 2022 was the ongoing impact of the COVID-19 pandemic on clinical services. Despite the changes implemented due to COVID-19, clinical outcomes were good with no significant maternal adverse outcomes.

With only five cubicles for clinical assessment, space became an issue as women with symptoms suggestive of COVID-19 required isolation. Space limitations also negatively impacted on caring for patients following pregnancy loss.

Midwifery staffing retention and recruitment remains a challenge for the Emergency Assessment Service.

With the refurbishment of the Labour and Delivery Suite during 2022, there has been increased numbers of women labouring and delivering in the Emergency Assessment Service area. This poses a risk as it is not appropriately resourced for managing labouring women.

## PLANS FOR 2023

- To promote and facilitate the expansion of the role of the midwife and Advanced Midwife Practitioners in provision of emergency care to pregnant women and gynaecology patients
- 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. Aoife Corcoran**, Early Pregnancy Service Fellow

**Dr. Icchya Gyawali**, Early Pregnancy Service Fellow

**Ms. Suzanna Byrne**, CMM3 Outpatients and Early Pregnancy Assessment Unit

**Ms. Judith Mulligan**, Early Pregnancy Unit Administrator

## SERVICE OVERVIEW

The Early Pregnancy Assessment Service plays a key role in the management of complicated pregnancies up until 12 weeks' gestation, with case referrals from the Emergency Assessment Service and various external sources. Through the Reassurance Ultrasound part of the service, the team provides an ultrasound service for women who have had prior molar pregnancies, ectopic pregnancies or two consecutive early pregnancy losses. Close links are maintained with the Bereavement and Social Work Services.

Women with prior poor obstetric outcomes are offered an early booking visit or a reassurance ultrasound 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 2020 - 2022

Activity	2020	2021	2022
Total number of patients seen	3,527	4,234	4,071
Referred for booking visit	1,366	864	1,748
Miscarriage	1,046	1,494	972
Repeat EPAU scans	1,237	780	929
Expectant or medical management of miscarriage	327 (76%)	421 (92%)	879 (90%)
Serial Beta hCG testing	873	817	709
Pregnancy of uncertain viability	663	545	598
Reassurance Ultrasound	390	368	480
Pregnancy of unknown location	338	303	331
Patients admitted from the EPAU	59	82	107
Surgical management of miscarriage	105 (24%)	114 (8%)	93 (10%)
Methotrexate use	72	111	83
Ectopic pregnancy	39	80	71
Features suggestive of molar pregnancy	18	23	11

## SUCCESSSES & ACHIEVEMENTS 2022

### ENHANCING PATIENT CARE

In 2022 Drs. Aoife Corcoran and Icchya Gyawali provided continuity of care as Early Pregnancy Fellows for the women attending the Service. Dr. Gyawali also used the opportunity to attain an advanced qualification in ultrasound scanning. This fellowship post is one of the few opportunities in Ireland to train in Manual Vacuum Aspiration (MVA), which provides women with an alternative management to pregnancy loss, other than inpatient surgical uterine evacuation.

The number of patients attending the service decreased in 2022 from 4,234 to 4,071, reflecting the fact that 2021 was an exceptionally busy year due to the COVID-19 pandemic and restricted access to community-based healthcare. The fall in numbers in 2022 is likely reflective of increased options to access care in the community as the pandemic restrictions were reversed.

Over half the women attending the service are diagnosed with a viable intrauterine pregnancy and are either discharged or referred onwards for a booking visit (55%). However almost one third of women (29%)

require more than one visit for either a repeat ultrasound or for serial hCG blood tests before pregnancy outcome could be determined. Such repeat visits frequently generate distress for the women involved, but the continuity of staff and care has meant that care continues to improve in the service with minimal complaints due to good communication around care plans.

A total of 1,748 patients who attended the service in 2022 were referred onwards for a booking visit. This may reflect improved management of miscarriage in the community or in referral services thereby increasing the proportion of viable pregnancies managed through the Early Pregnancy Assessment Service. The number of cases of pregnancy of unknown location and pregnancies of uncertain viability remained at similar levels to prior years.

In 2022, a significant number of women required care for incomplete medical termination of pregnancy which had been initiated in the community. The service continues to monitor these numbers to evaluate whether additional resources may be required to integrate community and hospital-based services.

Other service developments in 2022 included the approval of a Clinical Midwifery Manager role in early pregnancy loss, with the successful candidate due to start in 2023 following completion of ultrasound training. Facilitation and prioritization of training of the Early Pregnancy Fellows in obstetric ultrasound was successfully achieved in 2022, as well as provision of structured multi-modality teaching in early pregnancy management for non-consultant hospital doctors (NCHDs).

## CHALLENGES 2022

Demand for early pregnancy reassurance scans continues to exceed availability, and measures to increase ultrasound access hours is being addressed, although staffing remains the limiting factor

## PLANS FOR 2023

The service plans for 2023 include:

- Agreement with the Rotunda Executive Management Team for the continued appointment of an Early Pregnancy Fellow to maintain the initiatives within the Early Pregnancy Service and to assist in teaching
- Collaboration with Ms. Ann Charlton and the Bereavement Service to facilitate a Certificate of Life for women attending the Early Pregnancy Service in acknowledgement of pregnancy loss
- Linking with Support Groups to obtain constructive feedback on patient priorities
- Linking with other Early Pregnancy Services within the RCSI Hospitals Group and then nationally to see what common issues each Service faces and opportunities to standardise care and outcomes

# Recurrent Pregnancy Loss Service

## HEAD OF SERVICE

**Dr. Karen Flood**, Consultant Obstetrician Gynaecologist

## STAFF

**Ms. Patricia Fletcher**, Midwife

**Dr. Ronan Daly**, Obstetrics and Gynaecology Registrar

**Dr. Sabina Tabirca**, Obstetrics and Gynaecology Registrar

## SERVICE OVERVIEW

The Recurrent Pregnancy Loss Service was developed to provide thorough, standardized investigation and follow-up of couples with recurrent pregnancy loss. Current referral criteria have recently been broadened to include patients affected by two or more second trimester losses, three or more first trimester losses (including losses defined as 'biochemical' in nature), or two first trimester losses in women over 38 years of age. The service endeavours to deliver evidence-based care, limiting investigations and interventions to those recognised by international best-practice guidelines. This can often be difficult for patients to accept, as patients are frequently subjected to erroneous, anecdotal information on pregnancy loss derived from the internet or social media platforms.

As part of the service, early reassurance scans are 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 the Recurrent Pregnancy Loss Service for counselling and close serum  $\beta$ hCG monitoring, with rapid access for review if complications occur. All of these patients are registered with the National GTD Centre, based in Cork, to track their care.

## CLINICAL ACTIVITY

**TABLE 1: CLINICAL ACTIVITY 2018 - 2022**

Clinical Activity	2018	2019	2020	2021	2022
Total number of visits	845	715	867 (107*)	689 (77*)	823 (32*)
Return visits	694	559	747	562	577
New visits	151	156	120	117	136
Livebirth rate %	80	78	76	70	73
GTD pregnancies followed	24	39	21	19	17

\*telemedicine visits

## SUCCESSSES & ACHIEVEMENTS 2022

A more efficient triage system has been implemented to expedite appointments for patients who have not achieved a prior successful pregnancy or have experienced multiple previous pregnancy losses.

Staff from the Recurrent Pregnancy Loss Service contributed clinical data regarding referral criteria, investigations performed, and medical interventions provided to the development of the new guideline addressing management of recurrent first trimester miscarriage in Ireland.

As part of an MSc in Prenatal Genetics, a thesis entitled 'Clinical Practice Guidelines on the role of genetic testing for investigation of recurrent miscarriage: A Systematic Review', was completed. Knowledge garnered from this review has helped guide management for Rotunda patients.

## CHALLENGES 2022

Despite extensive efforts, including direct patient telephone contact to confirm attendance and appointment reminders, there has been a resurgence of higher failure to attend (DNA) rates of 9% for both new and return visits. This is disappointing given the high referral numbers internally and nationally and lengthy waiting times to attend the service.

## PLANS FOR 2023

The new National Guideline on Recurrent Pregnancy Loss is due to be published next year. A gap analysis will be performed to ensure care at the Rotunda is consistent with these new guideline recommendations.

Given the increasing numbers of patients being referred and the increasing waiting times, an overhaul of the triage/referral system and development of a hybrid telemedicine model will be implemented to increase numbers in a timely manner with appropriate patient prioritization.





# Fetal Medicine Service

## HEAD OF SERVICE

**Prof. Fionnuala Breathnach**, Consultant Maternal Fetal Medicine Specialist

## STAFF

### CONSULTANTS IN MATERNAL FETAL MEDICINE

**Prof. Fionnuala Breathnach**

**Dr. Sharon Cooley**

**Prof. Sean Daly**

**Dr. Jennifer Donnelly**

**Dr. Karen Flood**

**Prof. Michael Geary**

**Dr. Maria Kennelly**

**Dr. Etaoin Kent**

**Prof. Fergal Malone**

**Dr. Sieglinde Mullers**

### MATERNAL FETAL MEDICINE SUBSPECIALTY FELLOWS

**Dr. David Mackin**

**Dr. Brendan McDonnell**

### FETAL SONOGRAPHERS

**Ms. Mabel Bogerabaty**

**Ms. Fiona Cody**

**Ms. Suzanne Gillen**

**Ms. Aisling Graham**

**Ms. Linda Hughes**

**Ms. Laura McBride**

**Ms. Deirdre Nolan**

**Ms. Avril O'Connor**

**Ms. Gemma Owens**

**Ms. Gloria Guiteras Petibo**

**Ms. Roberta Saullo**

**Ms. Irene Twomey**

### MIDWIFERY

**Ms. Fionnuala Nugent**, Midwife Manager

**Ms. Jane Dalrymple**

**Ms. Nollaig Kelliher**

**Ms. Joan O'Beirnes**

### GENETIC COUNSELLOR

**Ms. Debby Lambert**

### ADMINISTRATION

**Ms. Suzanne Larkin**

**Ms. Mary Maguire**

**Ms. Anita O'Reilly**

### MEDICAL SOCIAL WORKER

**Ms. Louise O'Reilly**

### CHAPLAIN

**Ms. Ann Charlton**

## SERVICE OVERVIEW

The Rotunda Fetal Medicine Service continues to build on its reputation for excellence in the provision of fetal medicine services, delivering care to complex pregnancies from across the country. The Rotunda service retains its position as the largest fetal medicine division in Ireland, with 10 subspecialist consultant staff. All consultants have gained overseas experience, in the UK, France, Canada or the United States. In addition, the Rotunda has a unique RCOG-approved subspecialty fellowship training programme in maternal fetal medicine, in which fellows receive the first year of their training at the Rotunda followed by the second year at Columbia University Medical Center in New York. The success of this programme is evident by the fact that every single fellow who has graduated from the programme over the last 12 years has been appointed to a senior consultant post at either the Rotunda or the National Maternity Hospital, Dublin.

All women booked for prenatal care at the Rotunda are offered sonographer-provided accurate early pregnancy dating ultrasound and universal access to detailed mid-trimester fetal anatomy ultrasound. The Fetal Medicine Service therefore delivers the prenatal imaging requirements for all pregnancies registered at the Rotunda, in addition to specialised services for complex fetal conditions from maternity units across the country.

The Rotunda Fetal Medicine multidisciplinary team supports fetal medicine services across the RCSI Hospitals' Group, with Rotunda consultant-provided Maternal Fetal Medicine expertise now active and continuing to develop in Our Lady of Lourdes Hospital, Drogheda, and Cavan General Hospital. This is a unique example of a functioning fetal medicine network across an entire hospital group in Ireland, such that patients avail of the expertise of subspecialist consultants in their local hospitals while obtaining the benefits of tertiary level governance and expertise as needed.

All COVID-19 exposure-minimisation protocols were eased in 2022, with no restrictions placed on partner attendance at ultrasound examinations. Department sonographers worked to maintain the highest standards of excellence in prenatal screening for fetal abnormality, allowing multidisciplinary input for scheduled delivery planning in the case of complex fetal diagnoses.

## CLINICAL ACTIVITY

2022 was the busiest year on record for the Fetal Medicine Service, with an observed 21% increase in clinical activity since 2017. The categories of fetal ultrasound examinations performed are presented in Table 1.

**TABLE 1: CLINICAL ACTIVITY 2018 - 2022**

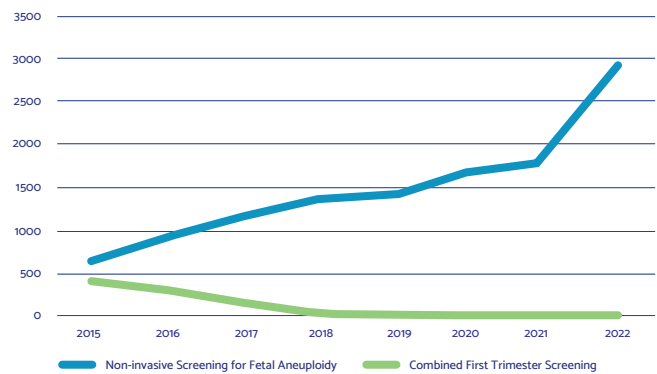
Clinical Activity	2018	2019	2020	2021	2022
Fetal growth assessment	14,843	14,961	14,822	15,860	15,995
Fetal anatomic survey (20-22 weeks)	9,016	8,710	8,524	8,452	8,166
Booking ultrasound examinations	6,401	6,351	6,776	6,261	6,718
Fetal echocardiography	289	278	260	304	263
<b>Total ultrasound examinations</b>	<b>30,549</b>	<b>30,300</b>	<b>30,382</b>	<b>30,877</b>	<b>31,142</b>

In 2022, on average, 135 formal ultrasound examinations were performed by the Fetal Medicine Service every day.

## PRENATAL SCREENING AND DIAGNOSIS

The Rotunda Fetal Medicine Service, together with its academic partner at the RCSI Department of Obstetrics and Gynaecology, remains Ireland's busiest provider of services for prenatal screening and diagnosis of fetal abnormalities, facilitating patients from all maternity units in Ireland. This service is based on non-invasive prenatal screening (NIPS) using a maternal blood sample for cell-free fetal DNA, followed by invasive testing, as needed, by means of chorionic villus sampling or amniocentesis. In 2022, a record 2,917 new patients attended for NIPS, including 1,787 at the main Rotunda campus and 1,130 at a satellite office. As in prior years, combined first trimester screening, based on nuchal translucency sonography together with serum markers, is now rarely performed as an initial screening test for aneuploidy.

**FIGURE 1: NON-INVASIVE PRENATAL SCREENING FOR FETAL ANEUPLOIDY**



All women registering for antenatal care at the Rotunda Hospital are given information relating to prenatal screening, including Non-Invasive Prenatal Screening (NIPS) for fetal aneuploidy. This remains an opt-in service that is not publicly funded, and therefore at the moment requires patients to self-pay. The vast majority of NIPS testing was carried out in the first trimester, with almost 96% of samples returning a low-risk result with first sampling, and fewer than 4% of women requiring a re-draw to obtain a result. Fewer than 1% of NIPS results were abnormal, as summarised in Table 2.

**TABLE 2: NON-INVASIVE PRENATAL SCREENING RESULTS (N = 1,787\*)**

NIPS Result	Number	Confirmed with Invasive Test	Pregnancy Termination
Low-risk at first sample	1,708 (95%)	N/A	N/A
High Risk for Trisomy 21	11 (0.6%)	10/11 (91%)*	7/9 (78%)*
High Risk for Trisomy 18	2 (0.1%)	1/2 (50%)**	1/2 (50%)**
High Risk for Trisomy 13	0	N/A	N/A
High Risk for Triploidy	0	N/A	N/A
Atypical Findings***	2 (0.1%)		0
No result with first sample	60 (3%)	N/A	N/A

**Table 2 Footnotes:**

\* Analysis based on cases performed at main hospital campus location

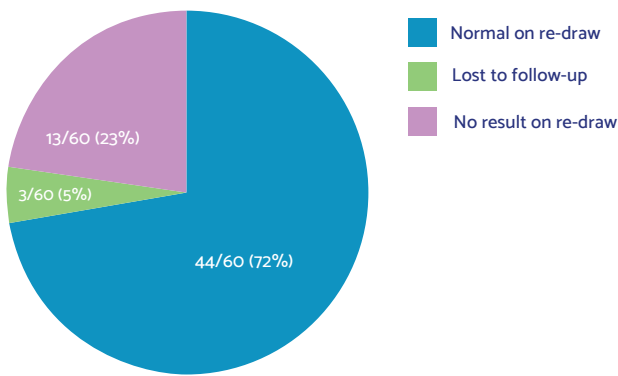
\* Among 11 patients with a high-risk NIPS screen for trisomy 21, two patients miscarried, two babies were liveborn (trisomy 21 confirmed at birth) and there were 7 pregnancy terminations

\*\* Among two patients with a high-risk NIPS screen for trisomy 18, one pregnancy miscarried and one underwent pregnancy termination

\*\*\* Among NIPS reports of 'Atypical Findings'; one patient had no follow-up at the Rotunda and one pregnancy is still ongoing

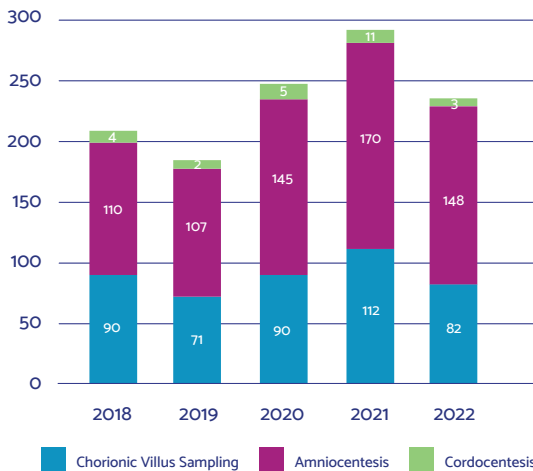


**FIGURE 2: OUTCOME OF NON-INVASIVE PRENATAL SCREENING (NIPS) IN WHICH THE INITIAL BLOOD SAMPLE DID NOT RETURN AN INFORMATIVE RESULT (N = 60)**



Among the 13 women for whom a second NIPS sample did not provide an informative result (less than 1% of the group that availed of NIPS), two women had a trisomy 18 diagnosis identified with amniocentesis, both in the setting of abnormal ultrasound findings. One case of septic miscarriage occurred at 12 weeks. The remaining 10 women delivered normally-formed babies, one of whom died at 25 weeks owing to complications of extreme preterm birth. Therefore, we have observed a normal pregnancy outcome in 9/13 (69%) of women for whom NIPS failed to return a result despite repeat sampling.

**FIGURE 3: INVASIVE PRENATAL DIAGNOSTIC PROCEDURES (N = 233)**



Following a peak in number of invasive diagnostic tests in 2021, the number of amniocentesis and chorionic villus sampling procedures decreased in 2022, to align more closely with 2020 activity. All

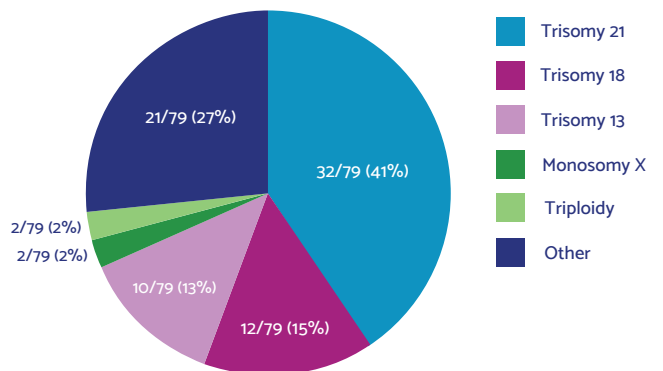
cordocentesis procedures were performed in the context of suspected fetal anaemia and proceeded with intrauterine fetal transfusion.

Among the total of 233 invasive diagnostic procedures performed in 2022, 34% (80) returned abnormal fetal genetic reports. The most common prenatal genetic diagnoses are presented in Figure 4.

The most common prenatal genetic diagnosis was trisomy 21, with 26/32 (81%) of cases with a prenatal diagnosis of trisomy 21 in 2022 either had an intrauterine demise or decided to terminate the pregnancy. These terminations were carried out in another jurisdiction (most commonly UK) in all cases, as patients generally receive confirmation of this diagnosis after the 12-week gestational age threshold that would have allowed termination in Ireland. All prenatally confirmed cases of lethal fetal aneuploidy (trisomy 13, trisomy 18 or triploidy) that opted for termination of pregnancy did so under section 11 of the Health (Regulation of Termination of Pregnancy) Act 2018.

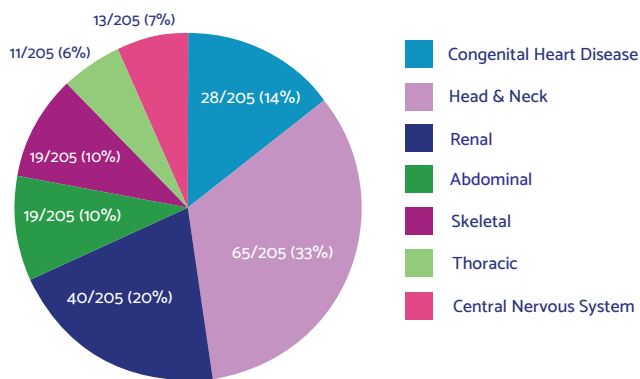
**FIGURE 4: FETAL GENETIC ABNORMALITIES DIAGNOSED PRENATALLY (N = 79)**

**PRENATAL DIAGNOSIS OF MAJOR FETAL STRUCTURAL ABNORMALITY**



Excluding cases of fetal chromosome abnormality, an additional 205 cases of non-aneuploid major structural fetal abnormalities were detected prenatally in 2022. While many fetuses had multiple involved organ systems, the results described in Figure 5 are categorized based on the most dominant anatomic problem.

**FIGURE 5: MAJOR FETAL STRUCTURAL ABNORMALITIES (NON-ANEUPLOID) DIAGNOSED PRENATALLY (N = 205)**



The most common major structural abnormality identified prenatally was septated cystic hygroma. Among 46 cases of isolated septated cystic hygroma, 46% (21/46) returned an abnormal invasive genetic result. Among cystic hygroma cases with normal genetic testing, 16/23 (70%) experienced resolution of the hygroma, with no further structural abnormality identified and a normal birth outcome was observed. Two of these cases were lost to follow-up as they delivered elsewhere.

## FETAL SURGERY

During 2022, six cases of fetal congenital diaphragmatic hernia (CDH) were managed through the Rotunda Fetal Medicine service, one of whom underwent fetoscopic tracheal occlusion (FETO) surgery at 27 weeks' gestation with the fetal team in Leuven, Belgium. In total, four of the CDH cases underwent successful CDH repair in the neonatal period.

2022 marked the 12th year of a highly successful collaborative programme involving the fetal surgical teams at the Rotunda Hospital and the National Maternity Hospital for management of twin-twin transfusion syndrome. This has resulted in a single team approach to all such cases. During 2022, a total of 14 cases of severe twin-to-twin transfusion syndrome were managed by the Dublin Fetal Surgery Group by means of fetoscopic laser ablation of placental vessels. Amongst these 14 pregnancies, eight resulted in survival of both fetuses, one resulted in survival of one fetus, and one pregnancy is ongoing. Overall 19/28 babies (67%) survived. By the end of 2022, the group had treated 290 fetuses with laser surgery for severe TTTS, with a survival rate of 78% (226/290). These results are consistent with the results at the major international centres providing this advanced fetal therapy. This approach provides an example of a joint inter-hospital collaborative management strategy that continues to deliver excellent results for a rare, complex and high-risk fetal condition.

## FETAL CARDIAC SERVICE

The Fetal Cardiac Service at the Rotunda is a national referral service provided by Prof. Fionnuala Breathnach, and by Prof. Orla Franklin, Consultant Paediatric Cardiologist at Children's Health Ireland. In 2022, the Fetal Medicine Service performed 263 targeted fetal echocardiography examinations. A total of 35 cases of major congenital heart disease were managed through this service in 2022. The prenatal detection of duct-dependent critical congenital heart disease is the most meaningful metric for evaluating the success of this service, and during 2022 10 such cases were managed at the Rotunda. Nine of these 10 cases were correctly diagnosed prenatally, while one baby was diagnosed with coarctation of the aorta on day five of life, having had normal prenatal imaging.

**TABLE 3: PRENATAL DETECTION OF CONGENITAL HEART DISEASE (2018 – 2022)**

	2018	2019	2020	2021	2022
Hypoplastic left heart disease	3	5	5	8	5
Hypoplastic right heart disease	4	2	3	3	2
Complete AVSD	3	4	2	6	4
Isolated VSD*	18	4	11	6	3
Tetralogy of Fallot/ DORV	5	9	8	2	6
Transposition of great arteries	6	6	6	3	3
Aortic coarctation/ interrupted arch/ double arch	2	6	5	2	1
Truncus arteriosus	1	0	0	0	0
Isolated right-sided aortic arch	2	2	4	9	5
Ebstein's anomaly	0	1	0	0	0
Systemic vein anomalies	0	0	1	1	0
Arrhythmia	5	2	3	2	1
Cardiac tumours	1	0	1	1	0
Miscellaneous**	2	3	2	8	4
TAPVD	0	1	0	0	0
<b>Total</b>	<b>52</b>	<b>45</b>	<b>50</b>	<b>51</b>	<b>35</b>

AVSD = Atrioventricular septal defect; VSD = ventricular septal defect;  
DORV = double outlet right ventricle; TAPVD = Total anomalous pulmonary venous drainage

\*The majority of isolated VSDs are not referred to the multidisciplinary fetal cardiology service, but rather are evaluated for aneuploidy and a postnatal echocardiogram is planned in the event of abnormal neonatal examination

\*\* Miscellaneous includes two cases of isolated pulmonary valve stenosis, one case of isolated aortic valvular stenosis and one case of left atrial isomerism.

## PLACENTA ACCRETA SPECTRUM SERVICE

Placenta Accreta Spectrum (PAS) refers to a range of clinical conditions characterised by abnormal placental adherence to the uterine wall. The incidence of PAS has increased substantially from 0.8 per 1,000 deliveries in the 1980s to three per 1,000 deliveries in the past decade, largely attributed to a rising global caesarean section rate. The condition is associated with significant maternal morbidity.

The PAS multidisciplinary team (MDT) service was established in June 2017. This service provides care to patients from the Rotunda and the National Maternity Hospital, and also accepts external referrals nationwide. To date, over 60 women with PAS have been cared for by the MDT.

In 2022, nine women with PAS had their care supervised through the PAS MDT (Table 4). This included eight planned caesarean hysterectomies and one planned uterine conservation procedure. Of these, 44% (n=4) were external referrals. The median gestational age at delivery was 34 2/7 weeks, with most women having an elective surgical delivery (n=7; 78%). The median estimated blood loss (EBL) was 1,675mls, with less than half of women requiring a blood transfusion (n=4; 44%).

All women were offered input from allied healthcare professionals including social work, perinatal mental health, physiotherapy, and lactation support as well as follow-up information about the Placenta Accreta Ireland Support Group.

**TABLE 4: PLACENTA ACCRETA SPECTRUM (PAS) CASES - 2022**

Case	Age	Parity	Place of Delivery	Elective/ Emergency	Gestation	Procedure	Anesthesia	Estimated blood loss (ml)
1	49	2	NMH	Elective	35+1	CH	GA	500
2	35	3	NMH	Elective	34+2	CH+AB	GA	1,675
3	37	2	NMH	Emergency	22+1	CH	GA	11,000
4	38	3	MMUH	Elective	32+2	CH+AB	GA	950
5	35	3	MMUH	Elective	34+0	CH+AB	GA	1,000
6	30	1	MMUH	Elective	33+6	CH+AB	GA	500
7	39	2	Rotunda	Elective	35+3	CH	Regional/GA	11,000
8	30	2	Rotunda	Emergency	32+1	CH	Regional/GA	2,300
9	41	0	Rotunda	Elective	38+5	CS	Regional/GA	2,000

NMH = National Maternity Hospital; MMUH = Mater Misericordiae University Hospital; CH = caesarean hysterectomy; AB = aortic balloon via interventional radiology; CS = caesarean section (uterine conservation)

## CAESAREAN SCAR PREGNANCY

Caesarean scar pregnancy (CSP) is a precursor to severe PAS and both conditions exist as part of a common disease spectrum. Although relatively uncommon, the incidence of CSP is increasing in line with increasing caesarean section rates. In 2022, three women with CSP were managed through the PAS MDT. One case was undiagnosed and presented with a uterine rupture at 15 weeks' gestation, being managed at St Vincent's University Hospital. The remaining two cases were diagnosed before eight weeks gestation, with no fetal heart present. One case was managed medically at a local hospital, while the other had a successful ultrasound-guided evacuation of retained products of conception (ERPC).

## MULTIPLE PREGNANCY SERVICE

A new consultant-delivered Monochorionic Multiple Pregnancy Service was established in 2021, with its first full year of operation completing in 2022. All patients with a monochorionic pregnancy are now provided with their complete antenatal care through this service, including a review by a consultant MFM specialist every two weeks from 16 weeks' gestation until delivery. This enables an efficient comprehensive maternal and fetal assessment at each visit.

In 2022, a total of 50 sets of multiple pregnancies had their care supervised through this service, comprising 34 pregnancies with a monochorionic pair (30 MCDA twins, one case of monoamniotic twins, two cases of DCTA triplets, and one case of MCTA triplets). A further 14 sets of complicated dichorionic twins were supervised through this clinic, in addition to two sets of trichorionic triplets. There were a total of four Rotunda-booked cases of TTTS requiring laser with a further seven cases requiring laser therapy being referred from external hospitals. There were two cases of twin anaemia polycythaemia sequence (TAPS), one case of dual demise at 19 weeks' gestation in a monochorionic twin in the absence of TTTS, and five cases of selective fetal growth restriction (sIUGR) in monochorionic twins. The monoamniotic twin case was further complicated by discordant anomaly of one twin with a diagnosis of spondylocostal dysostosis. There was a case of single demise in the first trimester in the monochorionic triplets followed by preterm delivery at 30 weeks, but without significant adverse outcome.

## PERINATAL GENETICS SERVICE

With ongoing advances in genetic technologies, it has become apparent that an increasing number of Rotunda patients may benefit from genetics input to their pregnancy care. In 2022, a full-time genetic counsellor, Ms. Debby Lambert, commenced at the Rotunda, to provide genetic services for patients with a new fetal diagnosis or family history of a genetic condition

The Rotunda Perinatal Genetics testing protocol involves performing both PCR and microarray for all fetal medicine cases that require an invasive test. The only exception to an automatic reflex microarray test is when an abnormal PCR result is returned in the setting of a clear ultrasound abnormality, particularly in the setting of a high-risk NIPS result. In an effort to streamline resources, conventional prenatal karyotyping is only specifically performed in the setting of recurrent aneuploidy or significant family history of fetal anomalies. The role of whole exome sequencing (WES) continues to evolve, with an increasing number of trio exome tests being performed. Determining the correct WES test/panel has been greatly aided by the availability of genetic counsellor expertise, with all complex cases discussed at a weekly MDT at which a consensus on the role of prenatal WES is confirmed.

## WEEKLY MULTIDISCIPLINARY TEAM CONFERENCES

A weekly Multidisciplinary Team (MDT) meeting represents an integral component of the work of the Fetal Medicine Service. This meeting is attended by clinicians from the Fetal Medicine Service, together with the Neonatology Service, and a range of additional paediatric subspecialists as needed, to discuss and plan the perinatal management of individual complex cases. During 2022, 308 case discussions were conducted at this meeting, with documentation of the outcome of resultant management plans being placed in each patient's MN-CMS electronic healthcare record.

Included in this forum are discussions relating to requests by patients to terminate a pregnancy with a prenatal diagnosis of fatal fetal abnormality. During 2022, 66 patients attending the Fetal Medicine Service opted for termination of pregnancy for fetal abnormality. Four of these patients availed of termination under Section 12 of the Health (Regulation of Termination of Pregnancy) Act 2018 (i.e. less than 12 weeks' gestation), 41 patients underwent pregnancy termination for fatal fetal abnormality under Section 11 of the Health Act, and the remaining 21 patients travelled to another jurisdiction for pregnancy termination, most commonly to the United Kingdom. Six of the women who underwent pregnancy termination for fatal fetal abnormality attended the Rotunda for the purposes of Fetal Medicine consultation and diagnosis, including MDT input and initiation of the termination process, with planned completion of the termination process in their original (booking) hospital.

The vast majority of patients at the Rotunda who receive a prenatal diagnosis of a serious fetal abnormality continue with their pregnancy. These patients then receive their prenatal care and follow-up postnatal care in a streamlined manner through the Fetal Medicine Service, in collaboration with relevant Paediatric specialties. The contribution of Dr. Fiona McElligott, Consultant in Paediatric Palliative

Care Medicine, toward guiding families through this pathway is highly valued by staff and patients.

### SUCCESSSES & ACHIEVEMENTS 2022

- A highly successful National Fetal Cardiac Study Day was coordinated by Prof. Fionnuala Breathnach, Ms. Fiona Cody and Prof. Orla Franklin, in April 2022. Sonographers from every Maternity Unit in Ireland, in addition to sonography colleagues from Northern Ireland, attended this first in-person Masterclass held in Ireland since 2014.

### PLANS FOR 2023

- Continued upgrading of all ultrasound equipment
- Appointment of a dedicated Fetal Medicine Midwife to the Fetal Medicine services at Cavan General Hospital and Our Lady of Lourdes Hospital, Drogheda, will enable enhanced referral pathways with the Rotunda
- Installation of Tricefy® software programme to permit cloud-based access to ultrasound images, facilitating inter-hospital MDT discussion for complex fetal cases
- The need for a midwife dedicated to the complex needs of patients with multiple pregnancy has been identified and will be implemented in 2023

# Bereavement Support and Chaplaincy Service

## HEAD OF SERVICE

**Dr. Sieglinde Mullers**, Consultant Obstetrician Gynaecologist

## STAFF

**Ms. Trish Butler**, Clinical Midwife Manager

**Ms. Ann Charlton**, Hospital Chaplain

**Ms. Laura Doherty**, Maternity Care Assistant

**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 a significant and painful experience for any parent. To meet the needs of bereaved parents, the hospital provides a range of services through the Bereavement and Chaplaincy, Recurrent Pregnancy Loss, and Fetal Medicine Services. The Bereavement and Chaplaincy Team includes a specialist bereavement midwife, chaplain, dedicated medical social worker, maternity care assistant, and administrative support. Throughout the COVID-19 pandemic, the team provided sensitive, individualised, and compassionate care to all families, and adapted to meet all challenges presenting during the pandemic.

The specialist bereavement midwife co-ordinates the Bereavement Service Team and is an advocate for all bereaved parents. This includes ensuring all relevant multidisciplinary medical and nursing/midwifery team members within the hospital and in the community are involved and engaged as required with the patient's and family's care following a stillbirth or perinatal death. The specialist midwife is also responsible for coordinating and arranging appropriate follow-up appointments for all bereaved patients and is available to patients in a subsequent pregnancy, ensuring an early reassurance scan and a timely booking visit are coordinated. Following resumption of typical clinical services in the wake of the COVID-19 pandemic, the service is now offering face-to-face appointments for all, although the option of virtual appointments remains.

On-site bereavement education sessions remained suspended in 2022 due to continuing reduction in staff. The online suite of bereavement education sessions, in collaboration with the Centre for Midwifery Education, remained available, with some targeted informal education sessions being provided in some clinical areas.

## SUCCESSSES & ACHIEVEMENTS 2022

The Annual Service of Remembrance for 2022 was held again at St. Saviours' Church, adjacent to the Rotunda in Dominick Street, with gratitude to the Dominican Community for once again welcoming hospital staff and families, thereby enabling the service to be delivered

in a sensitive and compassionate manner. The relaxation of COVID-19 restrictions enhanced the service for all present. The work of all hospital staff, including the bereavement team, is greatly assisted by the chaplains and ministers who are available to offer support to patients and staff alike. The Dominican Community from St. Saviour's Church continues to provide dedicated pastoral support to parents and families which is very much appreciated.

The inaugural Rotunda Charity fundraising lunch was held at the Shelbourne Hotel on September 30, 2022 in aid of enhancing bereavement services within the hospital. The fundraising committee, led by Ms. Eleanor Power, Hospital GP liaison officer, ensured the event was an outstanding success. The funds raised through this event have been allocated for renovations of several key clinical areas within the hospital for bereaved patients and families, with works to be complete by 2023. The Bereavement Team are extremely grateful to all the staff and patients who contributed to this event, which recognises the importance of bereavement care within the hospital.

## ACTIVITY

Table 1 summarises the number of patients requiring bereavement support over the last five years. Although there was a reduction in activity in 2022, the complexity and needs of bereaved parents continues to increase. The team endeavours to work cohesively to ensure that optimal, individualised care is provided for all parents.

**TABLE 1: PERINATAL LOSS CASES REQUIRING BEREAVEMENT SUPPORT FOR BURIAL OR CREMATION**

Year	No. of Patients
2018	209
2019	223
2020	242
2021	268
2022	240

## PLANS FOR 2023:

- Business case approval for a second full-time clinical midwife specialist has been confirmed with the post to be advertised in 2023
- Recommence dedicated bereavement education sessions once the full complement of staff is restored in 2023
- Completion of planned infrastructural developments to key clinical inpatient and outpatient areas for bereavement care in 2023





# Maternal Medicine Service

## HEAD OF SERVICE

**Prof. Jennifer Donnelly**, Consultant Obstetrician/Maternal Fetal Medicine  
Rotunda Hospital, Mater Misericordiae University Hospital (MMUH)

## STAFF

**Prof. Ann Brannigan**, Consultant Colorectal Surgeon, MMUH

**Dr. Tony Geoghegan**, Consultant Radiologist, MMUH

**Dr. Barry Kelleher**, Consultant Gastroenterologist, Rotunda Hospital and MMUH

**Dr. Maria Kennelly**, Consultant Obstetrician Gynaecologist, Rotunda Hospital

**Dr. Damien Kenny**, Consultant Congenital Cardiologist, MMUH

**Dr. Etaoin Kent**, Consultant Obstetrician/Maternal Fetal Medicine  
Rotunda Hospital and OLOLH Drogheda

**Prof. Leo Lawler**, Consultant Radiologist, MMUH

**Dr. Colm Magee**, Consultant Nephrologist, Rotunda Hospital and  
Beaumont Hospital

**Dr. Nicola Maher**, Consultant Obstetrician Gynaecologist, Rotunda Hospital

**Prof. Conán McCaul**, Consultant Anaesthesiologist, Rotunda Hospital and MMUH

**Prof. Fionnuala Ní Áinle**, Consultant Haematologist, Rotunda Hospital  
and MMUH

**Dr. Dorothy Ryan**, Consultant Pulmonologist, Beaumont Hospital

**Dr. Patrick Thornton**, Consultant Anaesthesiologist, Rotunda Hospital and MMUH

**Prof. Kevin Walsh**, Consultant Congenital Cardiologist, MMUH

**Dr. Jasmeet Kumari**, RCPI Fellow in Maternal Medicine

**Ms. Patricia Fletcher**, Staff Midwife

**Ms. Cathy O'Neill**, Staff Midwife

**Ms. Caroline Daly**, Administration

## SERVICE OVERVIEW

The Maternal Medicine Service at 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. The reports concerning endocrine, infectious diseases and epilepsy are found elsewhere in this Annual Report.

During 2022, members of the maternal medicine service liaised with clinicians in non-maternity hospitals including the Mater Misericordiae University Hospital (MMUH), Beaumont Hospital and Connolly Hospital to provide guidance and inpatient care for pregnant and postpartum women with various medical conditions.

## CLINICAL ACTIVITY

### MATERNAL MEDICINE CLINIC

There were 1,160 patient encounters at the Maternal Medicine Clinic, which was similar to the 1,216 seen in 2021. Table 1 provides an overview of the range of medical diagnoses managed through the clinic.

TABLE 1: REASONS FOR ATTENDANCE 2022

Rheumatology	48
Psoriatic arthritis	20
Systemic lupus erythematosus	6
Rheumatoid arthritis	4
Ankylosing spondylitis	4
Mixed connective tissue disease	4
Sjogren's syndrome	3
CREST syndrome	2
Ehlers-Danlos syndrome	2
Bechet's syndrome	2
Joint pain - no diagnosis	1
<b>Haematology</b>	<b>41</b>
Current or previous venous thrombosis	14
Platelet disorder	8
Bleeding disorder	7
Other	7
Antiphospholipid syndrome	5
<b>Neurology</b>	<b>40</b>
Stroke/transient ischemic attack	10
Idiopathic intracranial hypertension	6
Structural CNS	6
Epilepsy	4
Migraine	4
Miscellaneous	4
Multiple sclerosis	3
Bell's palsy	2
Friedrich's ataxia	1
<b>Gastroenterology</b>	<b>36</b>
Crohn's disease	17
Ulcerative colitis	13
Other	6

TABLE 1: REASONS FOR ATTENDANCE 2022 (CONT.)

<b>Respiratory</b>	<b>31</b>
Asthma	10
COVID-19 infection	10
Others	7
Sarcoidosis	2
COPD	2
<b>Oncology (current or previous)</b>	<b>14</b>
Lymphoma	6
Breast	2
Leukaemia	2
Thyroid	2
Ovarian	1
Sarcoma	1
<b>Renal</b>	<b>11</b>
Hypertension	3
Focal segmental glomerulosclerosis	2
Transplant	2
Urinary tract infection / urosepsis	2
Other	2
<b>Dermatology</b>	<b>8</b>
Psoriasis	4
Erythropoietic protoporphyria	2
Other	2

<b>Miscellaneous</b>	
Poor obstetric history	13
Preconceptional counselling	10
Postoperative debriefing	10
Research	7
Endocrine	5
Metabolic	4
Infectious disease	3
Immunology	3
Orthopaedics	2
Musculoskeletal	2
ENT	1
Placenta accreta	1

#### MATERNAL MEDICINE MULTI-DISCIPLINARY TEAM (MMMDT)

The MMMDT is held every six to eight weeks at MMUH and provides a platform for multidisciplinary input into the management of women with complex backgrounds. A total of 152 women were discussed at the MMMDT in 2022, which was significantly more than the 118 patients discussed in 2021.

#### CARDIAC OBSTETRIC CLINIC

This specialist clinic involves a collaboration between obstetricians with expertise in maternal medicine together with cardiologists with expertise in congenital heart disease. There were 505 patient encounters at this clinic in 2022, which was a 6% increase on the 476 patients seen in 2021.

Table 2 gives an overview of the range of cardiac diagnoses managed at this clinic.

**TABLE 2: CARDIAC DIAGNOSES MANAGED DURING PREGNANCY 2022**

Classification of cardiac disease	Number
Arrhythmia	74
Congenital heart disease	35
Non-cardiac cases	22
Valvular aortic disease	21
Cardiomyopathy	8
Family history	8
Endocarditis	5
Aortic disease	4
Coronary artery disease	3
<b>Total</b>	<b>180</b>

### CARDIAC MDT

The Cardiac MDT is held every six to eight weeks, which provides a forum for multidisciplinary discussion and delivery planning for women with complex congenital heart disease and other complex cardiac conditions. A total of 130 patients were discussed at this MDT held at MMUH in 2022.

### SUCCESSES & ACHIEVEMENTS 2022

The Maternal Medicine Service remains a national referral centre for pregnancy in women with complex congenital cardiac disease, lung and heart transplant, and metabolic disease, as well as a range of other serious medical diseases that can coincide with pregnancy.

The Service continued to provide leadership in the care of pregnant women with medical conditions in non-maternity hospitals in the north Dublin region as well as nationally. Outpatient follow-up and ongoing education and contribution to local and national guidelines is provided by this Service.

The Service has established a series of symbols for use in electronic healthcare records to facilitate the transfer of care from the referral maternity hospital to the tertiary care.

A new obstetric and gynaecology specialist registrar with a focus on maternal medicine and obstetric liaison commenced with the Service.

### PLANS FOR 2023

Financial support is being developed for the appointment of midwifery support within MMUH to provide supportive holistic care for women during pregnancy who have medical conditions

Further development of the Irish Medicines in Pregnancy Service to support the Maternal Medicine Service

Commencing the appointment of a joint site consultant radiologist between MMUH and Rotunda to support major obstetric haemorrhage management and other complex maternal medical conditions between the two hospitals

# Teenage Pregnancy Service

## HEAD OF SERVICE

**Dr. Nikita Deegan**, Consultant Obstetrician Gynaecologist

## STAFF

**Ms. Deborah Browne**, Clinical Midwife Specialist

**Ms. Laura Feely**, Medical Social Worker

**Ms. Eileen Gleeson**, Medical Social Worker

## SERVICE OVERVIEW

For the 18<sup>th</sup> consecutive year, the Teenage Pregnancy Service at the Rotunda has continued to provide holistic pregnancy care for those up to the age of nineteen. The service also caters for some vulnerable young adults over the age of 19 (such as those with additional medical or social needs) who may benefit from the continuity of care of a dedicated obstetrician, midwife, and other supports which are available within the service.

## CLINICAL ACTIVITY

As demonstrated in Table 1 below, the number of new patients managed in the service over the past five years peaked again in 2022, representing a 22% increase on 2021.

Year	No. of Patients
2018	129
2019	126
2020	136
2021	119
2022	145

From the total of 145 patients who booked with the Teenage Pregnancy Service for antenatal care in 2022, 72% were nulliparous, and 28% were multiparous. Of note, over half (53%) of the multiparous patients were aged under 18 at the time of booking, with 23% of these multiparous patients reporting already having had one previous caesarean delivery.

From an ethnic perspective, the largest proportion of patients attending the service were Roma (43%), which represents a significant increase in this cohort of patients from 12% in 2017. Having access to a telephone translation service is therefore, more than ever, an essential part of the service.

An essential component of the Teenage Pregnancy Service is the dedicated support from the Medical Social Work (MSW) Service. Patients are referred to the MSW Service whenever a particular need is identified at the booking visit, or during subsequent appointments. Essential emotional and practical support is provided to patients with respect to parenting and relationship issues, education, financial and work support. In 2022, 77% of patients attending the Teenage Pregnancy Service were provided with MSW support during and after their pregnancy, with 18% of these requiring onward referral to Tusla – Child and Family Agency.

During their pregnancy, 11 patients transferred their care to another hospital, or moved outside of Ireland. One additional patient transferred their care to the HSE home birth service and gave birth at home as planned.

As well as the patients who attended the service antenatally, an additional two patients (aged 16 and 17) presented to the Rotunda for the first time in labour, without having previously booked for antenatal care. A third patient (aged 18) had a concealed pregnancy and presented to a local general hospital with eclampsia, which required delivery by emergency caesarean section at 34 weeks' gestation. All three of these patients were referred to the specialist Teenage Postnatal Clinic.

One patient was diagnosed with a fetal cardiac anomaly during pregnancy and had shared antenatal care between the Teenage Pregnancy Service and the Fetal Medicine Service.

Unfortunately, two 18-year-old patients were inadvertently not referred to the Teenage Pregnancy Service antenatally, with both attending general adult antenatal clinics at the Rotunda instead. However, both were referred to the Teenage Pregnancy Service postnatally once identified.

TABLE 2: PREGNANCY OUTCOMES 2022

Pregnancy Outcomes	Number*	%
Spontaneous vaginal delivery	89	67%
Operative vaginal delivery	21	16%
Caesarean delivery (elective)	7	5%
Caesarean delivery (emergency)	16	12%
<b>Total Delivered in Rotunda</b>	<b>133</b>	<b>100%</b>

\*Does not include patients who were un-booked and delivered at the Rotunda or 12 patients who were transferred to other hospitals or opted for home birth

The overall caesarean delivery rate for 2022 was 17% which is higher than the 11% noted in 2021. Amongst these 23 patients who had caesarean delivery, 65% were nulliparous and 35% were multiparous (all of whom had a previous caesarean delivery). Three patients attempted a trial of labour after caesarean delivery (all of whom had only one previous caesarean). Two of these three patients required an emergency caesarean section in labour, and the remaining one patient had a successful vaginal birth after previous caesarean (VBAC) delivery.

The Teenage Pregnancy Service provides a postnatal clinic once monthly, offering appointments to patients at approximately six weeks after delivery. This is a further opportunity to provide contraceptive advice and administration, and to check on physical and psychological wellbeing. In 2022, a consultant-provided Implanon contraceptive device insertion service commenced, thereby now enabling all forms of Long Acting Reversible Contraceptive (LARC) to be provided at the Teenage Pregnancy Service. Unfortunately, 26 of 139 (19%) eligible patients were not offered a specialist postnatal clinic appointment, and only 43 (38%) of the 113 who were offered an appointment actually attended. This suggests areas for quality improvement in the service in 2023.

### SUCCESSSES & ACHIEVEMENTS 2022

- 2022 saw the retirement of Dr. Geraldine Connolly who established the Teenage Pregnancy Service at the Rotunda in 2005. The Rotunda is profoundly grateful for the fantastic contribution Dr. Connolly made to the hospital by developing and delivering this service so successfully over the past 18 years. She will be greatly missed by the patients and staff
- In-person, one-to-one antenatal classes for vulnerable teenagers re-commenced in 2022
- Clinical Midwife Specialist, Ms. Debbie Browne, commenced a project with Inclusion Health Ireland to produce and launch a Roma information booklet regarding maternity care
- Dedicated dietetic support is now available for all teenage patients
- Development of a close working relationship with the Safetynet Primary Care charity has facilitated access to free contraception for patients who fell outside the remit of the national Free Contraception Scheme. This has been particularly beneficial for providing LARCs to patients within the Teenage Pregnancy Service

- Introduction of Implanon insertion as an option for patients attending the service, including both on the postnatal ward and within the dedicated teenage postnatal clinic

### CHALLENGES 2022

- In September 2022, the introduction of the national Free Contraception Scheme widened access to contraception for anyone in Ireland aged 17-25 with a PPS number. While this was a welcome development, many of the Teenage Pregnancy Service patients faced challenges with accessing the scheme because they were below the age of 17 and/or did not have a PPS number. To address this challenge, the service developed a close working relationship with the Safetynet Primary Care charity, so that no patients are left without appropriate contraceptive access
- Attendance rates at the dedicated teenage postnatal clinic has continued to be challenging in 2022
- Accessing training in Implanon insertion for Clinical Midwife Specialist, Ms. Debbie Browne, has been challenging

### PLANS FOR 2023

- A new and improved targeted scheduling system to optimise attendance at the specialist teenage postnatal clinic visit will be implemented, which will include text-based reminders
- Expanded options for LARC administration will be developed, following training of the service's CMS

# Combined Obstetric Endocrine Service

## HEADS OF SERVICE

**Prof. Fionnuala Breathnach**, Consultant Obstetrician Gynaecologist

**Dr. Maria Byrne**, Consultant Endocrinologist

**Dr. Maria Kennelly**, Consultant Obstetrician Gynaecologist

## STAFF

**Ms. Jackie Edwards**, Clinical Midwife Manager

**Ms. Aileen Flemming**, Clinical Midwife Manager

**Ms. Rebecca Lanuze**, Clinical Midwife Manager

**Ms. Alexandra Cunningham**, Senior Dietician

**Ms. Hilary Devine**, Senior Dietician

**Dr. Mairead Crowley**, Specialist Registrar Endocrinology

**Dr. Nicholas Kay Jay**, Specialist Registrar Endocrinology

## SERVICE OVERVIEW

The Combined Obstetric Endocrine Service provides focussed multi-disciplinary, single-site care for women with diabetes mellitus at the Rotunda Hospital. This service is responsible for one of the highest-risk areas of clinical care at the hospital. Details on the characteristics and outcomes of each subgroup with diabetes (Type I, Type II, MODY and gestational diabetes) are provided in Tables 1 to 4. Uncomplicated gestational diabetes (GDM) cases that are treated by diet or metformin are managed in hospital routine antenatal clinics, while those with pre-gestational diabetes, as well as gestational diabetic cases that require insulin, are managed through the Combined Obstetric Endocrine Service. Patients with MODY (Maturity Onset Diabetes of the Young) have been included within the pre-gestational diabetic group, as have patients using continuous subcutaneous insulin infusion (CSII) pumps. The previously noted increase in the prevalence of pre-gestational and gestational diabetes reduced somewhat in 2022. Patients with a diagnosis of MODY represented 4% of the pre-gestational diabetic group in 2022 and are a diagnostic challenge as they can overlap with Type 1 or Type 2 phenotypes, with a specific diagnosis often being delayed.

**TABLE 1: CLINICAL ACTIVITY OVERVIEW - DIABETES MELLITUS TYPES (2018 - 2022)**

	2018	2019	2020	2021	2022
Type 1	26	29	32	31	29
Type 2	25	55	24	34	29
MODY	0	0	0	5	3
GDM - Diet	674	856	1,040	1,193	875
GDM - Metformin	0	0	52	27	103
GDM - Insulin	289	325	223	188	229
<b>Total</b>	<b>1,014</b>	<b>1,265</b>	<b>1,371</b>	<b>1,488</b>	<b>1268</b>

MODY = maturity onset diabetes of the young; GDM = gestational diabetes mellitus

It is notable that mean HbA1C levels at the time of booking are significantly higher in the Type 1, pre-gestational, diabetic population at the Rotunda than international recommendations, which reflects the particularly high-risk patient demographic at the hospital. Despite this hyperglycaemic environment at booking, the perinatal outcomes for these patients remain excellent, with miscarriage rates consistent with those seen in uncomplicated pregnancies. In addition, there were no reported incidences of shoulder dystocia or neonatal deaths in this cohort (Table 3). There was one stillbirth in the Type 2 patient cohort. This occurred at 28 weeks' gestation, in a baby who had a known severe cardiac anomaly. This anomaly consisted of left atrial isomerism with complete AVSD, pulmonary atresia, and complete heart block leading to fetal hydrops. It was expected that this would lead to fetal demise in utero.

**TABLE 2: PRE-GESTATIONAL DIABETES - MATERNAL CHARACTERISTICS\***

	Type 1 N (%)	Type 2 N (%)	MODY N (%)
Number	29	29	3
Mean age (years)	33.0	36.0	36.0
Mean duration (years)	13.4	3.6	1.9
Chronic hypertension	3/29 (10%)	7/29 (24%)	0/3(0%)
Retinopathy	12/29 (41%)	1/29 (3%)	0/3 (0%)
Nephropathy	1/29 (3%)	0/29 (0%)	0/3(0%)
Neuropathy	1/29 (3%)	0/29	0/3(0%)
Preeclampsia	6/29 (21%)	3/29 (10%)	0/3 (0%)
Mean HbA1c at booking (mmol/L)	60.7	45.5	35.0
Mean HbA1c at delivery (mmol/L)	49.6	40.1	31.6
Mean fructosamine at booking (umol/L)	302.2	239.2	225.6
Mean fructosamine at delivery (umol/L)	258.8	221.1	203.3

\*Complications are expressed from ongoing viable pregnancies; MODY = maturity onset diabetes of the young

**TABLE 3: PRE-GESTATIONAL DIABETES - PERINATAL OUTCOMES\***

	Type 1 N (%)	Type 2 N (%)	MODY N (%)
Number	29	29	3
Spontaneous fetal loss <24 weeks	0/29 (0%)	0/29 (0%)	1/3 (33%)
Delivered elsewhere	0/29 (0%)	0/30 (0%)	0/3 (0%)
Preterm delivery <37 wks	8/29 (28%)	7/29 (24%)	0/3 (0%)
Liveborn	29/29 (100%)	28/29 (97%)	2/3 (67%)
Stillbirth	0/29 (0%)	1/29 (3%)	0/3 (0%)
Neonatal death	0/29 (0%)	0/29 (0%)	0/3 (0%)
Shoulder dystocia	0/29 (0%)	0/29 (0%)	0/3 (0%)
Caesarean delivery rate	24/29 (83%)	21/29 (72%)	1/3(33%)
Mean gestational age delivery (weeks)	36	37	38
Mean birthweight (g)	3,494g	3,031g	3,100g
Macrosomia (>95th centile)	5/29 (17%)	2/29 (7%)	0/3 (0%)

\*Complications are expressed from ongoing viable pregnancies; MODY = maturity onset diabetes of the young.

The use of continuous subcutaneous insulin infusion (CSII) pump therapy is now used as often as multiple daily insulin injections (MDII) in the management of pre-gestational diabetes in recent years, with up to half of the Type 1 diabetic cohort now using this as their principal form of therapy. In 2022, 11 of 23 Type 1 diabetic patients used CSII, with 10 of these 11 patients using sensor-augmented pumps providing continuous glucose monitoring. The remaining 12 of 23 Type 1 diabetic patients were managed with MDII, the majority of which (91%) availed of continuous glucose monitoring for glycaemic surveillance.

A total of 1,207 patients were diagnosed with GDM during pregnancy in 2022 (Table 4). While this was lower than the 1,408 managed in 2021, a greater proportion of patients required therapy beyond diet and lifestyle alone. For many patients, this involved metformin therapy, which reduces the need for insulin.

**TABLE 4: GESTATIONAL DIABETES - PERINATAL OUTCOMES\***

	Diet Controlled N (%)	Insulin N (%)	Metformin N (%)
N (%)	875	229	103
Mean age (years)	33	34	34
Delivered elsewhere	0 (0%)	0 (0%)	0 (0%)
Stillbirth	1 (0.1%)	0 (0%)	0 (0%)
Caesarean delivery	364 (42%)	131 (57%)	45 (43%)
Mean gestational age at delivery (weeks)	39	38	39
Mean birthweight (g)	3,371g	3,330g	3,395g
Preeclampsia	22 (3%)	15 (7%)	3 (3%)
Shoulder dystocia	7 (1%)	2 (1%)	1 (1%)

\*Complications are expressed from ongoing viable pregnancies.

## SUCCESSSES & ACHIEVEMENTS 2022

Ms. Aileen Flemming, clinical midwife specialist, was appointed as candidate advanced midwife practitioner (AMP) in diabetes with the intention of providing a specialist AMP-led clinic for those with pre-gestational diabetes. In addition, Ms. Rebecca Lanuze was appointed as CNM2 for the diabetes service.

Women diagnosed with GDM attended a midwifery- and dietician-led service for lifestyle-intervention and self-monitoring of blood glucose levels. This highly successful programme features scheduled telephone-consults with specialist midwives and group-dietetic sessions, with individual in-person sessions where needed. Following this self-management programme, 28% of women required treatment beyond lifestyle intervention, with 9% being managed with metformin, and the remaining 19% requiring insulin for glycaemic control.

During 2022, Dr. Suzanne Smyth was awarded a PhD for a thesis entitled 'Clinical investigation of a novel app-assisted self-management programme for gestational diabetes'.

The IRELAND randomized controlled trial of aspirin for women with Type I or Type II diabetes continued to recruit throughout 2022, and will conclude in early 2023. The Rotunda team will also participate in a National Diabetes in Pregnancy audit.

The diabetes midwives continued to provide lectures and clinical skills workshops to undergraduate and postgraduate student midwives within the hospital environment at Trinity College Dublin. They have

also contributed to the bi-annual Tri-hospital Diabetes Study Day for staff incorporating the three Dublin maternity hospitals. Midwifery-led teaching was conducted on endocrine emergencies due to its increased incidence in pregnancy over the last year. In addition, the diabetes midwives continued to facilitate specialist diabetes placements for undergraduate students. Joint consultations with dietitian colleagues have been established for ongoing management and training of Type 1 patients using CSII pumps.

Dr. Maria Kennelly and Prof. Fionnuala Breathnach provided postgraduate GP teaching through the Rotunda Hospital and Mater Misericordiae University Hospital educational group on Diabetes in Pregnancy.

## CHALLENGES 2022

The increased incidence of patients diagnosed with gestational diabetes since introduction of the IADPSG-endorsed thresholds for diagnosis continues to be a major resource challenge for the service. Midwifery staffing levels and recruitment of specially trained midwives and nurses in diabetes continues to be challenging. Current staffing levels are at 50% capacity compared to other diabetic departments across the city despite the Rotunda having the largest endocrine service in Dublin and nationally.

The geographical location of the Rotunda within inner city Dublin lends itself to having one of the most vulnerable populations when it comes to those with chronic medical conditions in pregnancy. Health literacy promotion remains an ongoing priority for these patients to optimise pre-pregnancy health and compliance with treatment in pregnancy.

While the use of CSII pumps has revolutionised how women manage their glucose control in pregnancy, the use of these instruments requires care by skilled professionals, careful selection of patients, meticulous patient monitoring, and thorough patient education. As a result, such pumps are labour intensive to manage and require a lot of additional work load in order to properly monitor data output, and interpretation of this output.

## PLANS FOR 2023

Appropriately staffing for the Combined Endocrine service will be a clinical priority for 2023. It is hoped to appoint an additional clinical midwife specialist to aid in this ever-expanding service. Efforts will continue to be performed locally and nationally to advocate for additional funding and resource allocation for the diabetes in pregnancy service especially as the Rotunda endocrine service continues to operate as the largest such service in Dublin and nationally.







# Infectious Disease Service

## HEAD OF SERVICE

**Prof. Maeve Eogan**, Consultant Obstetrician Gynaecologist

## STAFF

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

## 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 2022, 157 women booked for antenatal care, which was similar to 2021 when 166 women attended.

Of those attending the service, 99 were serology positive:

- 41 (41%) women were positive for Hepatitis B surface antigen, representing an increase of 17% compared to 2021 (Fig 1)
- 20 (20%) women were positive for Hepatitis C antibody, a decrease of 44% compared to 2021
- 14 (14%) were positive for HIV infection, a decrease of 26% compared to 2021
- 24 (24%) women had positive syphilis serology, an increase of 50% compared to 2021

No women were co-infected with more than one blood borne infection.

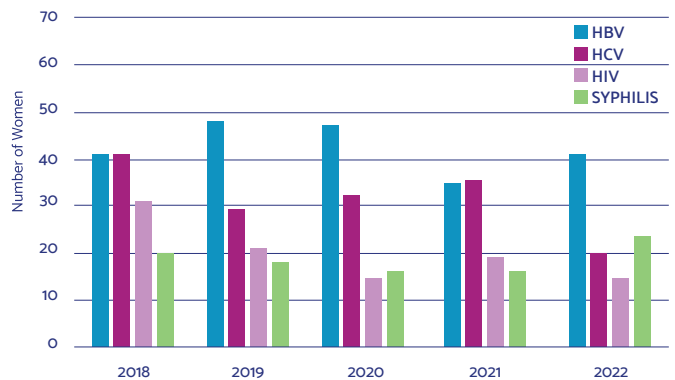
In addition, 117 women availed of the services provided by the Drug Liaison Midwives in 2022.

Furthermore, a number of women attend the service during the course of their antenatal care for diagnosis and treatment of HPV,

HSV, Chlamydia (n=84), Gonorrhoea (n=6) and Mycoplasma genitalium (n=18).

The numbers in the tables below refer to the number of births in the year, and therefore differ from the number of patients booked throughout the year.

**FIGURE 1: INFECTIOUS DISEASE SERVICE BOOKINGS BY YEAR**



**TABLE 1: DELIVERIES TO HBV-POSITIVE MOTHERS 2022**

Total mothers delivered <500g	0
Total mothers delivered >500g	37
Live infants (1xTwins)	38
Miscarriage	0
Stillbirths	0
Infants <37 weeks gestation	6
Infants ≥37 weeks gestation	32
Infants delivered by C-section	12
HBV-positive infants	0*
<b>Maternal Data (n=40 – 3 delivered elsewhere)</b>	
Median age (years)	32
Newly diagnosed this pregnancy	6

\*Final serology not yet available for all infants

TABLE 2: DELIVERIES TO HCV-POSITIVE MOTHERS 2022

Total mothers delivered <500g	1
Total mothers delivered >500g	30
Live infants	29
Miscarriage	1
Stillbirths	1
Infants <37 weeks gestation	7
Infants ≥37 weeks gestation	23
Infants delivered by C-section	14
HCV-positive infants	0*
<b>Maternal Data (n=31)</b>	
Median age (years)	34
Newly diagnosed this pregnancy	5

\*Final serology not yet available for all infants

TABLE 3: DELIVERIES TO HIV-POSITIVE MOTHERS 2022

Total mothers delivered <500g	0
Total mothers delivered >500g	17
Live infants	17
Miscarriage	0
Stillbirths	0
Infants <37 weeks gestation	3
Infants ≥37 weeks gestation	14
Infants delivered by C-section	5
HIV-positive infants	0
<b>Maternal Data (n=31)</b>	
Median age (years)	33
Newly diagnosed this pregnancy	2

TABLE 4: DELIVERIES TO SYPHILIS-POSITIVE MOTHERS 2022

Total mothers delivered <500g	0
Total mothers delivered >500g	18
Live infants	17
Miscarriage	0
Stillbirths	1
Infants <37 weeks gestation	5
Infants ≥37 weeks gestation	13
Infants delivered by C-section	6
Syphilis-positive infants	1
<b>Maternal Data (n=31)</b>	
Median age (years)	31
Newly diagnosed this pregnancy	8

### DRUG LIAISON MIDWIFE (DLM) SERVICE

During 2022, 117 women were referred to the DLM service, including 36 women who had a history of opiate addiction and were engaged in an Opioid Substitution Treatment (OST) programme, mostly methadone. This represents an increase of 13% compared with 2021. A total of 62 women linked with the DLM service delivered their babies in the Rotunda Hospital in 2022.

**TABLE 5: DELIVERIES TO MOTHERS UNDER DLM SERVICE 2022**

Total mothers delivered <500g	0
Total mothers delivered >500g	62
Mothers on prescribed methadone programmes	32
Mothers on prescribed buprenorphine	4
HCV-positive mothers	15
HIV-positive mothers	0
Live infants	62
Stillbirths	1
Infants <37 weeks gestation	21
Infants ≥37 weeks gestation	42
Infants delivered by C-section	21
NICU admissions for NAS	15

NAS = Neonatal abstinence syndrome

### INFECTIOUS DISEASE MEDICAL SOCIAL WORK

The Medical Social Worker liaised closely with the Drug Liaison Midwife, the Infectious Diseases Service 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 2022, 48 women were referred to Tusla.

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 are children separated from their parents, and only after all alternative means of protecting them have been exhausted. The following actions were the outcome of Tusla social work involvement:

- 35 Discharge Safety Planning Meetings
- 32 Child Protection Case Conferences
- 6 babies placed in foster care under an Interim Care Order
- 1 baby placed in pre-adoptive foster care
- 1 baby placed in a foster care placement under a voluntary care order
- 21 mothers required to return under the supervision of a non-drug using relative or agency for a period of time until stability assured
- 3 mothers admitted to a mother and baby unit/parent assessment unit arranged by Tusla

### PAEDIATRIC INFECTIOUS DISEASE SERVICE

Infants of mothers with positive serology were provided with follow-up appointments for the Rotunda paediatric infectious disease service. The service is delivered by Dr. Wendy Ferguson who is affiliated with the Rainbow Team: the national service for Paediatric Infectious Diseases. In 2022, a total of 244 infants and children attended the paediatric infectious disease service for monitoring and outcome. This included 72 patients with virtual consultations.

### SUCCESSES & ACHIEVEMENTS 2022

#### 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 undergraduate and postgraduate midwifery students annually.

The Drug Liaison Midwives have delivered lectures on substance misuse in pregnancy to both undergraduate and postgraduate midwifery students in TCD, as well as to students on the Masters Programme in Addiction Studies in the Dublin Business Institute and to those on the Graduate Diploma in Public Health Nursing in 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 Prof. Jack Lambert acting as course director, and Prof. Maeve Eogan providing teaching on management of rape and sexual assault. The courses took place in March and October 2022 and provided multidisciplinary training in the knowledge and skills required for the prevention and holistic management of sexually transmitted infections.

Dr. Wendy Ferguson provides regular lectures to NCHDs in house and also lectures at the microbiology specialist registrar study days and the Diploma in Primary Care Paediatrics. A new teaching initiative commenced in 2022 for all Dublin-hospital based paediatric infectious disease and microbiology NCHDs. Weekly teaching sessions are delivered virtually and Dr. Ferguson is on a rota with her Dublin-based paediatric ID and microbiology consultants for delivery of teaching sessions.

### ENHANCING PATIENT CARE

2022 saw a sustained collaboration with inclusion health (SafetyNet) to enhance patient care. This enabled provision of vaccination (including COVID-19 vaccination) and contraception on-site in the clinic. There has been a good uptake of both services. As well as delivering on recommendations of the Rotunda Hospital Strategic Plan and the National Maternity Strategy, this initiative fits with many of the fundamental recommendations of Sláintecare reform, including that patients can 'access (free) care ...with a strong emphasis on prevention and public health', 'right care, right place, right time'. The team was delighted to be awarded 'Outpatient Initiative of the Year' at the Healthcare Centre Awards in May 2022 for the initiative entitled 'Opportunity Knocks: Offering Onsite Vaccination and Contraception for Pregnant and Postpartum Women at the DOVE Clinic of the Rotunda Hospital'.

A number of members of the team have collaborated to enhance maternal and neonatal care in the context of perinatal infection – Dr. Wendy Ferguson continues to participate in the European Congenital CMV Network, which is a collaboration of paediatricians aimed at improving diagnosis and management of congenital CMV. Dr. Ferguson is a member of the working group for 'Targeted screening for congenital CMV linked with the newborn hearing screening programme.' This project will be launched in 2023 by NWIHP. This is a quality improvement project for early identification of congenital CMV infants with hearing loss who can potentially benefit from timely initiation of treatment.

A number of members of the team are involved in developing the NWIHP/IOG National Clinical Practice Guideline on prevention of Early Onset GBS Disease in Term Infants, which will launch in early 2023.

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 2022

The number of women attending the Infectious Diseases Service with HBV and positive syphilis serology increased in 2022. It is important to

continually assess these metrics to ensure the service we provide is responsive to the needs of patients.

Additionally, the service and allied agencies need to adapt and respond to evolving patterns of addiction. With increasing numbers of women being prescribed buprenorphine (rather than methadone) for OST, it is necessary to revise inpatient prescribing and adequate pharmacy supplies of buprenorphine.

Furthermore, 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. The HSE alcohol programmes have prepared a position paper on prevention of fetal alcohol spectrum (FAS), which includes advocacy for consistent education and supports in this regard. Prof. Maeve Eogan and Mr. Justin Gleeson will continue to be engaged in research and education in this context.

The DOVE team were sorry to say 'goodbye' to our highly respected Drug Liaison Midwife, Mr. Justin Gleeson, as he headed off to take up a similar role in the South East. Justin has been central to the provision of high quality, person-focussed, holistic care for women with addiction in pregnancy for a long number of years. We welcome his successor and look forward to continued collaboration with Justin on a number of initiatives.

### PLANS FOR 2023

The service will continue to embed accessible contraceptive advice within the service and to deliver funded long-acting reversible contraception (LARC). Furthermore, it is hoped to improve attendance rates for postnatal contraception by identifying and mitigating specific barriers to attending. Commencement of the Government-funded free contraception initiative is welcomed, and the team will continue to advocate for expanded provision of this service, particularly for people from vulnerable populations who may not fit the current age category.

The team will continue to explore ways of enhancing vaccination uptake by on-site hospital vaccination, which includes provision of a consultation room within the Pharmacy Service, where vaccination could be easily delivered.

The team looks forward to contributing to other ongoing inclusion health initiatives, including development of accessible patient resources for Roma women. The team was delighted to be funded to purchase tablet computers through the Rotunda Foundation in 2022, and will develop ways to optimise their use for patient information, education and communication in 2023.

# Epilepsy Service

## HEAD OF SERVICE

**Dr. Nicola Maher**, Consultant Obstetrician Gynaecologist

## STAFF

**Ms. Sinead Murphy**, Advanced Nurse Practitioner (ANP) in Epilepsy

**Dr. Lorna Tate**, Specialist Registrar

## SERVICE OVERVIEW

The Epilepsy Service at the Rotunda is part of the maternal medicine service. While most women with epilepsy have healthy, seizure-free pregnancies, epilepsy has regularly featured in maternal mortality reports such as MBRRACE. The need to provide women with epilepsy tailored multidisciplinary care has long been recognised. Pregnancy is an ideal opportunity to revisit patients' care from an epilepsy perspective and to ensure they are linked with a local neurology service. Ideally all patients with epilepsy planning a pregnancy should have the opportunity to avail of preconception counselling.

The Epilepsy Service is staffed by Dr. Nicola Maher, Consultant Obstetrician Gynaecologist, and Ms. Sinead Murphy, ANP in Epilepsy, where multidisciplinary antenatal care is provided to all women with a confirmed or suspected diagnosis of epilepsy. Close links exist with the Beaumont Hospital and Mater Misericordiae University Hospital (MMUH) Neurology Services. In addition, the Irish Medicines in Pregnancy Service (IMPS) offers valuable support to the service in terms of optimising medication choices.

## CLINICAL ACTIVITY

A total of 143 women attended the Epilepsy Service in 2022, representing a 17% increase compared with 2021. A total of 106 of these patients had a current diagnosis of epilepsy, and 89 of these patients were currently using medication.

The vast majority of patients seen in the service attended the multidisciplinary clinic. Private and semiprivate patients with epilepsy also separately availed of the ANP service while maintaining obstetric care under the supervision of their own consultant obstetrician gynaecologist.

A total of 77 women remained on one anti-seizure medication, while five were taking a second agent, and seven required three medications. The most common medication prescribed was levetiracetam (52 women) followed by lamotrigine (25 women). Approximately 12 women were taking newer medications for which there is little or no information available on pregnancy safety. Of the seven patients who were taking three medications, four of these patients experienced

seizures in pregnancy, reflecting the overall severity of such patient's epilepsy. Conversely only nine of the 77 women taking a single agent experienced a seizure during their pregnancy.

In recent years, significant advances have been made in relation to commonly prescribed anti-seizure medications and the evidence available to support their use. This enables clinicians to confidently prescribe and counsel women in relation to the importance of compliance to optimise mother and baby safety. Continuity of care is provided with the same obstetric team, including a consistent specialist ANP at least once per trimester. This facilitates clear consistent messaging which improves patient's confidence in the healthcare information with which they are provided.

## SUCCESSSES & ACHIEVEMENTS 2022

An audit conducted by Dr. Aaron Ryan on prescribing of anti-seizure medications highlighted challenges with the MN-CMS electronic healthcare record in relation to medication reconciliation. This audit will be presented at the international Society for Maternal Fetal Medicine meeting in the United States in 2023. In response to these audit findings, MN-CMS prescribing reconciliation tutorials were developed and will be optimised in 2023.

## PLANS FOR 2023

It is hoped that ongoing collaboration with the Irish Medicines in Pregnancy Service to develop information resources with visual aids for patients taking anti-seizure medications will produce a suite of resources for patients in 2023.

In addition, the support of a neurologist for patients with complex neurological symptoms in both the epilepsy and maternal medicine service has long been recognised as a valuable addition to the team. It is hoped that this resource will be provided in 2023.





# Perinatal Mental Health Service

## HEAD OF SERVICE

**Dr. Richard Duffy**, Consultant Psychiatrist

## STAFF

**Prof. John Sheehan**, Consultant Psychiatrist  
**Dr. Imran Ahmed**, Senior Registrar in Psychiatry  
**Ms. Julia Daly**, Clinical Nurse Specialist in Perinatal Mental Health  
**Dr. Jillian Doyle**, Senior Clinical Psychologist  
**Ms. Stefanie Fobo**, Senior Mental Health Social Worker  
**Ms. Eithne Kinsella**, Assistant Administrator  
**Ms. Jeanne Masterson**, Clinical Midwife Specialist in Perinatal Mental Health  
**Ms. Ursula Nagle**, Advanced Midwife Practitioner in Perinatal Mental Health  
**Ms. Leanne O'Neill**, Clinical Nurse Specialist in Perinatal Mental Health  
**Ms. Róisín Walsh**, Senior Occupational Therapist

## 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 provides specific services for psychological birth trauma, and works in collaboration with GPs, community mental health teams and voluntary organisations. The service provides a strong emphasis on prevention and early intervention.

## CLINICAL ACTIVITY

During 2022, all mental health professionals in the SPMHS continued to see high demand for services as other clinicians have become more aware of the service and women's mental health needs in pregnancy. Overall, there were 4,754 sessions offered to individuals over the course of 2022, which is similar to the 4,886 sessions offered in 2021. Of these appointments, 1,441 were new patients. In addition to these, there were 1,098 clinical group sessions attended by individuals. These occurred in four categories: emotional well-being in pregnancy, birth empowerment, 'me-to-mom', and post-natal depression. The team also carried out 60 home visits during the year, which represented a 200% increase from 2021. During the year, the service received over 4,700 telephone calls. In 2022, the SPMHS team saw 106 people in the perinatal trauma clinic, with eight of these women receiving trauma-focused interventions for active trauma symptoms (mostly Eye Movement Desensitisation and Reprocessing, and trauma-focused Cognitive Behavioural Therapy).

## SUCCESSES & ACHIEVEMENTS 2022

During 2022, clinical nurse specialists in perinatal mental health, Ms. Leanne O'Neill and Ms. Julia Daly both completed the nurse-prescribing course. Dr. Richard Duffy completed a PhD in Mental Health Law and Human Rights through Trinity College Dublin. Ms. Róisín Walsh was appointed as the first mental health Occupational Therapist in the Rotunda. Originally from the St John of God Mental Health Service, she has brought a wealth of experience and novel expertise to the Rotunda. Team members have trained in the Neonatal Behavioural Observation tool and clinical psychologist, Dr. Jillian Doyle has now trained in Eye Movement Desensitisation and Reprocessing (a treatment for trauma). Two senior psychiatry registrars, Dr. Anna Feeney and Dr. Kate Corrigan joined the service to spend a day a week in perinatal psychiatry, as well as the first psychologist in clinical training attached to the service, Ms. Aisling Hagerty.

## EDUCATION AND TRAINING

The SPMHS team continues to be involved in teaching in Dundalk Institute of Technology's Perinatal Mental Health Diploma. In addition to this, the team has provided teaching at multiple academic meetings for psychiatrists, midwives, public health nurses and the public throughout the country. Ms. Daly delivered a presentation at the first infant mental health training day for the Centre for Midwifery Education.

## RESEARCH

Research by the SPMHS team on birth trauma has continued, with initial findings having been published and plans are underway to submit evaluation data of individuals attending the trauma service. Dr. Firdous Murad, a former researcher with the SPMHS team, won the poster prize at the College of Psychiatrist of Ireland's Spring Conference, for research on the impact of selective serotonin reuptake inhibitors (SSRIs) on neonatal adaptation. Ms. Jeanne Masterson and Ms. Leanne O'Neill's poster presentation showcased ongoing collaborative work with the National Travellers Service, (Exchange House), winning a prize at the Rotunda's Charter Day and was also shortlisted at the NWIHP Quality & Safety Conference in October 2022.

## CHALLENGES 2022

The rapid growth in awareness of perinatal mental health conditions is a positive development for women in the perinatal period, although it has resulted in logistical, resource and accommodation challenges for the service. The SPMHS team is attempting to address these issues at a local level and through the national SPMHS, as well as seeking

to develop satellite clinics in primary care centres. The SPMHS team has lost some wonderful clinical expertise with the retirement of Ms. Louise Rafferty, who will be sorely missed in the service.

### PLANS FOR 2023

The SPMHS team will continue to be involved in teaching and research in perinatal mental health nationally. It is hoped to bring a greater awareness of trauma sensitive care into the hospital as a whole, and it is also planned to continue to grow closer links with the infant mental health services. Plans are also being developed to roll out a 'Me as Mum' group for women in the postnatal period.

# Labour and Delivery

## HEAD OF SERVICE

**Dr. Etaoin Kent**, Consultant Obstetrician Gynaecologist

## STAFF\*

**Ms. Fiona Walsh**, Clinical Midwife Manager

\*Supported by a large number of exceptional midwives, student midwives, maternity care assistants, and doctors

## SERVICE OVERVIEW

2022 once again saw an exceptionally high number of deliveries in the Rotunda with 8,292 babies born. This figure represented a 9% decrease on the delivery volume in 2021. Following completion of Labour and Delivery Suite renovations and extension in 2021, the Rotunda now has 11 individual delivery suites, an increase from nine previously, together with a state-of-the-art operating theatre within the immediate Labour and Delivery Suite area. This is a significant improvement given the high delivery numbers, as well as optimising patient safety by having a full emergency surgical suite immediately available at all times. It also allows one or more delivery rooms to be reserved for women with a diagnosis of a fetal demise or significant fetal anomaly to be cared for in a quieter, private environment. Further development of a dedicated bereavement suite within the Labour and Delivery Suite is planned in 2023.

The continued focus on safe delivery of care to women in labour remained in 2022, following the completion of the Hypoxic Ischaemic Encephalopathy (HIE) Taskforce review in 2020, which triggered significant changes to Labour and Delivery Suite practices in 2021. It is extremely gratifying to note a marked reduction in HIE cases over the last number of years since the HIE Taskforce project commenced, decreasing from 18 and 20 grade 2 or grade 3 HIE cases in 2020 and 2021 respectively, to only seven cases in 2022. While the ultimate goal will be zero cases of significant HIE cases, this is not realistic in contemporary obstetric care, given that not all cases of HIE are a result of obstetric or midwifery care. Maintaining such a low number of HIE cases into the future will be a major achievement in a hospital with 8,000 to 9,000 births per annum.

A further progressive step taken in 2022 was a change in obstetric registrar shift patterns on the Labour and Delivery Suite with overnight shifts being reduced from 16 hours to 12 hours. This will positively help in reducing the impact of fatigue on work practices as well as improving work-life balance for doctors.

Following a series of staff educational events and protocol development throughout 2021, a hydrotherapy pool became

operational in 2022. The hydrotherapy pool is used for normal-risk women in labour as a relaxation and analgesia aid, and is not yet being used for water-births, pending further research into safety measures. The hydrotherapy pool has been used regularly throughout 2022 without any adverse incidents or safety concerns. Feedback from patients and their partners has been very positive, with the only criticism being the availability of only one pool for such a busy Labour and Delivery Suite. It is hoped that future renovation and expansion plans for the Labour and Delivery Suite will support the development of more pool facilities.

**TABLE 1: LABOUR AND DELIVERY SUMMARY DATA 2022**

Number of deliveries	8,151
Induction of labour	40% (37% in 2021)
Spontaneous vaginal delivery	45% (47% in 2021)
Operative vaginal delivery	16% (16% in 2021)
Caesarean section	39% (37% in 2021)

Tables 2-5 below provide detailed analysis of induction of labour (IOL) at the Rotunda, while Table 6 summarises analysis of operative vaginal delivery.

**TABLE 2: INDUCTION OF LABOUR**

	2018	2019	2020	2021	2022
Total number of inductions	2,610	2,893	3,076	3,317	3,292
Incidence expressed from total deliveries	36%	35%	38%	37%	40%
Number of caesarean deliveries following induction	584	630	745	789	822
Caesarean delivery rate following induction	22%	22%	24%	24%	25%

**TABLE 3: TRENDS IN INDUCTION 2018-2022**

	2018	2019	2020	2021	2022
Nulliparous women	1,410 (39%)	1,635 (45%)	1,727 (47%)	1,821 (46%)	1,842 (52%)
Multiparous women	1,200 (25%)	1,258 (27%)	1,349 (30%)	1,496 (30%)	1,450 (32%)

Data are expressed as n (% of total deliveries)

TABLE 4: INDICATIONS FOR INDUCTION

	2021		2022	
	Total	%	Total	%
Fetal	916	28%	972	30%
Maternal	737	22%	894	27%
No medical indication	170	5%	158	5%
Preeclampsia/hypertension	178	5%	224	7%
Post-dates	667	20%	424	13%
Prolonged rupture of membranes	649	20%	620	19%

Data are expressed as n (% of inductions)

TABLE 5: METHODS OF INDUCTION OF LABOUR

Oxytocin	416 (13%)
ARM* +/- oxytocin	927 (28%)
Cervical priming +/- ARM +/- Oxytocin	1949 (59%)
Prostaglandin	1870 (96%)
Dilapan	62 (3%)
Foley balloon	17 (1%)

\*ARM - Artificial rupture of membranes

TABLE 6: OPERATIVE VAGINAL DELIVERY RATE 2018 - 2022

	2018	2019	2020	2021	2022
Forceps	4%	5%	5%	4%	4%
Vacuum	11%	10%	9%	11%	10%
Sequential	1%	1%	2%	1%	2%
<b>Total</b>	<b>16%</b>	<b>16%</b>	<b>16%</b>	<b>16%</b>	<b>16%</b>

## INDUCTION OF LABOUR

The induction of labour (IOL) rate increased again in 2022, with 40% of mothers undergoing IOL, compared with 37% in 2021, and 29% in 2016. Nulliparous women are more likely to undergo induction of labour, rather than experience spontaneous onset of labour (SOL) (1,768 cases vs 1,043 cases), with rates of IOL and SOL being similar amongst multiparous patients. There are several reasons for the increasing rates of IOL, including a recent change in practice regarding post-dates pregnancy management, now mainly scheduled for 41 0/7 weeks, instead of 41 3/7 weeks. In addition, there has been widespread recognition that IOL does not have the additive impact on caesarean delivery (CD) rates as previously thought, following publication of the results of the ARRIVE Trial in 2018.

However, there were others unique factors in 2022 that may have contributed to the increase in the number of inductions. Throughout 2022, the Rotunda followed a policy of recommending IOL at 40 weeks' gestation for women who had COVID-19 infection in the third trimester of pregnancy. The high COVID-19 prevalence in 2022 resulted in a large number of inductions being carried out for this indication, with 'maternal' reasons for induction being cited in 27% of cases, many of which were cases of COVID-19 infection. Additionally, an ongoing research trial on different methods of outpatient IOL amongst nulliparous patients at 39 weeks' gestation continued throughout 2022, with 94 women being induced as part of this trial. As this trial will end in 2023, and as the policy of recommending induction following COVID-19 infection ends, it is expected that there may be a small reduction in IOL rates in the future.

## CAESAREAN DELIVERY

The caesarean delivery (CD) rate in 2022 was 39%, which is the highest overall rate recorded at the Rotunda, representing an increase of 1.8% from the 37% rate in 2021, and significantly higher than the 35% rate in 2016 (Table 7). Of the 3,179 caesarean deliveries performed in 2022, 42% were primary caesarean sections. The continued decrease in the numbers of women opting for a trial of labour after a prior caesarean section (TOLAC) is a key driver of the progressively increasing overall CD rates. This mirrors international trends where safety concerns regarding TOLAC are leading many women to opt for elective repeat CD. The Rotunda continues to encourage appropriately selected women to attempt TOLAC, and it is hoped that the appointment of a dedicated Advanced Midwifery Practitioner providing care to this cohort of patients will yield positive results in this regard in 2023. The continued increase in repeat CD will also likely lead to an increase in diagnosis of Placenta Accreta Spectrum (PAS), with the 10 cases of caesarean hysterectomy performed in 2022 being the highest for the past five years, the majority being performed for PAS.

TABLE 7: CAESAREAN DELIVERY DATE 2018 - 2022

	2018	2019	2020	2021	2022
Total caesarean deliveries	2,820	2,884	3,033	3,344	3,179
Rate expressed from total mothers delivered >500g	34%	35%	37%	37%	39%
Primary caesarean delivery	57%	57%	61%	60%	58%
Repeat caesarean delivery	43%	43%	39%	40%	42%
Classical caesarean delivery	19	4	3	7	6
Tubal ligation at caesarean delivery	166	189	150	168	138
Caesarean hysterectomy	8	2	6	8	10

Overall, the indications for CD remain similar to prior years with 'non-reassuring fetal testing' (both prior to labour or in labour) being the second most common indication, after elective repeat CD (Table 8). A small cohort of women opt for elective CD where there is no other medical indication, and this number has not changed significantly in the last few years. However, with more women having their first baby at an older age and with an expectation for smaller family sizes, it will not be surprising to see the numbers of such non-medically indicated caesareans increase in future years. While patients at the Rotunda are always encouraged to deliver vaginally where possible, maternal choice is part of the Rotunda's ethos and will always be respected.

Continued analysis of all caesarean deliveries takes place at the Rotunda on a weekly basis, with review of trends in CD rates based on categorisation by Robson groups (Table 9), as well as individual review of complex cases.

### POSTPARTUM HAEMORRHAGE (PPH) PREVENTION TASKFORCE

The Rotunda proactively manages all adverse outcomes with a bespoke system for monitoring many measures of maternal, fetal and neonatal outcome. Following a recognition that the rate of postpartum haemorrhage (PPH) was progressively increasing, a PPH Prevention Taskforce was immediately established in February 2022, with the objectives being to examine potential underlying causes and to implement targeted recommendations to reduce PPH. Members of this multidisciplinary taskforce included staff from obstetrics, anaesthesiology, Labour and Delivery Suite midwifery, operating theatre nursing, pharmacy, and clinical risk.

Under the leadership of Prof. Michael Geary, Clinical Director, a series of taskforce meetings took place, which underpinned development of a PPH prevention bundle. A risk scoring system was developed and a medication care bundle was created for automated implementation through the MN-CMS electronic healthcare record system. All staff involved in the care of patients on the Labour and Delivery Suite, as well as the care of patients undergoing caesarean delivery in the operating theatre, were provided with education on this new risk reduction programme. An implementation date has been set for early 2023, following which it is expected that all women will have an individualised PPH risk assessment profile performed either on admission to the Labour and Delivery Suite or as part of the Surgical Safety checklist in the operating theatre. This risk profile will then trigger a specific care bundle. An audit of adherence to risk assessment profiling, prescribing of relevant medications, and evaluation of the impact on rates of PPH will be performed in late 2023.

### PATIENT SAFETY IN THE LABOUR WARD

As part of the HIE Taskforce review in 2020 – 2021, a new post was created for the Labour and Delivery Suite, with the appointment of a dedicated Fetal Monitoring Lead Midwife in 2022. The role of this Lead Midwife is to provide ongoing education and support to all staff in the Labour Ward with regard to cardiotocograph (CTG) interpretation, with an emphasis on the fetal physiology underpinning CTG monitoring. The Lead Midwife will also assist in fetal monitoring guideline development and implementation. Educational support will also be provided to staff on the Prenatal Ward and in the Emergency and Assessment Service.

The Fetal Monitoring Lead Midwife will also participate in regular Labour and Delivery Suite management meetings, and will run regular educational workshops. Ms. Jo Taylor commenced this post in summer 2022, with one of the first projects undertaken being the implementation of the regular 'Fresh Eyes' review for all intrapartum CTG tracings. This particular Quality Improvement Project is expected to improve CTG interpretation, escalation and documentation. This has now been embedded in routine practice, taking place every two hours for all patients in labour.

### PLANS FOR 2023

- Intrapartum Fetal Monitoring Working Group, under the leadership of Clinical Midwife Manager, Ms. Aidene Rogers, will commence monthly educational meetings in the Labour Ward in January 2023, including a number of 'Fetal Monitoring Study Days'
- Implementation of the newly developed PPH Prevention Bundle in February 2023
- Following the purchase of labour simulation models in 2022 with funding from the National Women and Infants Health Programme (NWIHP) and the Rotunda Foundation, it is planned to run regular education sessions on the Labour and Delivery Suite for midwifery and obstetric staff on intrapartum emergencies

TABLE 8: INDICATION FOR CAESAREAN DELIVERY

	2021			2022		
	Primary	Repeat	Total	Primary	Repeat	Total
Previous caesarean delivery	0	1,071	1,071	0	1,042	1,042
Fetal reason	668	104	792	672	124	796
Maternal medical reasons	326	42	368	213	66	279
Non-medical reason/patient request	149	2	151	124	4	128
Preeclampsia/Hypertension	54	13	67	41	18	59
Prolonged rupture of membranes	17	13	30	22	15	37
Post-dates	1	0	1	2	0	2
IUA - Poor response	386	33	419	386	37	423
IUA - Inability to treat / fetal intolerance	273	17	290	242	15	257
IUA - No oxytocin given	24	30	54	15	19	34
IUA - Inability to treat / over-contracting	6	1	7	7	0	7
EUA - Persistent malposition	62	2	64	69	4	73
EUA - Cephalopelvic disproportion	30	0	30	42	0	42
<b>Totals</b>	<b>2,016</b>	<b>1,328</b>	<b>3,344</b>	<b>1,835</b>	<b>1,344</b>	<b>3,179</b>

IUA: Inefficient Uterine Action; EUA: Efficient Uterine Action

TABLE 9: TRENDS IN CAESAREAN RATES (2018-2022) - ROBSON TEN GROUP ANALYSIS

	2018	2019	2020	2021	2022
All deliveries	8,359	8,262	8,146	8,968	8,151
All caesarean sections	2,820	2,884	3,033	3,344	3,179
Section Rate	34%	35%	37%	37%	39%
Group 1 - Nulliparous singleton cephalic term spontaneous labour	201/1,541	185/1,334	171/1,269	189/1,364	162/1,043
Section Rate	13%	14%	14%	14%	16%
Group 2 - Nulliparous singleton cephalic term induced	469/1,349	500/1,573	604/1,656	628/1,760	662/1,768
Section Rate	35%	32%	37%	36%	37%
Group 2a - Nulliparous singleton cephalic term CS before labour	291	295	275	381	304
Group 3 - Multiparous singleton cephalic term spontaneous labour	25/1,773	25/1,636	34/1,424	33/1,617	28/1,328
Section Rate	1%	2%	2%	2%	2%
Group 4 - Multiparous singleton cephalic term induced	60/1,078	74/1,146	81/1,208	88/1,318	69/1,258
Section Rate	6%	7%	7%	7%	6%
Group 4a - Multiparous singleton cephalic term CS before labour	123	110	175	172	124
Group 5 - Previous section singleton cephalic term	996/1,261	1,073/1,267	1,006/1,185	1,138/1,342	1,143/1,350
Section Rate	79%	85%	85%	85%	85%
Group 6 - All nulliparous breeches	176/180	181/186	199/206	208/216	181/186
Section Rate	98%	97%	97%	96%	97%
Group 7 - All multiparous breeches	145/157	141/150	128/139	151/160	130/141
Section Rate	92%	94%	92%	94%	92%
Group 8 - All multiple pregnancies	104/152	104/145	123/169	129/181	115/141
Section Rate	68%	72%	73%	71%	82%
Group 9 - All abnormal lies	21/21	28/28	25/25	33/33	32/32
Section Rate	100%	100%	100%	100%	100%
Group 10 - All preterm singleton cephalic	209/433	168/392	212/415	194/424	229/477
Section Rate	48%	43%	51%	46%	48%
Elective caesarean total	1,435	1,455	1,557	1,796	1,546
Emergency caesarean total	1,385	1,429	1,476	1,548	1,633
<b>Total multiparous</b>	<b>4,747</b>	<b>4,655</b>	<b>4,451</b>	<b>4,964</b>	<b>4,572</b>
<b>Total nulliparous</b>	<b>3,612</b>	<b>3,607</b>	<b>3,692</b>	<b>4,004</b>	<b>3,580</b>

# Anaesthesiology Service

## HEAD OF SERVICE

**Dr. Patrick Thornton**, Consultant Anaesthesiologist

## STAFF

**Dr. Anne Doherty**, Consultant Anaesthesiologist  
**Dr. Thomas Drew**, Consultant Anaesthesiologist  
**Dr. Niamh Hayes**, Consultant Anaesthesiologist  
**Dr. Rose Kearsley**, Consultant Anaesthesiologist  
**Dr. John Loughrey**, Consultant Anaesthesiologist  
**Prof. Conán McCaul**, Consultant Anaesthesiologist  
**Dr. Brian Murphy**, Consultant Anaesthesiologist  
**Dr. Caitriona Murphy**, Consultant Anaesthesiologist  
**Dr. Aisling Ní Eochagáin**, Consultant Anaesthesiologist  
**Dr. Roisin Ni Mhuircheartaigh**, Consultant Anaesthesiologist

## SERVICE OVERVIEW

The Anaesthesiology Service provided care to over 3,300 patients for caesarean delivery, neuraxial block for over 4,000 labouring mothers, and anaesthesia for more than 1,600 gynaecology procedures in 2022. Anaesthesiology care was also provided in the operating room for maternal-fetal medicine and fertility procedures. The Service also provided support and care for obstetric patients at the Mater Misericordiae University Hospital (MMUH), particularly during the second wave of the pandemic. An extra gynaecology operating theatre was opened in the Rotunda in 2022, significantly increasing demands on the Anaesthesiology Service. In addition, over 2,600 patients were seen for outpatient consultations, either in person or via telemedicine, in specialist anaesthesiology clinics during 2022, a record number.

## CLINICAL ACTIVITY

An integrated pain management service is provided for labouring mothers on a 24-hour basis in the Rotunda. The most popular analgesic options are epidural or combined spinal-epidural (CSE) neuraxial techniques, and provide for individualised dosing. Programmed Intermittent Epidural Bolus (PIEB) pump technology is used, with Patient Controlled Epidural Analgesia (PCEA) boluses for delivery of epidural medication in labour to limit overall local anaesthetic agent dose, improve obstetric and neonatal outcomes, and enhance maternal satisfaction with labour.

Remifentanyl 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). In addition, it is more environmentally sustainable than Entonox, which is a well-recognised contributor to the carbon footprint of local, national, and global healthcare systems. A total of 14 patients

received remifentanyl pain relief in labour in 2022, which was a slight decrease compared with 2021. Remifentanyl IVPCA regimes in the Rotunda continue to be refined in light of international evidence for safe utilisation in labour, and patient feedback.

The Anaesthesiology Service also provides immediate, 24-hour anaesthesiology support for elective and emergency care for operative obstetrics and gynaecology, critical care and resuscitation, and facilitates multi-professional collaboration for deliveries that occur occasionally in partner adult hospitals. The more complex medical and cardiac patients continue to be delivered at MMUH, under the supervision of Rotunda anaesthesiologists and obstetricians.

## OBSTETRICS

### NEURAXIAL ANALGESIA IN LABOUR:

A total of 4,009 patients received neuraxial blockade for labour analgesia in 2022, the majority of which were epidurals, and represents a slight increase in the number of delivery suite blocks from the previous year. The proportion of first-time mothers getting epidural analgesia in labour is 76%.

**TABLE 1: NEURAXIAL ANALGESIA USE IN LABOUR IN 2022**

Nulliparous	3,046 (76% of labouring nulliparae)
Multiparous	963 (24% of labouring multiparae)
<b>Total</b>	<b>4,009</b>

### POST-DURAL PUNCTURE HEADACHE (PDPH)

In 2022, a total of 55 women were reviewed for headaches following a neuraxial procedure, 35 of whom had an epidural and 20 of whom had a spinal anaesthetic. In comparison, 39 patients were managed for possible PDPH in 2021. A total of 27 women had at least one epidural blood patch procedure as part of their treatment for PDPH and the remaining 28 women were managed conservatively. Of the women who had an epidural blood patch, 18 had developed a headache following an epidural and nine occurred following spinal.

### ANAESTHESIA FOR CAESAREAN DELIVERY

The vast majority of patients had a neuraxial technique (spinal or epidural injection) for caesarean delivery (CD), allowing mothers to be awake for the delivery of their baby. Less than 1% of elective caesarean deliveries had a general anaesthetic de novo for their surgery. Only 5% overall had a general anaesthetic (GA) as the primary option or following failure of an epidural or spinal anaesthetic. This occurred more frequently in those having emergency caesarean deliveries (10%) reflecting the relative unreliability of epidural top-up compared to spinal anaesthesia in the emergency setting, or



alternatively the time pressures to deliver a potentially vulnerable baby quickly. These proportions are consistent with suggested international audit standards of less than 1% GA rate for elective (category 4) CD, and less than 15% for urgent/emergent (category 1 – 3) CD.

**TABLE 2: ANAESTHESIA FOR CAESAREAN DELIVERY IN 2022**

	Elective	%	Emergency	%
Spinal	1,438	93%	862	53%
General	19	1%	93	6%
Epidural	13	1%	553	34%
Spinal/Epidural - CSE	55	4%	49	3%
General/Spinal/Epidural*	21	1%	76	5%
Uncategorised	0		0	
<b>Total</b>	<b>1,546</b>		<b>1,633</b>	

\*Some patients had failure of the primary neuraxial technique resulting in an alternative neuraxial block or general anaesthesia (GA) conversion

### OUTPATIENT OBSTETRIC CLINICS

More than 2,600 patients were reviewed in anaesthesiology clinics during 2022, the majority of which (1,600 or 62%) were telemedicine reviews. Additionally, members of the Anaesthesiology Service participate in the assessment and care-planning of patients attending the maternal multidisciplinary team meetings at MMUH to address their specific anaesthetic needs.

A specialist cardiac anaesthesiology clinic is also run both on-site in the Rotunda and in conjunction with the cardiology service at MMUH to serve the needs of this vulnerable population. This service managed 71 patients in 2022.

### GYNAECOLOGY

More than 1,600 gynaecology procedures were carried out in the operating theatres during 2022, including almost 800 hysteroscopic procedures and more than 500 laparoscopic procedures. Gynaecology pre-assessment anaesthesiology review has now been integrated with the MN-CMS electronic healthcare record which facilitates more efficient referral. The team of pre-assessment nurses offer anaesthesiology reviews to all gynaecology patients which has been essential for co-ordination of safe operating theatre practices, in particular in the setting of the COVID-19 pandemic.

## SUCCESSSES & ACHIEVEMENTS 2022

### CONSULTANT STAFFING

Dr. Rose Kearsley and Dr. Brian Murphy were both appointed as permanent consultants in 2022, while Dr. Aisling Ní Eochagáin was

appointed as a locum consultant. Dr. Mary Bowen retired from the Rotunda Hospital and MMUH. Dr. Bowen was first appointed to the Rotunda in 1995, and has been an inspirational figure in anaesthesiology both at the Rotunda and nationally. She inspired many NCHDs to specialise in obstetric anaesthesia, and was responsible for the first dedicated high-risk obstetric anaesthesiology clinic in Ireland. She also developed the obstetric cardiac service which provides a nationwide referral pathway for complex cardiac pregnant patients. Hundreds of women have had successful and safe pregnancies because of this service. Her contribution to the Rotunda was immense and she will be greatly missed.

### NEW SERVICE DEVELOPMENTS

The specialist Postnatal Anaesthesia Clinic was established in 2022 in line with recommendations from the Ockenden Report regarding anaesthesiology follow-up. Patients are facilitated via telemedicine or in-person appointments, and the clinic aims to follow-up with patients who have had an anaesthesiology complication such as a post-dural puncture headache. It also receives referrals from the Birth Reflections Team to allow for further debriefing and discussions around anaesthesiology care.

The Anaesthesiology Service introduced ROTEM guided management of coagulation complications during major obstetric haemorrhage (MOH) in 2022. ROTEM is a point-of-care technology that enables rapid analysis of whole blood clotting, improving early decision-making in the use of coagulation products. This system has resulted in a reduction in the use of blood coagulation products, in particular fibrinogen concentrate, significantly reducing costs.

The Anaesthesiology Service also introduced a 'Sip 'til Send' fasting protocol for women undergoing elective caesarean delivery under planned regional anaesthesia. Consistent with international best practices, patients are encouraged to sip water on the ward prior to arrival at the operating theatre complex. This has reduced mean fasting times for fluids from eight hours to less than one hour, with patients reporting significant improvements in outcomes such as thirst, comfort, nausea and light-headedness.

### EDUCATION, RESEARCH AND 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, labour analgesia and pain management. There is also an active teaching programme for postgraduate anaesthesiology for College of Anaesthesiology trainees up to and including fellowship level. The Rotunda offers two RCSI-affiliated fellowship training posts and one College of Anaesthesiologists-affiliated fellowship

posts. Fellows also take part in the JFICMI Basic Critical Care Echocardiography Course at MMUH.

The Anaesthesiology Service is responsible for advanced airway teaching and high-fidelity simulation training at the College of Anaesthesiologists in Ireland (CAI) and RCSI. Dr. Niamh Hayes serves on the council of CAI and chairs the Education Committee. The research program is diverse and members work in collaboration with both RCSI and UCD, as well as with an industry partner - Aerogen. Current areas of research include aerosol exposure during airway management, development of 3D printed teaching models for airway management, development of 3D printed video laryngoscopes, use of advanced thermal imaging to evaluate neuraxial blockade, characteristics of CSF flow through epidural catheters, fascial plane blockade and a systematic review of high neuraxial blockade in obstetric anaesthesia. Prof. McCaul supervises or co-supervises undergraduates and candidates for Master's, MD and PhD.

### PLANS FOR 2023

It is hoped to increase consultant anaesthesiologist staffing to enable all four new operating theatres at the Rotunda to be fully utilised throughout extended surgical working days, five days per week.





# Critical Care Service

## HEADS OF SERVICE

**Dr. Thomas Drew**, 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 medical and nursing care for critically ill women. Level 2 critical care is facilitated, except for the provision of respiratory support. Most often this includes invasive cardiovascular monitoring or the infusion of vasoactive drugs. A multidisciplinary approach between anaesthesiology, obstetrics, gynaecology, and nursing/midwifery is provided, often supplemented by external specialist advice. The unit receives support from the Department of Critical Care Medicine at the Mater Misericordiae University Hospital (MMUH), which provides a pathway to ICU beds for women with higher level (Level 3) intensive care needs, for example if mechanical ventilation or renal replacement therapy is required. Dr. Mary Bowen, consultant anaesthesiologist and Joint Head of Critical Care Services at the Rotunda, retired in 2022. The Rotunda is most grateful for her many years of leadership and service, with very best wishes for the future. Dr. Thomas Drew, consultant anaesthesiologist, was appointed as Joint Head of Service in 2022.

## CLINICAL ACTIVITY

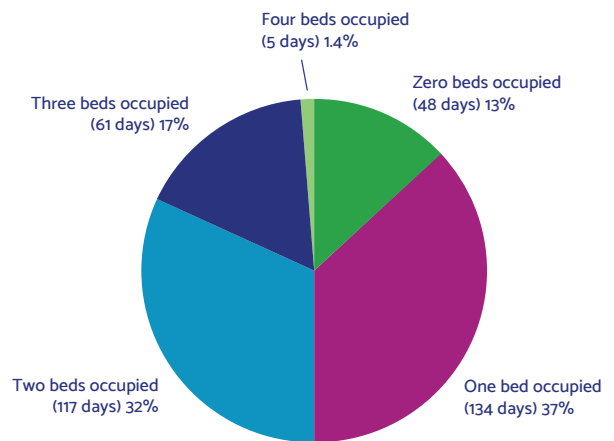
Admissions to the Rotunda HDU increased by 6% compared with 2021, consistent with recent trend towards increased complexity of care at the Rotunda over the past five years (Table 1). There were eight readmissions to the HDU, with one patient re-admitted twice (readmission rate 3%).

**TABLE 1: HDU CLINICAL ACTIVITY 2018 - 2022**

	2018	2019	2020	2021	2022
Obstetrics	199	258	249	272	288
Gynaecology	1	11	4	13	15
<b>Total</b>	<b>200</b>	<b>269</b>	<b>253</b>	<b>285</b>	<b>303</b>

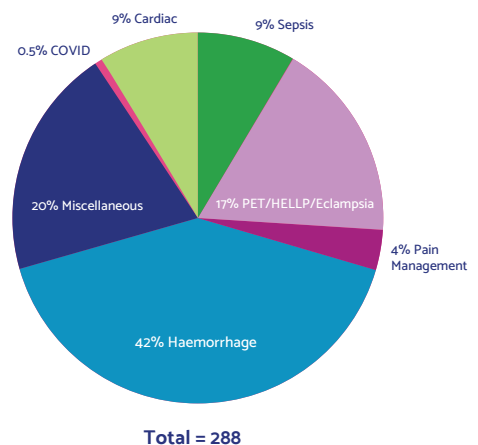
Figure 1 summarises HDU bed occupancy rates in 2022. While the Rotunda has only two beds dedicated for HDU, with staffing for this number, during 2022 on almost 20% of days a total of three or even four women required HDU level care, highlighting the need to provide additional HDU bed space in upcoming infrastructure development.

**FIGURE 1: DAILY NUMBER OF BEDS OCCUPIED BY WOMEN REQUIRING HDU CARE (2022)**



Reasons for admission of obstetric patients to the HDU are summarised in Figure 2, with obstetric haemorrhage being the most frequent primary indication. While COVID-19 infection was still prevalent throughout 2022, there was a notable drop in the numbers of women presenting with severe morbidity related to COVID-19 infection. Only one woman was admitted to HDU in 2022 with COVID-19 as the primary indication for admission, compared to 19 in 2021. Miscellaneous reasons for HDU admission in pregnancy included five cases of diabetic ketoacidosis, renal monitoring, monitoring of neurological conditions, including myasthenia gravis, and supportive management for women with surgical complications.

**FIGURE 2: PRIMARY INDICATION FOR OBSTETRIC HDU ADMISSION (2022)**

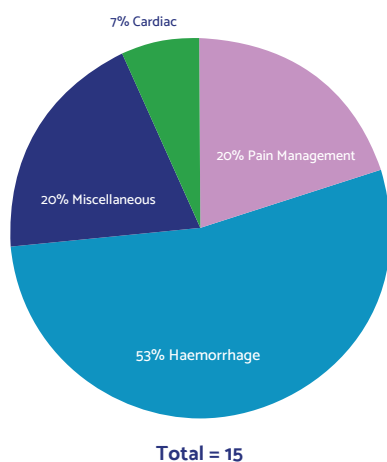


PET = preeclampsia; HELLP = haemolysis elevated liver enzymes and low platelets syndrome

The Rotunda provides joint obstetric-cardiac care for a significant number of women with underlying maternal cardiac disease. These women often require HDU admission following planned caesarean delivery. Twenty-five women were admitted to the HDU for cardiac indications in 2022, with 18 of these having a prior existing diagnosis of complex cardiac disease. Seven women were admitted to HDU with unanticipated cardiac events or for monitoring of detected cardiovascular abnormalities.

Figure 5 summarises the primary indications for HDU admission of gynaecologic patients. Three patients had complex postoperative analgesic needs, while eight patients had significant haemorrhage.

**FIGURE 3: PRIMARY INDICATION FOR GYNAECOLOGIC HDU ADMISSION (2022)**



Given that the Rotunda is a standalone maternity hospital, it is not surprising that some women may require onward transfer to a Level 3 intensive care unit in an external hospital. In 2022, a total of eleven Rotunda HDU patients required onward transfer for Level 3 ICU care at MMUH, compared with 12 patients in 2021. Most of these patients were subsequently transferred back to the Rotunda HDU for step-down care following stabilisation. The average length of stay in the HDU was 2.1 days (range 1-8 days), with 36% of patients requiring arterial line placement, and 5% requiring central venous line placement. A total of six patients (2%) required transfer to an external hospital for further diagnostic investigations or surgical intervention, while 10 patients (3%) required external transfer for higher level of critical care.

### CHALLENGES 2022

The long-standing challenge to the Critical Care Service at the Rotunda remains the poor physical infrastructure of the HDU. Neither of the two HDU beds has ensuite facilities and neither has appropriate

infection control or air-handling systems. This has been highlighted previously by external inspections and remains a high priority for rectification.

The increase in the use of advanced diagnostic studies was also highlighted, with a significant number of women transferred to external hospitals for CT or MRI studies. These transfers represent a logistical challenge and may take many hours, creating risk to patients by delaying diagnosis as well as drawing significantly on staff resources.

A further challenge is high bed occupancy rates, with critical care needs exceeding the two-bed capacity on almost 20% of days in 2022. On these occasions, additional HDU-level care was provided on an 'ad hoc' basis using other single-occupancy rooms on the gynaecology ward adjacent to the HDU. This puts significant pressure on nursing and on-call medical staff, as well as diluting the high intensity care that HDU nurses provide. It is imperative that sufficient capacity is accounted for in the planned new critical care wing on the west side of Parnell Square.

### PLANS FOR 2023

A HDU Steering Group was established in 2022, to further develop the HDU service, with a number of key priorities being identified for implementation in 2023. This includes moving from manual to electronic data capture of HDU patients using the MN-CMS electronic healthcare record.

Enhanced education of HDU nurses has also been identified as a strategic objective for 2023, with a bespoke 'Rotunda Maternity Critical Care Course' having been designed to cover important topics such as maternal collapse, management of invasive monitoring, and care of women with cardiac disease.

Development of a new Critical Care Wing on the west side of Parnell Square will ultimately allow for the provision of appropriate HDU-level care, although it is expected that this will take several years to achieve. During 2023, work will continue on relevant design plans for this new facility.

# Maternal Morbidity

## HEAD OF SERVICE

**Dr. Maria Kennelly**, Consultant Obstetrician Gynaecologist

## STAFF

**Dr. Thomas Drew**, Consultant Anaesthesiologist

**Prof. Michael Geary**, Consultant Obstetrician Gynaecologist

**Dr. Niamh Hayes**, Consultant Anaesthesiologist

**Dr. Claire McCarthy**, Consultant Obstetrician Gynaecologist

**Dr. Sara Mohan**, Specialist Registrar in Obstetrics and Gynaecology

**Dr. Jasmeet Kumari**, Maternal Medicine Fellow

**Dr. Vanitha Zusti**, Associate Specialist, Anaesthesiology

**Ms. Kathy Conway**, Clinical Reporting Service

**Ms. Niamh Hegarty**, Clinical Reporting Service

**Ms. Ruth Ritchie**, Clinical Reporting Service

**Ms. Catherine Daly**, Administrative Assistant

**Ms. Rose O'Donovan**, Haemovigilance Officer

## SERVICE OVERVIEW

Severe maternal morbidity (SMM) has come to be a key quality indicator of obstetric care and maternal safety in developed countries. 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 for mother and baby. Severe maternal morbidity is prospectively monitored and reported throughout the year and classified according to the Irish National Perinatal Epidemiology Centre (NPEC) system.

## CLINICAL ACTIVITY

There were 288 obstetric admissions to the Rotunda High Dependency Unit (HDU) in 2022, similar to the 272 admissions seen in 2021. Of these 288 HDU admissions, 57 patients were affected by a major morbidity diagnosis amounting to 70 events that fulfilled NPEC severe maternal morbidity criteria. The incidence of major morbidity events has remained stable over the last five years, as summarised in Table 1, at just under 1% of all deliveries. Postpartum haemorrhage, hypertensive disorders and sepsis remain the top three indications for admission to the HDU, which has been consistent over the last five years.

**TABLE 1: INCIDENCE OF MAJOR MORBIDITY EVENTS 2018 - 2022**

	2018	2019	2020	2021	2022
Number of mothers delivered	8,358	8,262	8,152	8,972	8,151
Number of major morbidity events	85	73	67	78	70
Incidence of major morbidity	0.9%	0.9%	0.8%	0.8%	0.9%

There were 11 inter-hospital transfers for major maternal morbidity between the Rotunda and the Mater Misericordiae University Hospital (MMUH) during 2022. These cases are described in the Critical Care Service chapter of this report. The clinical complexity of these cases demonstrates the superb degree of multidisciplinary cooperation with medical, surgical, radiologic and critical care services at MMUH and Beaumont hospital that results in excellent clinical outcomes for both mother and baby.

## MATERNAL MORTALITY

Sadly in 2022, after seven years of continuous and extremely busy maternity services at the Rotunda without a maternal death, we experienced the ultimate tragedy in obstetric care by having four maternal deaths. These cases were as follows:

- A 33 year old woman with three prior caesarean deliveries and an antenatal course complicated only by gestational diabetes was brought by ambulance from home to a neighbouring adult general hospital at 38 weeks' gestation with new onset seizure activity. CT imaging revealed a massive intracerebral haemorrhage and an emergency caesarean delivery was carried out at the general hospital. The baby survived intact. Unfortunately, brain recovery was not possible and life support was withdrawn on the following day
- A 26 year old woman with one prior vaginal delivery and a normal antenatal course was brought by ambulance from home to a neighbouring adult general hospital at 36 weeks' gestation with new onset seizure activity. CT imaging revealed a massive intracerebral haemorrhage and an emergency caesarean delivery was carried out at the general hospital. The baby survived intact. Unfortunately, brain recovery was not possible and life support was withdrawn two days later
- A 30 year old woman with one prior vaginal delivery had an uncomplicated operative vaginal delivery, followed by a normal postpartum course. She experienced a massive pulmonary embolism 26 days postpartum and was brought by ambulance

from home to a neighbouring adult general hospital in cardiac arrest where she unfortunately died eight days later from brain injury, despite thrombolysis and extensive resuscitative efforts

- A 34 year old woman had a caesarean section for preeclampsia on her first pregnancy at 35 weeks' gestation. She was discharged home and had an unremarkable initial postnatal recovery until she was admitted to a regional hospital two weeks later with severe acute pancreatitis secondary to cholelithiasis. She was transferred to another adult general hospital where she unfortunately died five months postpartum from complications of pancreatitis

From a statistical perspective, these cases therefore confirm one case of 'Direct Maternal Death' in 2022 at the Rotunda (pulmonary embolism), and two cases of 'Indirect Maternal Death' in 2022 at the Rotunda (intracerebral haemorrhage). The fourth case is not considered a maternal death from statistical analysis perspective, as it did not occur within 42 days of birth, and was also not related to an obstetric problem. Instead it is categorised as a 'Late Maternal Death'. The thoughts and prayers of all staff from the Rotunda are with the grieving families of these four women who tragically died during 2022.

**TABLE 2: MAJOR OBSTETRIC HAEMORRHAGE AND RELATED OPERATIVE EVENTS 2018 - 2022**

	2018	2019	2020	2021	2022
Massive haemorrhage	26 (0.3%)	30 (0.4%)	26 (0.3%)	44 (0.5%)	30 (0.4%)
Peripartum hysterectomy	6 (0.07%)	2 (0.02%)	6 (0.07%)	9 (0.1%)	12 (0.2%)
Haemorrhage requiring interventional radiology	0 (0%)	1 (0.01%)	0 (0%)	1 (0.01%)	4 (0.1%)
Uterine rupture	1 (0.01%)	3 (0.04%)	1 (0.01%)	0 (0%)	1 (0.01%)

Haemorrhage resulted in 126 admissions to the HDU, with 30 of these cases fulfilling NPEC criteria for Major Obstetric Haemorrhage (MOH), which is an estimated blood loss (EBL) of  $\geq 2,500$ mls. As noted in Table 2, the rate of MOH declined from 2021 to 2022, possibly as a result of a major educational and risk-scoring system initiative by the Executive Management Team as an important taskforce response to a perceived increased incidence of postpartum haemorrhage (PPH).

The mean EBL across the 30 cases of MOH was 3,810mls, with 29 of these cases being classified as primary PPH cases. The one case

of secondary PPH occurred 12 days after an emergency caesarean section, and was related to endometritis with sepsis which ultimately required a peripartum hysterectomy. Overall, delivery by caesarean section accounted for 70% of MOH cases, with 50% of these being pre-labour caesarean deliveries. Spontaneous vaginal delivery and operative vaginal delivery accounted for 20% and 10% of MOH events respectively.

There were 12 peripartum hysterectomies performed in 2022. Five of these were in the context of known Placenta Accreta Spectrum (PAS) disorder and were planned procedures. Four of the PAS cases utilised interventional radiology support by placing intra-aortic balloon devices due to the surgical complexity and location of the placental invasion resulting in significantly less blood loss. The remaining seven hysterectomy cases were unplanned and performed as an emergency due to unexpected MOH.

**TABLE 3: END ORGAN DISEASE 2018 - 2022**

	2018	2019	2020	2021	2022
Severe sepsis	13 (0.2%)	5 (0.1%)	5 (0.1%)	1 (0.01%)	5 (0.1%)
Renal/liver dysfunction	19 (0.2%)	9 (0.1%)	3 (0.04%)	1 (0.01%)	4 (0.1%)
Pulmonary oedema/ acute respiratory dysfunction	3 (0.04%)	5 (0.1%)	2 (0.02%)	12 (0.1%)	3 (0.04%)
Pulmonary embolism	0 (0%)	3 (0.04%)	3 (0.04%)	5 (0.02%)	2 (0.02%)
Cardiac arrest	0 (0%)	1 (0.01%)	2 (0.02%)	1 (0.01%)	1 (0.01%)
Other	6 (0.1%)	1 (0.01%)	0 (0%)	1 (0.01%)	0 (0%)

As described in Table 3, the rate of end-organ disease, including major venous thromboembolism (VTE), was similar to prior years, with two cases of pulmonary embolism (PE) reported. The first occurred in a 25 year old nulliparous patient who developed a PE at 28 weeks gestation. Provoking factors in addition to her pregnancy included a BMI of 38 kg/m<sup>2</sup>, recent upper respiratory viral illness (non-COVID related), and family history. Imaging confirmed a segmental perfusion defect in the left lower lobe. At 36 weeks, she subsequently developed preeclampsia and had an induction of labour that resulted in a vaginal delivery of a healthy baby. She had an uncomplicated postpartum course. The second case of PE tragically resulted in a maternal death of a 30 year old woman, and has already been described above, as a case of unexpected massive PE nearly four weeks postpartum following which maximal therapeutic and resuscitative efforts were unsuccessful.



There were four cases of severe liver dysfunction that met SMM criteria. The first occurred in a 34 year old with poorly controlled Type 1 diabetes with concomitant vasculopathy and neuropathy, who developed superimposed preeclampsia at 35 weeks' gestation with significant liver dysfunction. She made a full recovery after being delivered in the maternal interest. The second case of severe liver dysfunction occurred in a 43 year old multiparous patient in the context of severe COVID-19 infection at 37 weeks' gestation. The third case occurred in a 38 year old nulliparous in the context of severe preeclampsia at term, complicated by a requirement for re-operation for post-caesarean bleeding. The fourth case occurred in a 31 year old nulliparous patient with dichorionic twins at 35 weeks' gestation, who had a caesarean section for abnormal fetal growth, with preeclampsia and obstetric cholestasis. She developed HELLP syndrome and pulmonary oedema postoperatively, and required HDU admission, prior to ultimately making a full recovery.

There were five cases of severe sepsis that met NPEC SMM criteria. There were two cases of urosepsis in antenatal patients at 28 and 29 weeks' gestation, who required vasopressor support and admission to ICU in MMUH. Both made full recoveries and went on to have an uncomplicated vaginal delivery at term. The third case was of urosepsis in the immediate postpartum period, which required vasopressor support and HDU admission, before being discharged home well one week later. The fourth case was an ESBL septic shock associated with pre-viable PPRM and delivery at 21 weeks' gestation. Despite her care also being complicated by COVID-19 infection, she made a full recovery. The fifth and final case was that of acute chorioamnionitis on a background of induction of labour for prolonged rupture of membranes at term. Following delivery of a healthy baby she developed sepsis postpartum which required vasopressor support and wound management, but ultimately was discharged home well.

**TABLE 4: CENTRAL NERVOUS SYSTEM EVENTS 2018 – 2022**

	2018	2019	2020	2021	2022
Eclampsia	3 (0.04%)	1 (0.01%)	1 (0.01%)	2 (0.02%)	3 (0.04%)
Status epilepticus	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Cerebrovascular accident	0 (0%)	1 (0.01%)	0 (0%)	0 (0%)	1 (0.01%)
Coma	0 (0%)	0 (0%)	1 (0.01%)	1 (0.01%)	1 (0.01%)

As summarised in Table 4, there were three cases of eclampsia in 2022. The first occurred in an 18 year old nulliparous patient who was unbooked with a concealed pregnancy, and was brought directly by ambulance from home to the MMUH with seizure activity and severe hypertension. She was delivered by emergency caesarean section in the MMUH once stabilised and transferred back to the Rotunda for ongoing care. The second case occurred in a 21 year old multiparous patient who was brought directly by ambulance from home to Beaumont Hospital with new onset seizures. She was confirmed to be hypertensive and proteinuric and a diagnosis of eclampsia was made. Following stabilisation, she was transferred to the Rotunda Hospital, where she was induced and had an uncomplicated vaginal delivery of a healthy baby. The third case was in a 24 year old multiparous patient with poorly controlled Type 1 diabetes, who presented at 27 weeks' gestation with diabetic ketoacidosis precipitated by Influenza A sepsis. During her admission, she became rapidly hypertensive, was diagnosed with superimposed preeclampsia, and commenced seizing. After stabilization, she was delivered by emergency caesarean section and was then transferred to the MMUH for further management.

Table 5 summarises the overall intensive care inter-hospital transfer workload at the Rotunda, as well as maternal mortality rate, which unfortunately was associated with four maternal deaths in 2022, for the first time in over seven years.

**TABLE 5: INTERHOSPITAL TRANSFERS AND MATERNAL MORTALITY 2018 – 2022**

	2018	2019	2020	2021	2022
ICU/CCU Transfer	12 (0.1%)	15 (0.2%)	18 (0.2%)	10	11 (0.13%)
Direct Maternal Death	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1* (0.01%)

\*One case of direct maternal death (pulmonary embolism at 34 days postpartum); there were two additional cases of indirect maternal death (intracerebral haemorrhage) and one late maternal death (not pregnancy-related)

## SUCSESSES & ACHIEVEMENTS 2022

Although COVID-19 did not feature as heavily in this years' maternal morbidity report, the Rotunda's critical care experience of looking after these women during 2021 and its corresponding exploratory data was presented at teaching ICU grand rounds in the MMUH, in addition to national and international meetings.

With respect to the hub-and-spoke model of healthcare, the Rotunda continues to provide a continuously expanding satellite high-risk maternal medicine service at Cavan General Hospital, together with maternal-fetal medicine support at Our Lady of Lourdes Hospital, Drogheda, enabling equity of access to high quality, specialised healthcare in regional areas. The development of this service has allowed many women that would have otherwise had to deliver in Dublin in the past, deliver locally near their family support structure. The introduction of an obstetric-gynaecology specialist registrar post at Cavan will also allow for further education and training in these specialised clinics.

Surveillance and delivery of unwell mothers across all Rotunda-affiliated medical campuses requires significant coordination and MDT organisation with ICU, theatre, obstetric and neonatal transport colleagues. This coordinated teamwork functioned extremely effectively in 2022 with the delivery of several emergency cases at affiliated hospitals. The support of maternal medicine fellows, and specialist registrars, has been extremely important for this service.

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 in order to adapt to the ongoing complexity of cases as a result of the efforts of consultant obstetrician-gynaecologists, Dr. Jennifer Donnelly, and Dr. Maria Kennelly who look after all pregnant patients during their stay at the MMUH.

## CHALLENGES 2022

The death of a woman during pregnancy, delivery or soon after delivery is devastating for her family and for society. When this occurs amongst women from marginalised communities, this highlights how extremely vulnerable this population is despite regular healthcare access, patient and staff education initiatives and improved community care. Further efforts will be required in reaching out to such marginalised communities to optimise their access to effective healthcare.

Data capture for out-of-hospital and inter-hospital transfers to and from other units continues to be challenging. The integration of the MN-CMS electronic healthcare record system with other hospitals

would allow more streamlined communication between healthcare providers, which currently poses challenges for patients receiving care in multiple centres. Monthly and quarterly outcome reports are now being generated to facilitate ongoing data capture which should enhance data capture.

The medical complexity of patients attending the Rotunda Hospital continues to present diagnostic and management challenges as a stand-alone maternity hospital.

## PLANS FOR 2023

- Following on from the success of recruiting a maternal medicine specialist registrar to the MMUH, it is hoped to develop and make a business case for a specialist midwifery role between the MMUH and the Rotunda that would significantly improve maternity support for the acutely unwell pregnant patients at the MMUH
- As part of a quality improvement project to further enhance the pathway to specialist non-obstetric care between the Rotunda and the MMUH, the maternal medicine fellow and specialist registrar are enrolled in the 'Greenbelt Project of Process Improvement in Healthcare'. This project will involve input from all multidisciplinary specialties from Emergency through to Medicine, Surgery, Pharmacy and Radiology on how to expand and enhance the pathway to access specialist care outside of the 'critically unwell patient'

# Complicated Postnatal Service

## HEADS OF SERVICE

**Prof. Maeve Eogan**, Consultant Obstetrician Gynaecologist

**Dr. Meena Ramphul**, Consultant Obstetrician Gynaecologist

## SERVICE OVERVIEW

Led by Prof. Maeve Eogan, this service was originally established 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 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 by the HSE-funded Female Genital Mutilation (FGM) service for surgical revision of FGM.

In recent years, the postnatal service expanded even further to offer postnatal review to women who have had other unexpected intrapartum outcomes and events. This particular aspect of the service is currently 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. This service was established to review women who have had traumatic births or had a complication during their pregnancy or postnatal period. It offers a multidisciplinary approach, with access to perinatal mental health services and anaesthetic review when required, to address the different needs of women for their postnatal care. In 2022, a designated postnatal anaesthesiology consultant-led clinic was also established to run alongside this Complicated Postnatal Service clinic.

The service provides an opportunity for open discussion, debriefing, and planning for subsequent pregnancies. In addition, there is a midwifery-led Birth Reflections Service, which compliments the Complicated Postnatal Service.

## CLINICAL ACTIVITY – PERINEAL SERVICE

A total of 270 new patients attended this specialist service in 2022, and the reasons for attendance are described in Table 1.

**TABLE 1: INDICATIONS FOR ATTENDANCE 2019 – 2022**

	2019	2020	2021	2022
Antenatal assessment (previous OASI)	81	79	101	61
Antenatal assessment (other issues)	34	24	39	33
Postnatal assessment after third-degree tear	105	104	80	69
Postnatal assessment after fourth-degree tear	1	8	7	4
Postnatal assessment after button-hole tear	-	-	-	3
Postnatal assessment of perineal infection/pain/dyspareunia	60	64	53	48
Postnatal assessment of faecal incontinence	6	2	3	6
Female genital mutilation (FGM) assessment	9	17	12	29
Other	13	7	7	17
<b>Total</b>	<b>334</b>	<b>314</b>	<b>303</b>	<b>270</b>

The service has also begun to collate metrics for people attending after ‘button hole’ rectovaginal tearing. This is an isolated tear of the anal epithelium or rectal mucosa and vagina that does not involve the anal sphincter, which previously would likely have been categorised as fourth degree tears.

OASI rates in the Rotunda had previously declined by 30% in 2021 (84 cases) compared with 2020 (124 cases), and this reduction in incidence of third and fourth degree perineal tears was sustained in 2022 (75 cases), representing 1.5% of all vaginal births. While OASI is a recognised complication of vaginal birth and cannot be entirely eradicated, this reduction followed a sustained commitment by staff to institute a suite of mitigating interventions over the past number of years (PEACHES care bundle) and it is rewarding to see these benefits being continually realised. Modes of delivery for those who sustained anal sphincter injury are described in Table 2 below. Overall, 41% of those who sustained OASI had a concurrent episiotomy, while 59% did not. A total of 82% of those who had operative vaginal deliveries

and OASI had an episiotomy, while 17% of those who had unassisted vaginal births and OASI had episiotomy.

The total numbers of those who sustained OASI in 2022 (Table 2) is different from the numbers seen for follow-up after OASI (Table 1), as the cases described in Table 1 may have delivered their babies in the previous year (2021).

**TABLE 2: MODE OF DELIVERY AND OASI - 2022**

Mode of Delivery	3rd Degree Tear	4th Degree Tear
Spontaneous vaginal	46	1
Vacuum	7	1
Vacuum and forceps	4	0
Forceps	16	0
Born outside hospital (BBA)	0	0
<b>Total</b>	<b>73</b>	<b>2</b>

A total of 41 people who attended the service required additional treatment or onwards specialist referral, such as to a colorectal surgeon, in addition to physiotherapy (which is provided to all patients). The specific additional treatments that were required are listed in Table 3 below, with the rates being similar to previous years. This table does not account for women who have experienced FGM who may undergo surgical reversal of this during labour.

**TABLE 3: SUBSEQUENT TREATMENT OF PERINEAL CLINIC PATIENT ATTENDEES 2019 - 2022**

	2019	2020	2021	2022
Treatment of granulation tissue (outpatient)	15	28	27	24
Perineal revision/injection (day case)	9	10	4	9
Referral to colorectal service	7	6	7	3
Removal of persistent suture material (outpatient)	10	7	2	4
Reversal of Female Genital Mutilation	3	2	2	1
<b>Total</b>	<b>44</b>	<b>53</b>	<b>42</b>	<b>41</b>

## CLINICAL ACTIVITY - COMPLICATED POSTNATAL SERVICE

A further 24% increase in attendances at the Complicated Postnatal Service was noted in 2022, on top of the prior 60% increase from 2021 to 2020, demonstrating the clinical utility of this new service.

**TABLE 4: INDICATIONS FOR REFERRAL TO COMPLICATED POST NATAL SERVICE 2020 - 2022**

	2020	2021	2022
Postpartum haemorrhage	24	45	49
Category 1 emergency caesarean delivery	4	22	30
Wound infection	-	4	15
Neonatal encephalopathy	20	11	13
Various neonatal complications	7	9	13
Various maternal complications such as collapse, organ injury	2	10	10
Hospital re-admission	5	4	6
Shoulder dystocia	6	8	5
Fourth degree tear	5	4	3
Caesarean hysterectomy for placenta accreta	1	1	2
<b>Total</b>	<b>74</b>	<b>118</b>	<b>146</b>

## SUCCESSSES & ACHIEVEMENTS 2022

There continues to be a sustained commitment to mitigating risk in terms of reducing both primary and recurrent OASI. This includes provision of evidence-based written and oral patient information regarding OASI management. The postnatal services collaborate closely with the Specialist Perinatal Mental Health (SPMH) Team, particularly in terms of the perinatal trauma clinic led by that team. In 2022, the SPMH team saw 106 people in the perinatal trauma clinic. Of these, 16 patients were referred by either the Complicated Postnatal Service or the perineal service. A total of eight of these women received trauma-focused interventions for active trauma symptoms, mostly psychotherapy with eye movement desensitisation and reprocessing (EMDR) and trauma focused cognitive behavioural therapy (CBT). These are prolonged forms of therapy, varying from four to 15 sessions per patient, provided on a one-to-one basis for a minimum of 1-1.5 hours per session.

### EDUCATION AND TRAINING

An obstetric non-consultant hospital doctor (NCHD) attends both of these clinics and receives in-service training in management of OASI, postpartum complications and debriefing as well as gaining the opportunity to undertake audit and research. Other opportunities for outreach education have also been embraced, including participation in medicolegal study days and educational forums.

### CHALLENGES 2022

Periodically throughout the year the number of unattended appointments increased, which is always a challenge as other patients would have taken that appointment had the slot been properly cancelled by the patient. Improvements in administrative solutions, such as texting prior to the appointment were instituted to reduce this occurrence.

### PLANS FOR 2023

Continued collaboration between all members of the MDT, and allied specialists, will assist in provision of the optimal response to people who have experienced unexpected and unanticipated birth outcomes. To improve the Complicated Postnatal Service, the team will perform a qualitative questionnaire survey to evaluate whether women's needs after complicated births and pregnancies are being met and identify areas for improvement.

Additionally, the team looks forward to on-site availability of some objective continence testing in 2023, such as endoanal ultrasound, to facilitate patient care.

The team supports the hospital's ambition to become a trauma-informed institution, and all developments within postnatal services will be delivered with this focus at their core.



# Radiology Service

## HEAD OF SERVICE

**Dr. Ailbhe Tarrant**, Consultant Paediatric Radiologist

## STAFF

**Dr. Neil Hickey**, Consultant Adult Radiologist

**Dr. Kevin Pennycooke**, Consultant Adult Radiologist

**Dr. Matylda Sheehan**, Consultant Paediatric Radiologist

**Ms. Aine Hahessy**, Radiology Services Manager

**Mr. Patrick Feeney**, Senior Radiographer in Ultrasound

**Ms. Megan Kelly**, Senior Radiographer

**Mr. Paddy Nolan**, Clinical Specialist in Radiography

**Ms. Shenaz Subjee**, Senior Radiographer, Radiation Protection Officer and PACS Manager

## SERVICE OVERVIEW

The COVID-19 enforced changes to routine practice which were in place throughout 2020 and 2021 were reversed in 2022 as normal clinical service resumed. Together with continued increased demand for imaging in general, back-log demand continued for appointments for patients who could not be accommodated during the pandemic. Demand continued to outstrip supply especially in regard to more specialised investigations. Particular pressure remains on ultrasound examinations which still account for the majority of imaging on both the adult and paediatric services. This has been compounded by the continued challenge of filling the vacant specialist sonographer position.

## CLINICAL ACTIVITY

### PAEDIATRIC RADIOLOGY

Table 1 describes clinical activity levels from 2019 to 2022. In 2022, a total of 5,253 paediatric studies were performed. This figure is lower than 2021, reflecting the outsourcing of hip ultrasounds for January, February and March 2022. Of these studies, 3,395 or 64% were paediatric ultrasound examinations, performed in both the inpatient and outpatient settings. This includes 2,809 cranial ultrasound examinations on inpatient babies, and 2,129 hip ultrasounds performed as part of the National Screening Program for Developmental Dysplasia of the Hip (DDH).

A total of 2,303 plain X-ray films and 32 upper gastrointestinal contrast fluoroscopic studies were performed.

Following the appointment of a Speech and Language Therapist at the Rotunda, the Radiology Service began a videofluoroscopy feeding study service in 2022. This is a significant service improvement, and allows Rotunda infants to be assessed on site, in a timely manner, removing delays in management or discharge, which previously had

been experienced when relying on Children's Health Ireland (CHI) for this service provision.

The appointment of a replacement consultant paediatric radiologist, Dr. Matylda Sheehan, in April 2022, brought the WTE consultant staffing back to 0.65, which remains less than what is required to administer an optimal paediatric radiology service based on the Rotunda's clinical activity. A focus on addressing this deficit continued as a top priority in 2022. This replacement appointment also enabled the reversal of the temporary outsourcing of paediatric hip ultrasound examinations, which was in place from September 2021 until April 2022.

The CT and MRI needs of the Rotunda's paediatric patients continue to be provided by both the National Maternity Hospital and CHI-Temple Street, following completion of a service level agreement as arranged with the National Women and Infants Health Programme (NWIHP). The National Maternity Hospital is now the main provider of paediatric MRI scans for Rotunda patients, with 84 neonatal MRI studies and 62 fetal MRI studies being provided at NMH for Rotunda patients. An additional nine paediatric MRI scans and two paediatric CT scans were performed for Rotunda patients at CHI-Temple Street. Multidisciplinary meetings continue to be held at CHI-Temple Street to discuss relevant cases between various paediatric subspecialists from the Rotunda and CHI-Temple Street.

**TABLE 1: PAEDIATRIC AND ADULT CLINICAL ACTIVITY 2019 - 2022**

Paediatric Radiology	2019	2020	2021	2022
Total studies	5,499	5,309	6,109	5,253
Ultrasound	2,843	2,751	3,261	3,395
Plain film X-ray	2,427	2,443	2,749	2,303
Hip ultrasound	1,752	1,511	1,885	2,219
Fluoroscopic studies	62	47	24	32

Adult Radiology	2019	2020	2021	2022
Total studies	1,436	1,770	2,351	2,939
Ultrasound	1,090	1,407	1,750	1,790
Fluoroscopic studies	207	197	393	451*
Plain film X-ray	99	118	105	134
MRI**			85	200
CT**			46	29

\*some studies performed at Connolly Hospital

\*\*some studies performed at Connolly Hospital or Mater Misericordiae University Hospital (MMUH)

## ADULT RADIOLOGY

### ULTRASOUND

The clinical activity workload for adult radiology is summarised in Table 1. Urgent and semi-urgent cases have continued to be prioritised leading to increased waiting times for routine examinations as demand continues to exceed supply. Most of the ultrasound examinations are performed by one of two half-time consultant radiologists, and despite this challenge, there has been a small increase in the total number of scans performed. It should be noted that this number of ultrasound examinations represents significant workload as many require the double approach of transabdominal with transvaginal imaging. One of the radiography trainees is currently completing a Master's Course in Sonography, while two further trainees rotated through the gynaecologic ultrasound service in 2022, successfully completing their Masters.

### FLUOROSCOPY

The majority of fluoroscopy studies comprise hysterosalpingograms (HSG), the demand for which has continued to grow. A significant number of HSGs are performed by the Rotunda Radiologists at Connolly Hospital. Oil-based contrast is now employed for a proportion of the HSGs performed in the Rotunda and an audit is under way to

assess fertility rates in comparison to water-based contrast. The fibroid embolisation service at Connolly for Rotunda patients has continued with a small increase in overall numbers. These case numbers have been limited by reduced day-bed availability. Tubal re-cannulations also comprise a small number of interventional cases by the Rotunda Radiology Service at Connolly.

### MRI

During 2022 there was a more than doubling of the number of Rotunda patients undergoing MRI scanning at Connolly, increasing from 85 in 2021 to 200 in 2022. This has resulted in increased waiting times for routine MRIs and further service-planning will be required in the future. Many scans are approved in advance following discussions at the Rotunda Gynaecology MDT meeting, where scan results and follow-up are also discussed.

## CHALLENGES 2022

The major challenges in 2022 remain related to staffing limitations. At 0.65 WTE consultant paediatric radiologists, the Rotunda remains significantly under-resourced for its paediatric radiology service, which resulted in service limitations during 2022.

Similarly, it has been very challenging recruiting replacement clinical specialist radiographers, with one particular post remaining unfilled since April 2022, despite extensive recruitment efforts.

## PLANS FOR 2023

- To complete the recruitment of a third Consultant Paediatric Radiologist with a 25-hour weekly Rotunda commitment to address service deficits
- To complete the recruitment of a third Consultant Adult Radiologist between MMUH and the Rotunda to supplement the existing service and improvement in the interventional radiology support for major obstetric haemorrhage cases
- To continue the recruitment campaign to fill existing staffing deficits at radiographer level as well as attracting additional staff to meet the increasing service demand
- To maintain and increase capacity in key diagnostic areas such as ultrasound, MRI and fluoroscopic-guided procedures. This may necessitate short-term outsourcing to keep pace with demand



# Gynaecology

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# Gynaecology Service

## HEAD OF SERVICE

**Dr. Vicky O'Dwyer**, Director of Gynaecology

## SERVICE OVERVIEW

The Rotunda continues to be a leader in the field of benign gynaecology, providing care for women in North Dublin and beyond. The hospital expanded its Women's Health Services in 2022 with additional capacity in general and specialist clinics, as well as outpatient surgical procedures. The Minister for Health, Mr. Stephen Donnelly, officially opened the Complex Menopause Clinic in November 2022. This clinic is managed by Dr. Caoimhe Hartley. Dr. Nikita Deegan curated a multidisciplinary paediatric and adolescent gynaecology service expansion. Dr. Naomi Burke and Dr. Fadi Salameh expanded the urogynaecology service with their team of specialist nurses and physiotherapists. The addition of advanced nurse practitioner gynaecology clinics has enhanced the gynaecology service offering with appointments for women with menorrhagia, cervical gynaecology and prolapse.

There were 4,829 new gynaecology appointments in the public hospital clinics and 5,042 return appointments. This was a 60% increase compared with 2,745 new and 3,070 repeat visits in 2021. The 'did not attend' (DNA) rate for appointments unfortunately deteriorated from 22% in 2021 to 30% in 2022. There was a significant increase in new gynaecology referrals from 6,782 in 2021 to 8,116 in 2022. Despite this increase in referrals, there was a decline in waiting time for new appointments, with 94% of patients being seen within six months of their referral by December 2022.

Acknowledgement and credit must be given to all staff involved in the expansion of 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. The hard work and dedication of our radiology and laboratory staff who have provided an exemplary service to women attending our service is also acknowledged.

## GENERAL GYNAECOLOGY CLINICS

General benign gynaecology outpatient clinics are provided by the following consultants: Dr. Rawia Ahmed, Dr. Kushal Chummun, Dr. Sharon Cooley, Dr. Sam Coulter-Smith, Dr. Niamh Daly, Dr. Eve Gaughan, Prof. Michael Geary, Dr. Claire McCarthy, Dr. Seiglinda Mullers, Dr. Hassan Rajab, Dr. Meena Ramphul and Dr. Fadi Salameh. These consultants all have individual special interest areas such as minimal access surgery, pelvic floor surgery, management of endometriosis and uterine fibroids.

## SPECIALIST GYNAECOLOGY CLINICS

### PAEDIATRIC AND ADOLESCENT GYNAECOLOGY (PAG) SERVICE

This service provides two PAG clinics run by Consultant Paediatric and Adolescent Gynaecologist, Dr. Nikita Deegan, Clinical Midwife Specialist, Ms. Debbie Browne, and Clinical Psychologist, Dr. Susan Carroll. One clinic is for patients aged under 18 with general gynaecological concerns. Virtual appointments are also offered for patients with mobility issues or additional needs that make attending in-person appointments challenging. In 2022, there were 129 new and 155 follow-up appointments for this general PAG clinic.

Another PAG clinic is Ireland's first and only dedicated specialist multidisciplinary service for patients of any age with complex congenital anatomic gynaecologic conditions. Medical care, psychological support and educational events are provided for patients and families affected by premature ovarian insufficiency, structural or developmental anomalies of the genital tract (e.g. Mayer-Rokitansky-Küster-Hauser Syndrome), cloacal anomalies/bladder extrophy, and differences in sex development. This clinic was established in August 2022.

In 2022, there were 129 new and 155 follow-up appointments in the general PAG clinic, and 41 new and 26 follow-up appointments in the complex PAG clinic between August and December 2022. These represent significant increases in referrals and attendances compared with 2021.

### UROGYNAECOLOGY SERVICE

This is a multidisciplinary service that provides rapid access for patients to expert advice while simultaneously improving access for new patients to consultant-led clinics. This service continued to grow in 2022 with the addition of a new consultant sub-specialist urogynaecologist, Dr. Fadi Salameh, supported by Ms. Siji Philip, a second bladder care nurse, who has completed the Bristol urodynamic course and is now independent in urodynamic practice.

The unique multidisciplinary approach to patients in this clinic includes two consultants, two bladder care nurses, specialised pelvic floor physiotherapists and advanced nurse practitioners leading a specialised pessary clinic.

The Urogynaecology team provide diagnostic tests for women attending with urinary incontinence and voiding dysfunction. They also provide education, support and follow-up for women who present with urinary retention in the antenatal, postnatal and postoperative periods and patient's with altered bladder sensation related to pudendal neuropathy.

This includes providing uroflowmetry as an objective measurement of detrusor function, teaching bladder management techniques such as clean intermittent catheterisation, double voiding and on occasion management of long-term indwelling catheters. The team also teach patients pessary self-management.

### SUBFERTILITY CLINIC

Three clinics are provided weekly by specialist consultants in reproductive medicine, Dr. Conor Harrity, Dr. Edgar Mocanu and Dr. Rishi Roopnarinesingh, dedicated to the investigation and management of subfertility. The complete array of investigations and expertise are available at these clinics to thoroughly assess female and male factor subfertility. In 2022, there were 498 new appointments and 1,118 follow up appointments. This represented a 50% increase compared to 2021.

### VIRTUAL GYNAECOLOGY CLINIC

Two fully virtual gynaecology clinics are provided per week, as well as many of the general gynaecology clinics also offering additional virtual consultation for follow-up appointments for select patients, rather than face-to-face appointments. All patients on the general gynaecology waiting list are now assessed for suitability for such virtual consultation. Select new patients are 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 younger women, menorrhagia in women younger than 40 years of age, and initial consultation for intermenstrual or postcoital bleeding. This significantly improves the efficiency of outpatient gynaecology services by ensuring that patients are triaged and directed as quickly as possible to the optimal subspecialty gynaecology service based on their clinical need.

### CERVICAL GYNAECOLOGY

There were 187 women seen in the cervical gynaecology clinic in 2022. The referral criteria for this clinic includes benign cervical abnormalities such as cervical polyp, cervical ectropion, contact bleeding at a smear, women referred with a suspicious cervix on routine physical examination but with normal cytology/negative HPV test, and women with postcoital or intermenstrual bleeding. Of the women seen in this clinic, 5% require onward referral for colposcopy examination. There were no cases of cervical cancer.

### OUTPATIENT HYSTEROSCOPY SERVICE

The Outpatient Hysteroscopy Service caters for women referred to the Rotunda who meet specific eligibility criteria and are scheduled for 'one-stop/see-and-treat' gynaecologic evaluation. The clinics were provided by consultant gynaecologists Dr. Rawia Ahmed, Dr. Naomi Burke, Dr. Kushal Chummun, Dr. Eve Gaughan, Dr. Conor Harrity, Dr. Nicola Maher, Dr. Claire McCarthy, Dr. Edgar Mocanu and Dr. Vicky

O'Dwyer. Clinical Nurse Specialists (CNS) Ms. Hannah Bolger, Ms. Kathleen Kelly and Ms. Catriona McNeela, ensure the smooth and efficient running of these clinics. The team is supported by Healthcare Assistants Ms. Lisa Hillman, Ms. Ciara Deegan, Ms. Jade Barton and Ms. Grace Nolan. The Outpatient Hysteroscopy Service receives both direct GP referrals and internal referrals for diagnostic and operative hysteroscopy. The procedures offered in the clinic include diagnostic hysteroscopy and biopsy, either through a vaginoscopic approach or with cervical dilation under local anaesthesia. Operative hysteroscopy is also used for removal of intrauterine contraceptive devices that could not be removed in the outpatient clinic. Uterine polypectomy and myomectomy are performed using Myosure operative hysteroscopes. A total of 1,066 diagnostic outpatient hysteroscopies were performed by this service in 2022, as well as 234 polypectomies, 38 myomectomies and three endometrial ablations under local anaesthesia.

### 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, by providing an efficient service for insertion and removal of intrauterine contraceptive devices, in particular those that have proven challenging in other clinical settings.

### 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. The vast majority of women seeking pregnancy termination under Section 12 of the Health (Regulation of Termination of Pregnancy) Act 2018, avail of this service with their local GP, in particular up to nine weeks' gestation. In general, from nine to 12 weeks' gestation, patients seeking this service under Section 12 attend maternity hospitals, and in 2022, 145 terminations were performed at the Rotunda in this setting. This compared with 102 such terminations performed in 2021 between nine and 12 weeks' gestation, 123 in 2020, and 178 in 2019. The vast majority of these 145 women (88%) had a medical termination of pregnancy, while 12% (18) women opted for surgical termination. In addition, there were 94 women who attended the pregnancy options clinic with persistent bleeding or a persistently positive urinary pregnancy test (UPT) after an earlier medical abortion being commenced before nine weeks' gestation by their GP. These women were treated with repeat medication prescription, surgical evacuation of retained products of conception, or by manual vacuum aspiration (MVA) under local anaesthesia in the OPH procedure suite.

## OPERATING THEATRE ACTIVITY 2022

## ABBREVIATIONS USED IN TABLES

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

## TABLE 1: HYSTEROSCOPIC PROCEDURES

	2020	2021	2022
D+C with insertion of IUCD	230	270	377
Polypectomy	87	113	124
D+C	310	278	99
D+C with endometrial ablation	86	67	90
Myomectomy	56	28	48
D+C with diathermy to cervix	4	13	10
Resection of uterine septum	2	3	7
<b>Total</b>	<b>775</b>	<b>772</b>	<b>755</b>

## TABLE 2: LAPAROSCOPIC PROCEDURES

	2020	2021	2022
Dye +/- APC +/- ovarian drilling +/- adhesiolysis	332	328	395
Ovarian cystectomy	87	71	74
Diagnostic	74	70	60
Hysterectomy +/- salpingectomy +/- oophorectomy	22	40	31
Salpingo-oophorectomy	41	36	36
Myomectomy	6	2	6
Sterilisation	9	8	5
Oophorectomy	8	9	3
Appendectomy	2	6	0
<b>Total</b>	<b>581</b>	<b>570</b>	<b>610</b>

## TABLE 3: LAPAROTOMY

	2020	2021	2022
TAH +/- BSO	23	35	43
Myomectomy	18	20	24
Salpingectomy	1	0	7
Conversion from laparoscopy	7	4	4
Cystectomy/oophorectomy/washings	2	0	4
Ovarian Cystectomy	6	6	4
STAH	1	1	2
Oophorectomy	3	4	1
Reversal of sterilisation	1	0	0
<b>Total</b>	<b>62</b>	<b>70</b>	<b>89</b>

TABLE 4: VAGINAL AND TRANSVAGINAL SURGERY

	2020	2021	2022
Anterior and posterior colpoperineorrhaphy	63	66	99
Vaginal hysterectomy	51	37	51
Sacrospinous fixation	9	8	11
Transvaginal oocyte retrieval	1	0	0
<b>Total</b>	<b>124</b>	<b>111</b>	<b>161</b>

TABLE 5: OTHER VULVOVAGINAL PROCEDURES

	2020	2021	2022
Fenton's procedure	5	5	26
Resection of vaginal septum	7	5	10
Revision of perineum	10	0	3
Labial reduction/repair	5	0	2
Repair of FGM	1	0	0
<b>Total</b>	<b>28</b>	<b>10</b>	<b>41</b>

TABLE 6: MINOR SURGICAL PROCEDURES

	2020	2021	2022
Cystoscopy	39	42	44
EUA +/- smear	5	0	35
Vulva biopsy/excision of vulva lesions	29	17	24
Hymenectomy	14	14	21
Bartholin's cyst or vaginal cyst	74	10	13
Intravesical Botox injection	1	0	0
<b>Total</b>	<b>162</b>	<b>83</b>	<b>137</b>

TABLE 7: FIVE YEAR COMPARATIVE

	2018	2019	2020	2021	2022
Anterior and posterior repair	37	63	63	66	99
Vaginal hysterectomy and AP repair	46	60	51	37	51
TAH +/- BSO	37	53	23	35	43
Laparoscopic hysterectomy +/- BSO	52	33	41	40	36
LLETZ	11	19	14	15	19
Sacrospinous fixation	8	16	9	8	11
Laparoscopic sterilisation	6	11	9	2	5
STAH	19	0	2	1	2
<b>Total</b>	<b>216</b>	<b>255</b>	<b>212</b>	<b>204</b>	<b>266</b>

## ANALYSIS OF GYNAECOLOGIC ACTIVITY

The number of minor and laparoscopic gynaecologic procedures remained similar in 2022 compared with 2021. Of note, the increase in hysteroscopic procedures has been predominantly in the outpatient setting, which is a significantly more efficient and cost-effective approach to surgical treatment. There were also 51 cases of Bartholin cyst treated exclusively in the outpatient setting compared to only 13 such cases requiring inpatient care and general anaesthesia. Outpatient surgery continues to receive high patient satisfaction scores.

There was an increase in vaginal surgical procedures performed in 2022, including a 28% increase in vaginal hysterectomies, and a 33% increase in anterior and posterior vaginal repairs. The number of laparoscopic and open hysterectomies remained similar to previous years.

## SUCCESSSES & ACHIEVEMENTS 2022

- The new operating theatre build, including four operating theatres, opened on the Rotunda campus which significantly increased inpatient gynaecologic surgical capacity. Previously, with only two properly equipped operating theatres, it was particularly challenging to schedule full elective gynaecologic surgical theatre lists, due to constant interruptions and delays by emergency obstetric surgeries. Now with two dedicated obstetric operating theatres (one elective and one emergency)

and two dedicated gynaecologic operating theatres, it has been possible to schedule full gynaecologic theatre lists, which are successfully completed

- Expansion of urogynaecology services focusing on a multidisciplinary approach to pelvic floor conditions and continence promotion
- Establishment of a complex menopause service for women with perimenopausal and menopausal symptoms who have high-risk medical conditions or a history of cancer
- Establishment of Ireland's first and only multi-disciplinary specialist service for adolescents and adults with complex congenital gynaecologic conditions

#### PLANS FOR 2023

- Expansion of nurse-led gynaecology services, by empowering nurses and Physician Associates to take on the primary management of more gynaecologic cases
- Free contraception for women attending the termination of pregnancy service
- Expansion of secondary level fertility services at the Rotunda to include intrauterine insemination, such that all fertility services other than IVF will be provided again on site at the Rotunda
- A multidisciplinary endometriosis service will commence in 2023
- Expansion of the multi-disciplinary PAG service to include endocrinology through RCSI Hospitals Group partner, Beaumont Hospital





# 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. Yahya Kamal**, Consultant Obstetrician Gynaecologist

**Dr. Vicky O'Dwyer**, Consultant Obstetrician Gynaecologist

**Dr. Hassan Rajab**, Consultant Obstetrician Gynaecologist

**Ms. Rose Thorne**, Lead Nurse Colposcopist

**Ms. Virginie Bolger**, Nurse Colposcopist

**Ms. Barbara Markey**, Nurse Colposcopist

**Ms. Ciara Muddiman**, Nurse Colposcopist

**Ms. Jennifer O'Neill**, Nurse Colposcopist

**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. Lisa Gleeson**, Clerical Officer

**Ms. Ruth Mackey**, Clerical Officer

**Ms. Jade Ng**, Clerical Officer

**Ms. Sarah O'Brien**, Clerical Officer

## SERVICE OVERVIEW

The Rotunda Colposcopy Service is the largest such service in Ireland. This is a quality assured service with an annual review of all key performance indicators. Monthly multidisciplinary team meetings are provided and are attended by all staff including histopathology and cytology.

Since 2018, each year has brought constant challenges both for the national programme and local colposcopy units. Recovering from the COVID-19 pandemic and the HSE Cyberattack in 2021 took huge effort from the entire Colposcopy Service team.

The year 2022 brought different but equally significant challenges to the service. There have been several staff changes due to retirements and alterations in job plans, alongside an ongoing increase in referrals to the service. The Rotunda's service has seen a continued increase in new referrals, with the implementation of HPV primary screening. These factors combined to negatively impact on waiting time targets.

Despite these difficult times, every member of the Colposcopy team consistently goes above and beyond to continue to provide the best patient care possible, which is sincerely appreciated.

## CLINICAL ACTIVITY

Clinic capacity had been optimised throughout 2021, and this was continued throughout 2022. Despite the impact of staff changes and infrastructural limitations, the Rotunda's service maintained a higher turnover of new appointments alongside an increase in treatments.

Due to the increasing numbers of new referrals projected for 2022, the Memorandum of Understanding with the National CervicalCheck Programme increased from an annual 2,000 new referrals each year to an agreed number of 2,400. Even with this higher agreed target, the number of new patients actually seen in 2022 significantly exceeded this target, at 2,672 cases.

The resultant increase in treatments and diagnostic biopsies has placed further demands on the Rotunda's histopathology service. The approval of a new consultant histopathologist position, jointly between the Rotunda and the Mater Misericordiae University Hospital (MMUH) will not only support the colposcopy service's requirements but will also provide a robust link with the MMUH Gynaecology Department and improve the case flow to MMUH MDT services.

The Colposcopy Service has maximised all clinical capacity including an increase in nurse-led clinics and evening smear clinics.

**TABLE 1: FIVE YEAR COMPARATIVE**

	2018	2019	2020	2021	2022
Return Visits	3,472	3,940	4,004	2,791	2,920
New Attendees	1,936	2,073	1,589	2,444	2,672
<b>Total</b>	<b>5,408</b>	<b>6,025</b>	<b>5,593</b>	<b>5,235</b>	<b>5,592</b>

**TABLE 2: COMPLIANCE WITH REFERRAL APPOINTMENT TARGETS**

Year	Projected New Referrals	Number of New Referrals Attended	% referred with clinical indication	Met waiting time for High Grade cases*	Met waiting time for Low Grade cases**
2018	2,000	1,935	31%	91%	97%
2019	2,000	2,073	30%	60%	66%
2020	2,000	1,589	24%	78%	85%
2021	2,000	2,444	16%	62%	40%
2022	2,400	2,672	18%	80%	22%

\*Target for seeing patients with high grade cervical smear changes is 90% within four weeks of the referral

\*\*Target for seeing patients with low grade cervical smear changes is 90% within eight weeks of the referral

**KEY PERFORMANCE INDICATORS**

The maintenance of waiting time targets for urgent referrals has been a priority for the service, given the expectation of surpassing overall clinical capacity, and has been achieved for these highest risk cases throughout 2022. However, the negative impact of the increased workload and staff changes has negatively affected compliance targets for low grade referrals considerably, and this is of significant concern.

Throughout 2022, several measures were instigated to address the lack of compliance with low-grade referral targets. This included increasing the number of clinics, with support from BSCCP-accredited locum consultant gynaecologists and accredited fellows within the Rotunda.

Longer term, sustainable measures needed to deal with these compliance targets are now an urgent priority. There has been significant financial and administrative support from the Rotunda Executive Management Team to increase sessional clinics by external accredited consultants and also ensuring the inclusion of colposcopy sessions in future consultant job plans. Significant effort has also been made to address the urgent need to secure the future nurse colposcopy workforce, with new nurse colposcopist positions advertised. The success of these recruitment efforts will unfortunately be challenged by the national shortage of trained colposcopy nurses.

All Consultants within the Colposcopy Service are registered trainers with the BSCCP, and so the potential to train both medical and nursing staff is quite significant. These targeted efforts are already showing

promise, and it is expected that the first quarter of 2023 will show an improvement in compliance for low-grade patient referral targets.

Current clinical capacity is as follows:

- 74 colposcopy consultant appointment slots available per week with eight extra slots once every four weeks
- 54 nurse-led appointments available per week and additional cover provided wherever possible
- 40 test-of-cure appointment slots available per week

**ATTENDANCE RATES**

Another challenge for our service efficiency is the persistently high non-attendance (DNA) rate. Considerable work has been done to combat this, including the text message reminder service and DNA letters to patients and GPs.

In 2022, the DNA rate stood overall at 11%. As this was an increase from 2021 a full analysis was undertaken. Of interest the vast majority of DNA's were for new patient appointments. Investigation by the administration team found that common reasons included duplicate referrals to other colposcopy services and patients no longer residing within the area. This has been communicated to the national programme and measures for guidance for primary referrers are in progress.

In order to preserve as many new colposcopy slots as possible for evaluation of patients with abnormal smears, the Colposcopy Service has been directing new referrals with clinically-directed cervical problems to the General Gynaecology service where a new Clinical Cervical Clinic has been a major success. The proportion of new slots taken up by 'clinically indicated' referrals remains at 18%, which illustrates the careful balance that needs to be made between retaining relevant patients with higher probability of cervical malignancy within the Colposcopy Service and separate management in the general gynaecology service.

**SUCCESSES & ACHIEVEMENTS 2022**

**CLINICAL SERVICE DEVELOPMENTS**

- Continuation of early morning nurse-led Cold Coagulation Clinics has provided enhanced patient services, with current capacity for eight treatment sessions each week at 07.30am, which is the equivalent of one full additional weekly colposcopy session

- Evening smear clinics have created added capacity for an increase in daytime colposcopy and provide a greater patient choice of appointment times
- Expansion of the nurse colposcopy team is of paramount importance, as an increase in the number of nurse-led clinics, by experienced Nurse Colposcopists will address the major issue of increased low grade referrals now being seen, improve patient continuity of care, as well as more efficient progression through the service
- The role of advanced nurse practitioners is encouraged and supported within the Rotunda, with recognised benefits to patient care and service development. Ms. Jennifer O'Neill is currently undertaking Advanced Nurse Practitioner training and is within the final year of training
- Ms. Carol O'Rourke retired in 2022 after many years as lead staff nurse and will be greatly missed

### ACCREDITATION & TRAINING

- A National CervicalCheck Programme Quality Assurance visit occurred in November 2022, which recognised the clinical volume challenges, although despite this challenge it was noted that a very high-quality service was consistently provided. Recommendations were mainly directed towards infrastructure of the unit, which will be resolved in 2023 with the development of a new Rotunda building on O'Connell Street
- The service now has five nurse colposcopists, following Ms. Ciara Muddiman successfully completing BSCCP accreditation. However, due to work plan rearrangements, this is equivalent only to 2.5 whole time equivalent (WTE) and therefore an area that still needs further action
- Ms. Rose Thorne continued as Lead Nurse Colposcopist, despite recent retirement, which is of immense benefit to service management
- All actively practicing consultants in the Colposcopy Service are now accredited with the BSCCP
- There are five accredited colposcopy trainers within the service, greatly expanding the opportunity for training of obstetric-gynaecologic trainees
- The entire consultant team is active in education, including primary care colleagues, via the Institute of Obstetricians and Gynaecologists, and CervicalCheck

- Members of the team also regularly attend relevant national and international conferences on colposcopy services

### CHALLENGES 2022

The main challenge for 2022 is handling the increased referral rate following the implementation of the national Primary HPV screening system, and the need to optimise work-force requirements particularly amongst nurse colposcopists, who are at a critical shortage level.

### PLANS FOR 2023

The next year will focus on strategic development on the following issues:

- Engagement in the development of new expanded facilities in a new outpatient services building to be purchased for the Rotunda on O'Connell Street, which will provide state-of-the-art physical infrastructure for colposcopy
- Expansion of nurse-led colposcopy services with recent interviews being completed for new CNM 3 positions and Nurse Colposcopist positions
- Continue the development of the Advanced Nurse Practitioner role within the Colposcopy Service
- Engagement in workforce planning initiatives for future-proofing and expansion of nurse-led services
- Enhancement of colposcopy training opportunities for both nursing and medical staff
- Increase annual audits, which were negatively impacted in recent years due to clinical pressures, COVID-19 impacts, and the HSE Cyberattack impacts
- Commencement of new sessional clinics by BSCCP-accredited consultants
- The Clinical Lead position will undergo rotation in 2023 as per the CervicalCheck recommendation within the Quality Assurance report



# Sexual Assault Treatment Service

## HEAD OF SERVICE

**Dr. Nicola Maher**, Consultant Obstetrician Gynaecologist

## STAFF

**Prof. Maeve Eogan**, Consultant Obstetrician Gynaecologist

**Ms. Noelle Farrell**, Clinical Midwife Manager II

**Ms. Naomi Finnegan**, Clinical Midwife Specialist

**Ms. Kate O'Halloran**, Clinical Midwife Specialist

**Ms. Deirdra Richardson**, 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. Laura Doherty**, Healthcare Assistant

**Ms. Moira Carberry**, Administration

**Ms. Denise Rogers**, Administration

## ON-CALL FORENSIC CLINICAL EXAMINERS

**Dr. Wendy Ferguson**

**Dr. Elzahra Ibrahim**

**Dr. Daniel Kane**

**Dr. Haroon Khan**

**Dr. Ciara Luke**

**Dr. Jill Mitchell**

**Dr. Cathy Monteith**

**Ms. Sue Roe**

**Ms. Aideen Walsh**

**Dr. Amy Worrall**

## 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, inter-agency national Sexual Assault Response Team (SART). Clinicians from the Rotunda founded the first SATU in Ireland in 1985 and care for victims of sexual assault continues to be provided on-site since then. 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 ATTENDEES TO THE ROTUNDA SATU 2018-2022**

Year	2018	2019	2020	2021	2022
Number new patients	319	393	277	309	427

In keeping with the increase in reported sexual assault crimes to An Garda Síochána nationally, an increase in attendees to the SATU at the Rotunda was also noted, with a record 427 patients being seen in 2022. Despite social pandemic restrictions in the early part of 2022, SATU attendance numbers exceeded pre-pandemic levels over the course of the year, with the months of August and September 2022 being the busiest months of the year. It is difficult to ascertain if this is a reflection of an increase in the true incidence of sexual assault or an increased awareness of the service and an increased confidence in reporting to the relevant authorities. It is certainly hoped to be the latter.

The Rotunda SATU provides 24 hours per day, 365 days per year care. While 63% of patients attended for a Garda forensic case, a total of 11% opted to attend for SATU evaluation but to instead securely store their evidence in case of a future decision to engage with An Garda Síochána. Case demographics remained largely unchanged compared with prior years, with 35% of patients reported as being school-going or university students. As with prior years, 7% of SATU patients identified as male. Assaultants were reported most commonly as being acquaintances, but 30% were reported as strangers. Intimate partner or ex-intimate partner sexual assault accounted for 10% of cases.

Staffing shortages proved to be a challenge in the first part of 2022 although this subsequently improved as three of the existing forensic nurse examiners returned to the service during the latter months. Many Rotunda nursing and midwifery colleagues provided supporting nurse cover, which was most appreciated. Volunteer recruitment across all volunteer sectors remains challenging following the pandemic and the team is extremely grateful to those volunteers from the Dublin Rape Crisis Centre and the Accompaniment Support Services for Children who continue to provide psychological support to SATU patients.

## SUCCESSES & ACHIEVEMENTS 2022

### EDUCATION & TRAINING

Rotunda staff continued to provide valuable support at the biannual national forensic training programme for medical staff in Galway this year. Thanks to Dr. Daniel Kane, Prof. Maeve Eogan and Ms. Sarah O'Connor for contributing their knowledge and expertise to this year's training days, and to all SATU staff for their ongoing training of incoming staff.

In addition, the Rotunda staff has begun supporting the new cohort of Sexual Assault Forensic Examiner (SAFE) students in September 2022. As the busiest unit in the country, the students gain valuable experiential training on-site shadowing cases with the forensic examiners.

Dr. Daniel Kane has commenced a two year MD with RCSI under the supervision of Prof. Maeve Eogan and Dr. Karen Flood. His research will investigate the frequency and type of genital and bodily injuries recorded in patients attending the SATU following sexual assault.

The annual inter-agency SATU study day took place in Autumn 2022 in Dublin. A large focus of the day was on staff support. Working with victims of sexual violence can lead to vicarious trauma which itself is recognised as a cause of staff burnout. This year psychological support for staff working in SATUs has rolled out nationwide using a clinical supervision model lead by Dr. Nicola O'Sullivan, Social Care Consultant. The model involves both group reflective practise and individual sessions and has been welcomed by staff at the Rotunda SATU.

## INNOVATION

During the COVID-19 pandemic, the SATU team availed of iPads to facilitate some consultations. As restrictions lifted these were adapted to allow patients complete patient feedback at the end of their visit. This has provided a large amount of feedback which will be used to drive quality improvement projects in the future.

The team working at the Rotunda has taken part in many outreach projects aimed at increasing awareness of SATU services amongst other allied health and social care professionals, and also amongst the public, in particular adolescents and young adults. This is particularly important given that 56% of SATU attendees in 2022 were under the age of 25 years.

The Rotunda team of forensic nurses and doctors provided expertise in the very successful 'Debunking the Myths: The Science behind our Sexual Health' programme run by the RCSI Department of Obstetrics and Gynaecology in collaboration with the Rotunda Hospital. The feedback in relation to the presentations on SATU was always positive and the transition year students attending engaged well with the speakers.

Many SATU nurses also provided outreach talks to secondary schools, accident and emergency departments, drug treatment centres and in other allied healthcare settings, highlighting the options of care open to victims of sexual assault and the service provided at the Rotunda SATU.

Forensic Nurse Examiner Ms. Kate O'Halloran engaged with AKIDWA to facilitate the launch of their guidelines at an event held in the Rotunda in November 2022. AKIDWA supports women who are victims of female genital mutilation (FGM). Studies have shown that women who have experienced FGM are twice as likely to experience intimate partner sexual violence compared with women who have not experienced FGM. Over the summer months many of the Rotunda

team volunteered to attend music festivals such as Electric Picnic and Longitude to promote awareness of SATU and provide on-site information and support to potential victims of sexual assault.

The recruitment of an additional healthcare assistant, Ms. Laura Doherty, to the team in 2022 significantly improved the efficiency of the service provided.

## CHALLENGES 2022

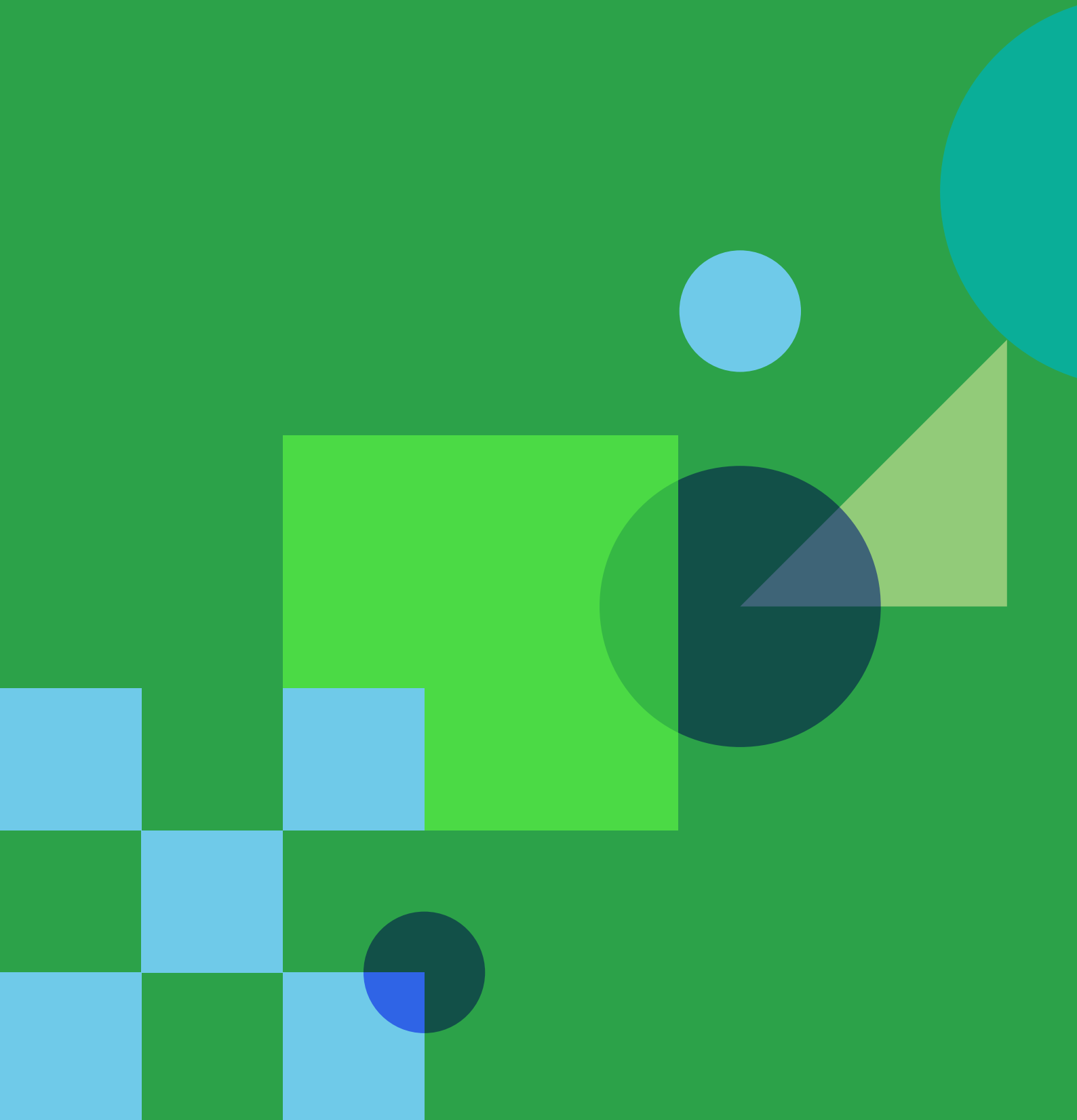
The increase in numbers seen in 2022 is likely to continue and it is expected that 2023 will be busier again. Providing a 24 hours per day, 365 days per year service with a forensic team including an assisting nurse has certainly been a challenge throughout the year, with the SATU team relying heavily on nursing and midwifery staff working within the Rotunda Hospital to provide assisting nurse cover. The SATU team is exceedingly grateful to all assisting nurses and forensic examiners who support the core staff covering many shifts throughout the year.

## PLANS FOR 2023

- Two of our CNS Forensic Nurse Examiners, Ms. Christine Pucillo and Ms. Naomi Finnegan, have enrolled in Nurse Prescribing courses and are hoping to complete this during 2023
- Continued collaboration with initiatives like 'Debunking the Myths' and outreach education pieces are planned for 2023
- It is hoped to make a business case to recruit a social worker specifically assigned to the SATU. This is a service which is strongly warranted to support all SATU patients but in particular people who disclose intimate and ex-intimate partner sexual violence. In addition, funding has been received to appoint an Advanced Nurse/Midwife Practitioner (ANP) to the SATU. This grade of staff was recommended by the Department of Health Policy Review of SATU in 2019. Many other SATUs have already appointed at least one ANP and the Rotunda hopes to follow suit in the near future to ensure that the service continues to respond to the clinical, educational and outreach needs of the people who attend SATU

# Neonatology

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# Department of Neonatology

## HEAD OF SERVICE

**Prof. Michael Boyle**, Consultant Neonatologist

## STAFF

**Dr. Maria Carmen Bravo Laguna**, Consultant Neonatologist

**Prof. David Corcoran**, Consultant Neonatologist

**Dr. Katie Cunningham**, Consultant Neonatologist

**Prof. Afif El Khuffash**, Consultant Neonatologist

**Prof. Adrienne Foran**, Consultant Neonatologist

**Dr. Breda Hayes**, Consultant Neonatologist

**Dr. Francisco Meze**, Consultant Neonatologist

**Dr. Margaret Moran**, Consultant Neonatologist

**Dr. Lyudmyla Zakharchenko**, Consultant Neonatologist

**Dr. Nurul Aminudin**, Consultant Neonatologist Transport

**Dr. Jan Franta**, Consultant Neonatologist Transport

**Dr. Hana Fucikova**, Consultant Neonatologist Transport

**Dr. Wendy Ferguson**, Clinical Specialist Paediatric Infectious Diseases

**Dr. Mahmoud Farhan**, Consultant Neurodevelopmental Paediatrics

**Dr. Fiona McElligott**, Consultant Paediatric Palliative Medicine

**Prof. 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

The Department of Neonatology provides the highest quality specialist care for all newborn infants delivered at the Rotunda Hospital. The Neonatal Intensive Care Unit (NICU) remained one of the busiest of the tertiary neonatal referral centres in Ireland throughout 2022. In addition to providing critical care across intensive, high dependency and special care designated units at both a local and national tertiary referral basis, the Department of Neonatology is also responsible for overseeing a number of neonatal screening programmes, delivering specialist neonatal outpatient clinics, and performing routine newborn examinations for thousands of infants per year. The Rotunda is one of four tertiary referral NICU's in the State providing care for extreme preterm infants and infants requiring therapeutic hypothermia, as well as those needing complex care such as sophisticated mechanical ventilation strategies and inhaled nitric oxide. The Rotunda is one of three units along with the Coombe Women and Infants' University Hospital and the National Maternity Hospital who provide staffing for the National Neonatal Transport Programme (NNTP) on a 24/7 basis, on rotation every third week, overseen by a Neonatal Transport Consultant.

As a consequence of the busy Fetal Medicine Service and the tertiary referral requirement for many antenatally diagnosed conditions, the neonatal team is also expert at providing detailed antenatal and postnatal counselling to parents facing this situation. The team works in partnership with quaternary specialists at Children's Health Ireland CHI-Temple Street and CHI-Crumlin, as well as with the RCSI Hospitals Group network hospitals of Our Lady of Lourdes Hospital, Drogheda, and Cavan General Hospital.

While the ongoing challenges of the COVID-19 pandemic remained an ongoing concern in 2022, life within the NICU began to return to normal with the stepwise reversal of visiting restrictions over the course of the year. These past few years have been incredibly challenging for parents and staff, and the dedication and understanding on both sides allowed the neonatal team to continue to deliver excellent care to babies, despite the unusual and challenging dynamic associated with the pandemic.

The Rotunda NICU has a total of 39 neonatal cots, and delivers care to infants requiring various levels of support across seven designated intensive care cots, 12 high dependency care cots, and 20 cots designated as special care. Over 1,100 infants were admitted to the NICU in the Rotunda in 2022 requiring either intensive, high dependency or special care, including more than 100 babies designated as very low birth weight (VLBW) infants. There was a moderate increase in intensive care bed days from the previous year to 2,004, while the high dependency bed day number increased for the fourth consecutive year to 4,261, a 5% increase compared to 2021. The special care bed day number of 6,384 was marginally lower than 2021, but remains significantly elevated compared with preceding years. Average daily bed occupancy rates remained high throughout the year.

An intensive care specialty such as neonatology requires extensive input from a range of other services and specialists, in addition to the expert medical and nursing neonatal care. The department benefits from the specialist expertise of colleagues in radiology, clinical nutrition and dietetics, clinical psychology, pharmacy, physiotherapy, medical social work, speech and language, clinical microbiology, lactation support, and chaplaincy. In 2022 funding was obtained to appoint a neonatal Occupational Therapist which will be an important addition to the department. The team is ably supported by a hardworking administrative team, healthcare assistants, porters and household staff to help maintain the ongoing exceptional running of the unit.

## CLINICAL ACTIVITY

The activity in the NICU remained high throughout 2022, although was more manageable than that experienced in 2021. The number of infants less than 1,500g cared for by the neonatal team in 2022 was 103, down 20 from the preceding year, but still significantly up on the two years prior to 2021.

The risk mitigation strategies adopted on foot of the multiple infectious outbreaks in previous years had obvious success in 2022, after a number of years where COVID-19 dominated the service. Despite these improvements, there were two infectious disease outbreaks in the NICU during 2022, a gentamicin-resistant *Escherichia coli* and a teicoplanin-resistant *Staphylococcus capitis*, with both outbreaks being successfully closed by end of the year.

## NEONATAL NURSING

The Rotunda NICU is fortunate to have a highly skilled and motivated neonatal nurse and midwife workforce, with a number of significant changes occurring over the course of 2022. Ms. Órla O Byrne retired as CNM3 after 18 years in the role and has been replaced by Ms. Siobhan Mulvaney as the new NICU CNM3. In addition, Ms. Christine McDermott retired in 2022, having been one of the first neonatal advanced nurse practitioners appointed in the State, and played a key role in advancing neonatal services locally and nationally. The challenges faced by the NICU nursing staff throughout 2022 in managing ever-changing COVID-19 visiting restrictions and coordinating visits on top of their busy clinical workload did not go unnoticed. The Rotunda's Executive Management Team is extremely grateful to them for maintaining an environment of continued safe delivery of care throughout this challenging time.

The unit continued to support ongoing nurse education programmes with two staff completing the RCSI Postgraduate Diploma in Neonatal Nursing. In conjunction with CHI-Temple Street, an additional candidate was seconded to the Rotunda NICU as part of preparations for opening of an additional NICU on the new national CHI-St James's site. The Rotunda plans to continue to support this model going forward. Despite the challenges experienced internationally in recruiting neonatal nursing staff, the Rotunda continued to make significant progress in recruitment towards an appropriate target whole time equivalent (WTE) number.

In recent years there have been a number of appointments to specialist neonatal nursing roles, such as a CNM in Neonatal Transport, Neonatal Resuscitation Officer and Neonatal Neurology Liaison Nurse. In 2022, funding was obtained for an additional Advanced Neonatal Nurse Practitioner post, with Ms. Paula Penrose being successfully appointed to this candidate post, while Ms. Elaine Butler was appointed

to the vacant ANP position bringing the unit total to four ANPs, alongside Ms. Edna Woolhead and Mr. Mark Hollywood. This exciting expansion in this important role will be of significant benefit to the unit on many levels.

## VERMONT OXFORD NETWORK (VON) OUTCOMES

The Rotunda NICU measures key performance indicators (KPIs) for very low birthweight (VLBW) infants (birth weight <1,500g) and submits anonymised data to the Vermont Oxford Network (VON) to benchmark outcomes against over 1,000 international centres of excellence, encompassing over 55,000 VLBW infants across the globe.

As seen in previous years, the Rotunda consistently performs very well against international standards for antenatal corticosteroid administration, antenatal magnesium sulphate administration, overall neonatal survival, retinopathy of prematurity, and various measures of infection. The previously identified higher than anticipated rate of necrotising enterocolitis (NEC) not only persists, but has increased compared with 2021. Mitigation initiatives have been in place, such as the establishment of a multidisciplinary taskforce, increased use of donor breastmilk for higher birthweight babies, and better lactation support, which will hopefully yield a positive impact on next analysis.

These VON results have prompted a rolling monthly review of all NEC cases at the Rotunda, to ensure cases are reviewed in a timely manner and correctly categorised in real time to be certain of data accuracy. However, the aggregate results over the past four years continues to improve and the findings remain within the VON observed/expected range. Late onset infection rates are noticeably better than VON averages and reflect a concerted effort to address this issue within the NICU. The incidence of chronic lung disease continues to exceed the VON average, but the difference is no longer significant and is an improvement on 2021 results. This may reflect the introduction of care bundles targeted at specific high risk groups. Maintaining a sustained reduction of chronic lung disease and NEC rates remain important key performance indicators for the NICU in 2023 and beyond.

## HYPOXIC ISCHAEMIC ENCEPHALOPATHY

In 2022, 14 babies were identified with HIE (10 inborn). Of these, 13 were treated with therapeutic hypothermia. This is a major reduction from the 23 cases of HIE managed in 2021 and reveals a return to the baseline level expected of a unit of this size. This likely reflects the impact of the Rotunda's HIE Reduction Taskforce that was set up as a quality improvement initiative in response to a perceived increase in HIE in 2020. The Taskforce findings were implemented in late 2021, with impact expected throughout 2022, and it is heartening to see such an obvious improvement in incidence.

Therapeutic hypothermia was discontinued early in one child due to refractory pulmonary hypertension. Unfortunately, three babies (two inborn) died in the early neonatal period following redirection of care in view of the severity of HIE with no expectation of recovery. All remaining babies with moderate encephalopathy have had a reassuring subsequent paediatric course, with appropriate developmental progress on later follow-up to date. Of these babies, six (three inborn) have normal neuroimaging. However, some radiologic evidence of brain abnormality was reported in the remaining five (all inborn) babies. Two babies had evidence of cerebellar haemorrhage, and in one this was associated with a small focus of ischaemia in the posterior frontal white matter. One baby had enlarged ventricular volumes with normal head growth and normal parenchyma. That MRI was performed late (day 15) given the baby's instability due to associated meconium aspiration syndrome. One baby had scattered foci of ischaemia seen in the bilateral white matter. The fifth baby had an extra-axial bleed and a small focus of ischaemia in the posterior frontal lobe. All children will continue to be followed in neonatal clinics for assessment of developmental progression until two years of age, at which time they will be invited back for formal assessment (Bayley-3) with the Rotunda's psychologist.

### PAEDIATRIC OUTPATIENTS DEPARTMENT (POPD)

The Rotunda Paediatric Outpatients Department is one of the busiest neonatal outpatient clinics in the country and in 2022 saw 9,121 attendances, with an overall did not attend (DNA) rate of 12%. This is a slight increase from 2021 and may still reflect an impact of the COVID-19 restrictions to only one adult per patient that was in place for most of 2022. As the neonatal service returned to normal with the relaxation of COVID-19 restrictions, telemedicine appointments were still offered, although these account for <2% of the overall outpatient activity in the Department.

The Neonatal Department is also the location for general neonatal clinics, infectious disease clinics, dietetic clinics, as well as frequent Speech and Language Therapy (SALT) and lactation support reviews. Despite the infrastructural challenges within the Rotunda outpatients building, the team continued to provide excellent care to a wide cohort of infants, and facilitated extra clinical sessions for infants of parents with active COVID-19 infection. The outpatient team is led by Ms. Mary Dwyer and Ms. Karen Finnegan as the CNM2 and Ms. Kathy Hayes as the lead of the busy administrative team. The exciting opportunity of moving to a new purpose built outpatient area in the Earl Building as part of the Clerys Quarter development, will allow for further expansion of the POPD in addition to improving the parent/patient experience.

### PAEDIATRIC INFECTIOUS DISEASE SERVICE (RAINBOW CLINIC)

Dr. Wendy Ferguson runs the Paediatric Infectious Disease Service (Rainbow Clinic) within the POPD building, whereby infants with antenatal, perinatal and some cases of postnatally acquired serious infectious diseases are managed and monitored. In addition to the outpatient workload, the neonatal team is fortunate to have inpatient support from Dr. Ferguson for a wide range of congenitally-acquired infections in terms of investigation and management. The service is closely aligned with the adult infectious disease service (DOVE Clinic) and to the Rainbow Clinic at CHI-Temple Street. There were 172 in-person attendances at the clinic in 2022, which is less than that seen in 2021, likely reflecting the fact that the peak of COVID-19 affected infants has now fortunately passed. In addition, the service has seen a more than doubling of the telemedicine appointments from 30 in 2021 to 72 in 2022.

### NEONATAL DEVELOPMENTAL SCREENING PROGRAMME

The Neonatal Developmental Screening Programme formally assess the development of VLBW babies (those with a birthweight <1,500g) as well as for infants who had a diagnosis of HIE requiring therapeutic hypothermia in the newborn period, which is consistent with the standards set out in the Irish National 2015 Model of Care for Neonatal Services. Assessment is via the Bayley Scales of Infant and Toddler Development (BSID-3), which is ideally completed at two years corrected gestational age for preterm infants, and two years chronological age for term infants.

The importance of maintaining a high standard of neurodevelopmental follow-up remains a priority for the Rotunda, with the service being provided by Dr. Liezl Wienand at the Summerhill Primary Care Centre, close to the Rotunda. The BSID-3 tool assesses the domains of gross motor, fine motor skills, expressive and receptive language skills and cognition. In addition, parental impressions regarding socio-emotional development and adaptive behavioural skills are reported. According to the BSID-3 scoring system, scaled scores  $\geq 8$  are considered to be within or above the typical/normal range. Scaled scores of 5-7 (composite score equivalent 78-85) are considered borderline, and scaled scores  $\leq 4$  (composite score equivalent 55-70) are suggestive of a significant abnormality.

During 2022, a total of 89 BSID-3 assessments were completed, with the majority (64) being of VLBW babies, while 16 were babies with HIE who had received therapeutic hypothermia, an additional six toddlers were referred with concerns regarding their behavioural presentation, including possible autism, while the remaining three cases were late prematurity consultant referrals. There were 21 DNA's recorded for the year.

In terms of outcomes, 46 out of 89 children (52%) were confirmed to be in the typical/normal range. In 29 out of 89 cases (33%), children had clinically significant signs of autism spectrum disorder, while a further nine children (10%) had delay in language development only. A total of five children (5%) had evidence of significant global developmental delay.

### NEURODEVELOPMENTAL CLINIC

The Neurodevelopmental Clinic has been running since 2019 and facilitates the onward referral of infants where concerns exist regarding potential neuro-disability or behavioural issues. The clinic is held in the Summerhill Primary Care Centre under the governance of the Rotunda Hospital. Over the course of the year, the clinic provided comprehensive neurodevelopmental assessments to 105 high-risk infants, 82 of which were follow-up assessments, while an additional eight telemedicine assessments were conducted. Drs. Mahmoud Farhan and Jennifer Finnegan provided this service in a locum capacity. This consultant post in Neurodevelopmental Paediatrics has been approved to be reconfigured to a substantive post with CHI developmental services and will be appointed in 2023.

### NEONATAL DIETETICS CLINIC

The Rotunda has a specialist neonatal dietetics clinic run by Ms. Anna-Claire Glynn and Ms. Naomi Hastings, who provide significant inpatient supports to the NICU. In 2022, this service was expanded to include inpatient review for all infants born before 34 weeks and all babies with birthweight less than 1.8kg, where previously it had been <32 weeks and <1.5kg. In the outpatient setting, patients with complex nutritional needs, faltering growth and suspected food intolerances are managed in conjunction with the neonatal clinics and the SALT support. Over 200 in-person attendances took place in 2022, with an additional 65 telemedicine assessments representing a significant increase in activity from 2021.

### SPECIALIST CARDIOLOGY SERVICES

During 2022, a formalised Rotunda Echocardiography Service was commenced, under the direction of Prof. Afif El Khuffash. This provides dedicated echocardiography sessions for the NICU, which are ring-fenced for functional echocardiography assessment to help guide management in cases where there may be functional cardiac concerns and critical pulmonary hypertension. The NICU also has a close working relationship with the cardiology service at CHI-Crumlin, through the leadership of Prof. Orla Franklin whose expertise benefits the management of preterm and term infants with cardiac concerns. Further development of the neonatologist-performed echocardiography (NPE) service is a key priority for the Department.

### NATIONAL NEONATAL TRANSPORT PROGRAMME (NNTP)

The Rotunda, along with its sister tertiary NICUs at the National Maternity Hospital and the Coombe Women and Infants' University Hospital, rotate responsibility for the National Neonatal Transport Programme (NNTP). This national service provides emergency and planned transfers of infants between all maternity and paediatric centres on a 24-hour basis throughout the year. The Rotunda acts as the NNTP paymaster and has taken the lead in initiating service expansion for this programme. The Rotunda provided the first NNTP Transport Fellow, which was vital in progressing the programme. This subsequently led to a designated transport fellow being appointed in each Dublin maternity hospital in 2022. The NNTP team comprises highly trained NICU staff (nurses and doctors), ground ambulance technicians (drivers) and Irish Air Corps (for neonatal air transfers).

The HSE approved the appointment of three full time Clinical Nurse Specialists (CNS) in neonatal transport for the Dublin maternity hospitals. Ms. Tara Moore CNS for the Rotunda continues to provide support in both the NICU and NNTP. The neonatal team is grateful to NNTP consultants Dr. Jan Franta and Dr. Hana Fucikova who continue their service with the Rotunda Hospital. They are now joined by Dr. Nurul Aminudin, recently appointed as the neonatal transport consultant linked specifically to the Rotunda Hospital NICU and will further support our team's national role in this regard.

During 2022, the overall service transported 577 infants on a national basis, with 36% (209) being transported by the Rotunda NNTP Team. The Rotunda NICU accepted 45 out-born postnatal transfers (8% of all NNTP transports, and 21% of all tertiary maternity hospital referrals). A further 77 infants were transferred from the Rotunda to other centres (81% were to Dublin paediatric hospitals).

### ROTUNDA FOUNDATION SUPPORT

The Rotunda Foundation has been a stalwart supporter of the NICU for many years in terms of funding for discretionary equipment and services, with 2022 being no exception. The neonatal team is eternally grateful to the Foundation for their ongoing support for the purchase of various pieces of equipment and supporting research within the unit. The Angel-Eye video system was purchased through funds from the Foundation which provides video footage of infants in real time for parents who cannot be with their babies in the NICU. The existing vCreate programme, also funded from the Foundation, will be used in more of a neurodevelopmental assessment capacity going forward. The RetCam camera arrived after successful fundraising in 2021, with the Rotunda Foundation also providing funding for training of two staff members which is expected to be completed in 2023. The highly successful 'Beads of Courage' and 'Tentacles for Tinies'

programmes continue to be supported from the Foundation, including the graduation packs that are sent to the graduates of the neonatal follow-up programme each year. It is hoped to be able to return to in-person celebrations in 2023 for graduates of the Rotunda neonatal programme.

## RESEARCH

The Rotunda has a longstanding reputation of supporting and fostering good quality research, with 2022 being no different seeing the awarding of four PhDs – Dr. Aisling Smith, Dr. Claire McCarthy, Dr. Kamelia Krysiak and Dr. Adam Reynolds. There are four MD candidates currently in programme – Dr. Sean Armstrong, Dr. Mahmoud Farhan, Dr. Rachel Mullaly and Dr. Áine Fox. In addition, Dr. Daniel O'Reilly, the first Irish Clinical Academic Training (ICAT) fellow in the Department, is enrolled as a PhD candidate. There are many other research and audit projects being conducted by clinical NCHDs of all grades leading to several peer-reviewed publications in 2022.

## CHALLENGES 2022

The challenges of delivering high quality tertiary level neonatal intensive care within the current Rotunda infrastructural limitations remain. The requirements for isolation of patients secondary to COVID-19 infection or other infections placed an additional burden on an already tested unit and continued to demonstrate the need for construction of a new neonatal intensive care unit.

Provision of Speech and Language Therapy (SALT) and Occupational Therapy services at the Rotunda has been quite limited given the absence of specialist appointees in this regard. However, the first Speech and Language therapist was finally appointed to the unit, with Ms. Amanda Scott commencing later in 2022. In addition, funding was received for an Occupational Therapist which is in the process of being appointed in 2023. In addition, the SHO number increased to 11 to facilitate in lieu days to improve the working arrangements and reduce the number of consecutive days being worked by SHOs. Additional funding from the National Doctors in Training Programme (NDTP) for a further specialist registrar post was confirmed to come into effect in July 2023.

## PLANS FOR 2023

It is hoped that during 2023 the final restrictions associated with the COVID-19 pandemic will be ended, allowing for a return to normal interactions with parents and colleagues.

Further progress in the development of the Critical Care Wing on the Parnell Square site to radically improve the NICU infrastructure is most welcome and is needed to ensure safe and excellent delivery of care to

babies. To ensure that this new NICU is a state-of-the-art facility where high-quality tertiary neonatal care is delivered, will require significant investment of time and funding to achieve. An interim step towards this goal includes relocation of Paediatric Outpatient Department (POPD) to the new Earl Building as part of the Clerys Quarter development on O'Connell Street, which has recently been purchased by the HSE for the Rotunda. In 2023, it is hoped that the neonatal team will have input in the design of these developments, and to establish a POPD that is fit-for-purpose for both families and staff alike.

More immediately in 2023, it is hoped to further develop the paediatric cardiology services here with CHI-Crumlin towards the aim of on-site patent ductus arteriosus (PDA) device closure in appropriate infants, minimising patient transfers and maximising care.

It is also hoped to continue to restructure consultant neonatologist working arrangements with the CHI Neonatology Department to the benefit of patients and staff on both sites.

The Angel Eye system will become operational in 2023 and the RetCam system will start on the return of consultant paediatric ophthalmologist Dr. Sarah Chamney.

In an effort to improve outcomes for the infants at the extremes of viability the Department of Neonatology will be initiating the EPIC (Early Preterm Intensive Care) project in 2023 with a focus on the first week of life of infants born at 23-25 weeks' gestation. This programme will optimise metabolic management, haemodynamic transitioning, initial ventilation strategies and early nutritional support, with appropriate neonatal nursing and medical attendance.

**TABLE 1.1: ADMISSIONS AND DISCHARGES TO THE NEONATAL UNIT**

	2018	2019	2020	2021	2022
Admissions *	1,116	1,300	1,181	1,255	1,169
Discharged alive	1,114	1,265	1,199	1,253	1,203
Infants > 1,500grams	1,097	1,176	1,103	1,130	1,100
Infants treated on the ward	967	875	442	483	471

\* Infants are not always admitted and discharged within the same clinical year

TABLE 1.2: CATEGORIES OF NEONATAL CARE\*

	2018	2019	2020	2021	2022
Total number of intensive care days	1,568	1,838	2,039	1,993	2,004
Total number of high dependency days	3,403	3,281	3,528	4,050	4,261
Total number of special care days	5,081	4,278	5,398	6,453	6,384

\* British Association of Perinatal Medicine – Categories of Care 2011

TABLE 1.3: ADMISSIONS TO THE NEONATAL UNIT BY BIRTH WEIGHT

	2018	2019	2020	2021	2022
<500g	2	3	1	0	2
501 – 1,000g	44	30	36	47	43
1,001 – 1,500g	63	55	59	76	58
1,501 – 2,000g	126	114	117	109	140
2,001 – 2,500g	160	158	200	161	189
Over 2,500g	719	905	786	860	771
<b>Total Discharged</b>	<b>1,114</b>	<b>1,265</b>	<b>1,199</b>	<b>1,253</b>	<b>1,203</b>

TABLE 1.4: ADMISSIONS TO THE NEONATAL UNIT BY INDICATION\*

	2018	2019	2020	2021	2022
Jaundice	328	365	546	540	575
Prematurity < 37 weeks	401	428	471	420	523
Respiratory symptoms	464	447	453	497	510
Low birth weight < 2,500g	397	360	230	240	281
Congenital abnormalities	184	205	208	239	238
Hypoglycaemia	184	167	227	248	220
Neonatal abstinence syndrome (NAS)	21	15	24	26	18
Suspected sepsis	36	30	23	11	17
Hypoxic ischaemic encephalopathy (HIE)	12	18	27	23	16
Social reasons	4	8	12	13	14
Dehydration	11	9	8	14	6
Seizures	9	10	15	12	4
Gastro-intestinal symptoms	3	1	2	0	0

\* Some Infants are assigned more than one reason for admission

TABLE 1.5: RESPIRATORY MORBIDITY IN TERM INFANTS &gt; 37 WEEKS ADMITTED TO THE NEONATAL UNIT

	2018	2019	2020	2021	2022
Transient tachypnoea of the newborn (TTN)	156	211	176	191	149
Respiratory distress syndrome (RDS)	35	40	50	51	58
Stridor	1	9	14	14	17
Congenital pneumonia	12	7	4	13	8
Meconium aspiration syndrome (MAS)	9	3	9	7	7
Congenital diaphragmatic hernia (CDH)	1	3	3	3	5
Congenital cystic adenomatoid malformation (CCAM)	2	0	0	0	0
Laryngomalacia	1	2	3	6	0
Trachea-oesophageal fistula	2	0	0	0	0
Pulmonary hypoplasia	0	0	1	0	0

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

	2018	2019	2020	2021	2022
Patent ductus arteriosus (PDA)	62	53	52	74	69
Dysrhythmia	55	65	60	51	63
Persistent pulmonary hypertension of the newborn (PPHN)	27	25	30	24	31
Ventricular septal defect (VSD)	30	21	30	23	20
Atrial septal defect (ASD)	13	9	11	9	10
Atrioventricular septal defect (AVSD)	2	6	5	6	4
Transposition of the great arteries (TGA)	6	7	5	4	1
Tetralogy of Fallot	1	8	3	2	5
Hypoplastic left heart syndrome (HLHS)	1	1	1	3	4







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

	2018	2019	2020	2021	2022
Inguinal hernia	4	6	8	5	6
Bowel atresia	1	0	5	5	4
Cleft lip	2	6	3	2	4
Spontaneous perforation	1	1	4	3	3
Imperforate anus	2	2	3	2	2
Isolated cleft palate	1	6	3	4	1
Omphalocele	5	4	2	5	1
Pyloric stenosis	1	1	0	0	1
Gastrochisis	0	1	3	3	0
Tracheo-oesophageal fistula	3	0	1	0	0

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

	2018	2019	2020	2021	2022
Neonatal abstinence system (NAS)	21	15	24	26	18
Meningitis	8	10	5	6	10
Seizures not associated with HIE	9	10	15	12	4
Erb's palsy	2	1	5	3	3
Hydrocephalus	4	1	1	0	1
Microcephaly	4	1	6	2	0
Schizencephaly	2	0	2	2	0

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

	2018	2019	2020	2021	2022
Hypoglycaemia	184	167	194	209	220
Anaemia of prematurity	68	63	63	64	54
Thrombocytopenia	32	34	36	43	32
Syndrome of inappropriate antidiuretic hormone secretion (SIADH)	17	3	15	12	21
Polycythaemia	44	29	44	20	18
Hyperglycaemia	29	24	32	22	14
Haemolytic disease of the newborn	17	27	34	30	14
Anaemia (not associated with prematurity)	10	8	6	10	12
Disseminated intravascular coagulopathy	0	6	4	13	3
Hypothyroidism	4	3	5	0	0
Galactosaemia	2	2	2	1	0

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

	2018	2019	2020	2021	2022
Trisomy 21 (Down syndrome)	23	15	14	14	21
Trisomy 18 (Edwards' syndrome)	1	2	0	0	0
Trisomy 13 (Patau syndrome)	1	0	0	0	0

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

	2018	2019	2020	2021	2022
Non-haemolytic jaundice	178	180	271	243	231
Haemolytic jaundice					
– ABO incompatibility	14	23	31	18	8
– Rhesus incompatibility	4	5	1	4	2

TABLE 2.1: BABIES ADMITTED TO NICU WITH BIRTH WEIGHT  $\leq 1,500\text{G}$  AND/OR  $< 29 + 6$  WEEKS' GESTATION

	2018		2019		2020		2021		2022	
	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 $< 401\text{g}$ but $\geq 22+0$ weeks gestation	2	2	0	0	0	0	0	0	0	0
Infants 401-500g	2	2	4	3	1	1	2	2	3	2
Infants 501-1,500g	104	94	90	85	93	88	114	106	94	90
Infants $> 1,500\text{g}$ but $\leq 29+6$ weeks gestation	1	1	2	2	2	2	0	0	0	0
<b>Total</b>	<b>109</b>	<b>99</b>	<b>96</b>	<b>90</b>	<b>96</b>	<b>91</b>	<b>116</b>	<b>108</b>	<b>97</b>	<b>92</b>

TABLE 2.2.1: SURVIVAL TO DISCHARGE OF INFANTS  $< 1,500\text{G}$  AND/OR  $< 29 + 6$  WEEKS' GESTATION BASED ON GESTATIONAL AGE (ALL INFANTS, INCLUDING THOSE WITH MAJOR CONGENITAL ANOMALIES)

Gestational Age at birth	2022 Inborn			2022 Outborn			2022 Total (Inborn & Outborn)			2017-2021 (Aggregate Inborn & Outborn)		
	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	0	0	0
22+0-22+6	1	0	0	0	0	0	1	0	0	13	0	0
23+0-23+6	4	2	50	2	0	0	4	2	50	28	4	14
24+0-24+6	6	1	16	5	0	0	6	1	17	46	29	63
25+0-25+6	8	6	75	3	2	67	11	8	73	47	34	72
26+0-26+6	12	8	67	4	0	0	12	8	67	45	35	78
27+0-27+6	7	7	100	1	0	0	8	7	88	58	47	81
28+0-28+6	10	10	100	1	1	100	11	11	100	55	52	95
29+0-29+6	11	10	91	1	1	100	12	11	92	74	69	93
30+0-30+6	7	7	100	1	1	100	8	8	100	61	60	98
31+0-31+6	8	8	100	0	0	0	8	8	100	36	31	86
32+0-32+6	7	6	86	1	0	0	7	6	86	33	31	94
$> 33+0$ weeks	8	8	100	0	0	0	8	8	100	31	28	90
<b>Total</b>	<b>89</b>	<b>73</b>	<b>81</b>	<b>19</b>	<b>5</b>	<b>71</b>	<b>96</b>	<b>78</b>	<b>81</b>	<b>530</b>	<b>420</b>	<b>79</b>

**TABLE 2.2.2: SURVIVAL TO DISCHARGE OF INFANTS <1,500G AND /OR <29+6 WEEKS' GESTATION BASED ON GESTATIONAL AGE (EXCLUDING THOSE WITH MAJOR CONGENITAL ANOMALIES)**

Gestational Age at birth	2022 Inborn			2022 Outborn			2022 Total (Inborn & Outborn)			2017-2021 (Aggregate Inborn & Outborn)		
	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	0	0	0
22+0-22+6	1	0	0	0	0	0	1	0	0	13	0	0
23+0-23+6	3	1	33	0	0	0	3	1	33	28	4	14
24+0-24+6	6	1	16	0	0	0	6	1	17	46	29	63
25+0-25+6	8	6	75	3	2	67	11	8	73	47	34	72
26+0-26+6	11	7	64	0	0	0	11	7	64	45	35	78
27+0-27+6	7	7	100	0	0	0	8	7	88	58	47	81
28+0-28+6	10	10	100	1	1	100	11	11	100	55	52	95
29+0-29+6	9	8	89	1	1	100	10	9	90	74	69	93
30+0-30+6	7	7	100	1	1	100	8	8	100	61	60	98
31+0-31+6	7	7	100	0	0	0	7	7	100	36	31	86
32+0-32+6	7	6	86	0	0	0	7	6	86	33	31	94
>33+0 weeks	8	8	100	0	0	0	8	8	100	31	28	90
<b>Total</b>	<b>84</b>	<b>68</b>	<b>81</b>	<b>7</b>	<b>5</b>	<b>71</b>	<b>91</b>	<b>73</b>	<b>80</b>	<b>530</b>	<b>420</b>	<b>79</b>

**TABLE 2.3.1: SURVIVAL TO DISCHARGE OF INFANTS <1,500G AND /OR <29+6 WEEKS' GESTATION BASED ON BIRTH WEIGHT (ALL INFANTS, INCLUDING THOSE WITH MAJOR CONGENITAL ANOMALIES)**

Birth Weight	2022 Inborn			2022 Outborn			2022 Total (Inborn & Outborn)			2017-2021 (Aggregate Inborn & Outborn)		
	N	Survival to discharge	%	N	Survival to discharge	%	N	Survival to discharge	%	N	Survival to discharge	%
<501g	3	0	0	0	0	0	3	0	0	19	2	11
501-600g	7	3	43	0	0	0	7	3	43	30	10	33
601-700g	10	6	60	0	0	0	10	6	60	52	27	52
701-800g	10	7	70	1	1	100	11	8	73	48	36	75
801-900g	3	2	67	1	1	100	4	3	75	44	31	71
901-1,000g	9	8	89	1	0	0	10	8	80	38	33	87
1,001-1,100g	3	3	100	0	0	0	3	3	100	47	43	92
1,101-1,200g	13	13	100	2	2	100	15	15	100	58	53	91
1,201-1,300g	5	5	100	0	0	0	5	5	100	46	43	94
1,301-1,400g	13	13	100	0	0	0	13	13	100	52	50	96
>1,400g	14	13	93	1	1	100	15	14	93	96	92	96
<b>Total</b>	<b>90</b>	<b>73</b>	<b>81</b>	<b>6</b>	<b>5</b>	<b>83</b>	<b>96</b>	<b>78</b>	<b>81</b>	<b>530</b>	<b>420</b>	<b>79</b>

**TABLE 2.3.2: SURVIVAL TO DISCHARGE OF INFANTS <1,500G AND /OR <29+6 WEEKS' GESTATION BASED ON BIRTH WEIGHT (EXCLUDING THOSE WITH MAJOR CONGENITAL ANOMALIES)**

Birth Weight	2022 Inborn			2022 Outborn			2022 Total (Inborn & Outborn)			2017-2021 (Aggregate* Inborn & Outborn)		
	N	Survival to discharge	%	N	Survival to discharge	%	N	Survival to discharge	%	N	Survival to discharge	%
<501g	3	0	0	0	0	0	3	0	0	19	2	11
501-600g	7	3	43	0	0	0	7	3	43	30	10	33
601-700g	8	4	50	0	0	0	8	4	50	52	27	52
701-800g	10	7	88	1	1	100	11	8	73	48	36	75
801-900g	3	2	67	1	1	100	4	3	75	44	31	71
901-1,000g	9	8	89	1	0	0	10	8	80	38	33	87
1,001-1,100g	3	3	100	0	0	0	3	3	100	47	43	92
1,101-1,200g	12	12	100	1	1	100	13	13	100	58	53	91
1,201-1,300g	5	5	100	0	0	0	5	5	100	46	43	94
1,301-1,400g	12	12	100	0	0	0	12	12	100	52	50	96
>1,400g	14	13	93	1	1	100	15	14	93	96	92	96
<b>Total</b>	<b>86</b>	<b>69</b>	<b>80</b>	<b>5</b>	<b>4</b>	<b>80</b>	<b>91</b>	<b>73</b>	<b>80</b>	<b>530</b>	<b>420</b>	<b>79</b>

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

	Rotunda 2022			VON Network 2022		Rotunda 2017-2021 Aggregate		
	No. Cases	No. Infants	%	No. Infants	%	No. Cases	No. Infants	%
Inborn	90	97	93	61,077	87	492	543	91
Male	54	97	56	61,023	51	279	543	51
Antenatal steroids – all infants	81	97	84	60,708	83	452	523	86
Multiple gestation	23	97	24	61,068	24	160	542	30
Antenatal magnesium sulphate	65	97	67	60,401	64	368	511	72
Caesarean delivery	70	97	72	61,046	74	390	543	72
Any major birth defect	5	97	5	61,044	7	55	540	10
Small for gestational age	20	97	21	59,439	22	90	532	17
Surfactant – administered in delivery room	32	97	33	60,961	18	226	540	42
Surfactant – any time	59	97	61	60,995	56	351	539	65
Any ventilation	56	93	60	58,698	55	296	508	58
Conventional ventilation	56	93	60	58,697	51	292	508	58
High frequency ventilation	17	93	18	58,665	23	70	506	14
Nasal CPAP	75	93	81	58,659	78	426	508	84
Inhaled nitric oxide	18	93	19	58,617	7	67	509	13
Respiratory distress syndrome	85	93	91	58,619	75	460	504	91
Pneumothorax	9	93	10	58,670	4	44	509	9
Chronic lung disease	24	70	34	50,245	27	114	380	30
Chronic lung disease in infants < 33 weeks	23	62	37	45,517	29	111	351	32
Corticosteroids for chronic lung disease	17	92	19	58,563	13	64	502	13
Late bacterial infection	13	87	15	56,067	8	49	485	10
Coagulase negative Staphylococcus infection	3	87	3	56,058	5	19	485	4
Fungal infection	1	87	1	56,061	1	1	486	0.2
Any late infection	15	87	17	56,060	12	57	485	12
Necrotising enterocolitis	8	93	9	58,645	5	45	508	9
Ibuprofen for PDA	17	92	19	58,502	6	44	506	9
Retinopathy of prematurity (ROP)	18	69	26	42,707	31	93	358	26
Severe ROP	2	69	3	42,707	6	10	358	3
Anti-VEGF treatment for ROP	7	92	8	58,380	3	11	508	2
Severe intraventricular haemorrhage	7	85	8	52,381	8	50	479	10
Cystic periventricular leucomalacia	5	87	6	54,095	3	9	478	2
Mortality	18	96	19	59,924	16	110	530	21
Mortality excluding early deaths	11	89	12	56,833	11	76	496	15.3
Survival	78	96	81	59,924	84	420	530	79.2
Survival without specified morbidities	45	96	47	59,644	55	260	530	49.1

\*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 501-1500g and it includes infants with major congenital anomalies. Survival: indicates whether the infant survived to discharge home of 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 leukomalacia.

TABLE 2.5: SHRUNKEN STANDARDISED MORTALITY RATIOS &amp; MORBIDITY RATES

Measure	Rotunda 2022				Rotunda 2019-2021			
	n	SMR*	Lower 95%	Upper 95%	n	SMR	Lower 95%	Upper 95%
Mortality	92	1.3	0.8	1.9	298	1.2	0.9	1.6
Mortality excluding early deaths	86	1.1	0.6	1.8	285	1.3	0.9	1.7
Death or morbidity	92	1.1	0.9	1.4	298	1.1	1.0	1.3
Chronic lung disease	69	1.3	0.9	1.8	217	1.5	1.2	1.8
Chronic lung disease <33 weeks	61	1.3	0.9	1.8	198	1.5	1.2	1.9
Necrotising enterocolitis	90	1.3	0.6	2.3	286	1.5	1.0	2.2
Any late infection	84	1.3	0.7	2.0	276	0.9	0.6	1.2
Late bacterial infection	84	1.7	1.0	2.6	276	1.2	0.8	1.7
Coagulase negative Staphylococcus infection	84	0.6	0.1	1.4	276	1.4	0.1	0.8
Fungal infection	84	1.2	0.1	3.9	276	0.5	0.0	1.4
Pneumothorax	90	1.4	0.8	2.3	286	1.8	1.2	2.5
Severe intraventricular haemorrhage	82	1.1	0.7	1.5	273	1.2	0.9	1.6
Cystic periventricular leucomalacia	84	1.8	0.7	3.4	275	0.5	0.2	1.1
Any retinopathy of prematurity (ROP)	68	0.9	0.6	1.3	227	0.9	0.7	1.1
Severe ROP	68	0.8	0.3	1.5	227	0.5	0.2	0.9

\*Shrunken standardised morbidity/mortality ratio (SMR) and its 95% confidence intervals indicate whether the centre has more or fewer infants with the outcome than expected given the characteristic of the infants being treated. If the upper 95% confidence interval is <1, the centre has fewer infants with the outcome than expected. 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.

TABLE 3.1: MORTALITY AMONGST INFANTS DELIVERED IN 2022 - EXCLUDING INFANTS WITH MAJOR CONGENITAL MALFORMATIONS

Birth Weight (g)	Gestation (wks)	Delivery	Apgar scores (1, 5, 10 minutes)	Age at Death	Principal Cause of Death
500	22+4	SVD	5,1	7 minutes	Extreme prematurity (previable)
560	24+0	SVD	1,1,1	6 hours	Extreme prematurity, anhydramnios following PPROM at 16 weeks
580	23+1	CD	Not recorded	13 days	Extreme prematurity, Candida sepsis
620	24+2	CD	5,8	3 days	IVH with associated intraparenchymal component, severe RDS, pneumothoraces
650	24+6	SVD	0,0,4	11 hours	Severe pulmonary hypertension secondary to pulmonary hypoplasia following PPROM at 18 weeks
655	24+2	CD	0,2,6	14 hours	IVH with associated intraparenchymal component, refractory hypotension
675	25+1	CD	1,1	19 mins	Extreme prematurity, PPROM, chorioamnionitis
710	26+1	CD	5,7	6 hours	Stage 3 TTTS
750	24+5	SVD	1,2,3	9 hours	Pulmonary hypoplasia and persistent fetal circulation
760	26+3	CD	8,9	12 days	Severe NEC
850	23+2	SVD	2,6	22 hours	Extreme prematurity, tension pneumothorax
960	26+1	CD	5,8	5 days	IVH with extensive intraparenchymal component, respiratory failure
1,465	32+4	CD	8,9	15 days	NEC, IUGR
3,000	40+6	CD	0,0,0	13 days	Severe neonatal encephalopathy, status epilepticus
3,140	39+0	CD	9,10	19 days	SIDS
3,510	40+3	SVD	9,10	21 hours	Postnatal asphyxia/collapse
3,620	37+6	CD	4,7	9 days	Severe HIE

SVD: spontaneous vaginal delivery; CD: caesarean delivery; PPROM: preterm premature rupture of membranes; IVH: intraventricular haemorrhage; RDS: respiratory distress syndrome; TTTS: twin to twin transfusion syndrome; NEC: necrotising enterocolitis; IUGR: intrauterine growth restriction; SIDS: sudden infant death syndrome; HIE: hypoxic ischaemic encephalopathy

TABLE 3.2: MORTALITY AMONGST INFANTS DELIVERED IN 2022 - INFANTS WITH MAJOR CONGENITAL MALFORMATIONS

Birth Weight (g)	Gestation (wks)	Delivery	Apgar scores (1, 5, 10 minutes)	Age at Death	Principal Cause of Death
520	29+1	SVD	not recorded	15 minutes	Cloacal anomaly, IUGR, oligohydramnios, VSD
1,160	31+4	SVD	2,1,1	28 minutes	Chromosome 4 abnormality, IUGR, oligohydramnios, VSD, absent kidney
1,730	28+2	SVD	not recorded	42 minutes	Fetal hydrops, Haemoglobin Barts
2,190	40+5	SVD	4,6	9 hours	Anencephaly
2,210	31+0	SVD	2,0	1 hour	Bilateral CDH
2,230	35+1	CD	6,7	6 days	Giant omphalocele, severe kyphoscoliosis
2,600	37+3	CD	6,2	75 minutes	Tetralogy of Fallot, dysplastic right kidney, posterior urethral valves, pulmonary hypoplasia
2,610	38+0	SVD	2,1	1 hour	Skeletal dysplasia
2,730	33+2	SVD	7,5	40 minutes	Bilateral multicystic dysplastic kidneys, anhydramnios
3,000	37+0	CD	3,5	21 hours	CDH, hypoplastic aortic arch
3,040	34+5	CD	4,5,8	3 days	Cystic fibrosis, antenatal perforation of meconium pseudocyst
3,240	39+1	SVD	3,7	11 days	Tetralogy of Fallot, absent pulmonary arteries, multiple MAPCAs, right-sided aortic arch
3,470	39+3	SVD	not recorded	1 hour	Pulmonary atresia, abnormal aorta, PFO closed in utero

SVD: spontaneous vaginal delivery; CD: caesarean delivery; IUGR: intrauterine growth restriction; VSD: ventricular septal defect; CDH: congenital diaphragmatic hernia; MAPCAs: major aorto-pulmonary collateral arteries



TABLE 4.1: HYPOXIC-ISCHAEMIC ENCEPHALOPATHY (HIE) SUMMARY 2018 – 2022

	2018		2019		2020		2021		2022	
	Inborn	Outborn	Inborn	Outborn	Inborn	Outborn	Inborn	Outborn	Inborn	Outborn
Total	13	1	10*	7	18*	5	19*	3	10*	4
Mild (Grade 1)	5	-	Not Reported Given Inaccuracy with Case Ascertainment		Not Reported Given Inaccuracy with Case Ascertainment		Not Reported Given Inaccuracy with Case Ascertainment		Not Reported Given Inaccuracy with Case Ascertainment	
Moderate (Grade 2)	5	1	4	3	14	4	17	3	8	3
Severe (Grade 3)	3	-	6	4**	4	1	2	0	2**	1
Therapeutic Hypothermia	8	1	9***	6	16**§	5	**18	3	9	4

\*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 in keeping with mild encephalopathy but who progressed with onset of seizures at 20 hours following birth

\*Grade 1 Encephalopathy not included

\*\*Therapeutic Hypothermia not commenced in one case as baby did not meet cooling criteria on initial review

\*Grade 1 Encephalopathy not included

\*\*Therapeutic Hypothermia not commenced in one case as baby did not meet cooling criteria on initial review



TABLE 4.2: CLINICAL DETAILS OF NEWBORN INFANTS WITH SIGNS OF MODERATE TO SEVERE HIE 2022

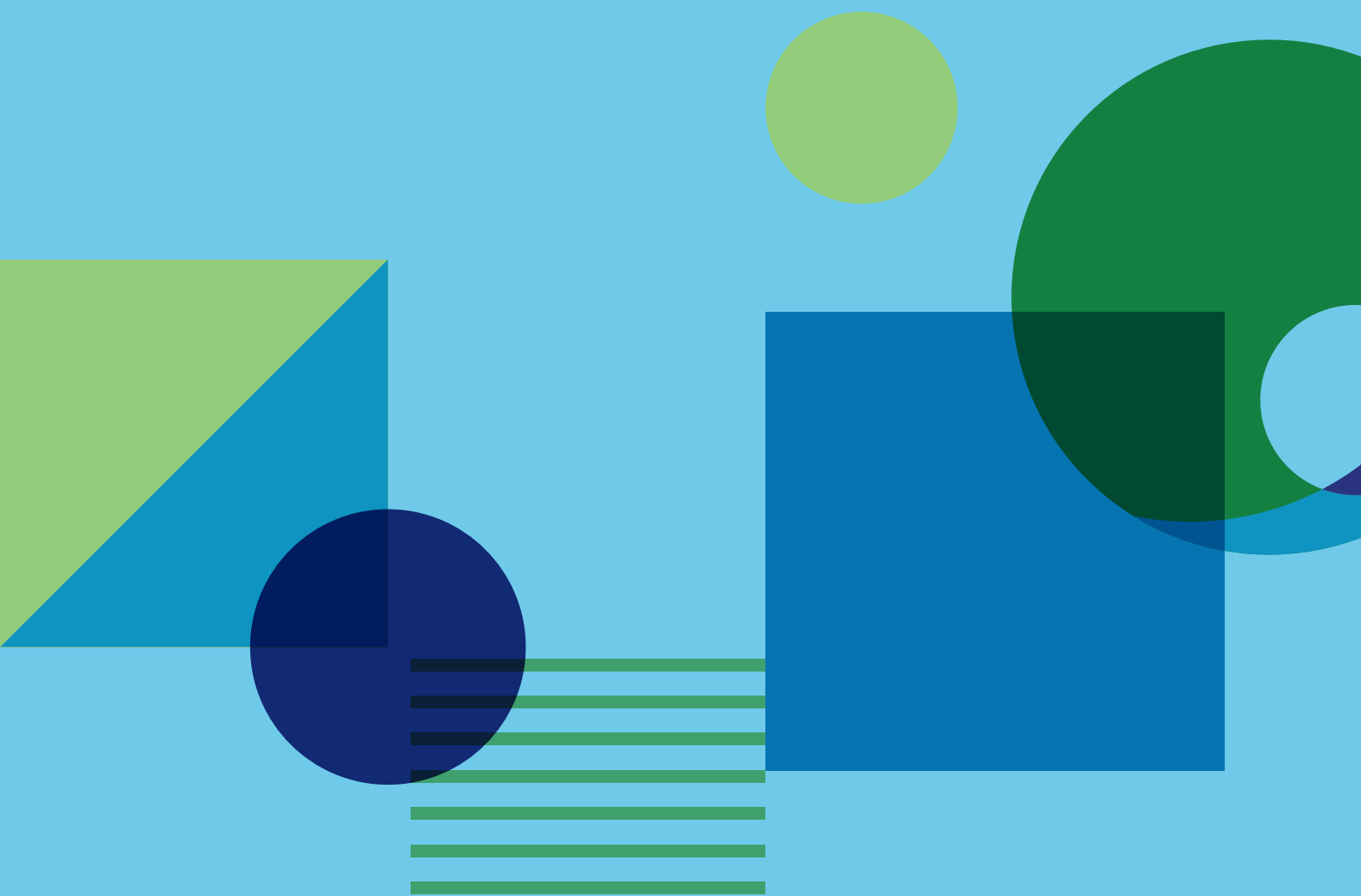
Grade HIE	Inborn/Outborn	Gestation	Mode of delivery	Arterial Cord Gas		Venous Cord Gas		1 Minute Apgar	5 Minute Apgar	
				pH	Base Excess	pH	Base Excess			
2	Inborn	39+4	CD	7.2	-2.0	7.34	-0.3	3	6	
2	Inborn	38+4	CD	6.9	-12.6	7.13	ND	3	7	
2	Inborn	39+3	OVD	7.2	-4.0	7.3	-5.0	1	1	
2	Inborn	39+5	OVD	7.2	-7.2	7.3	-7.3	4	6	
2	Inborn	41+2	OVD	7.0	-13.2	7.13	-12.7	1	3	
2	Inborn	40+4	CD	6.9	-14	7.05	-14.1	4	7	
2	Inborn	39+1	CD	ND	ND	ND	ND	2	2	
2	Inborn	39+1	OVD	ND	ND	7.3	-6.8	0	0	
3	Inborn	37+6	CD	7.15	-5.2	7.27	-3.9	4	7	
3	Inborn	40+6	CD	ND	ND	6.8	ND	0	0	
2	Outborn	41+2	OVD	6.9	-13.9	7.2	-7.8	2	4	
2	Outborn	38+0	OVD	ND	ND	6.8	ND	3	7	
2	Outborn	39+3	OVD	7.3	-5.1	7.3	-5.2	2	8	
3	Outborn	36+0	CD	ND	ND	7.0	-12.2	2	6	

CD = caesarean delivery; OVD = operative vaginal delivery; ND= Not documented

	10 Minute Apgar	Therapeutic Hypothermia	Seizures	Brain MRI	Neurodevelopmental Progress at Last Review	
					Outcome	Age
	7	Yes	No	Normal day 5	Typical development	5 weeks
		Yes	No	Day 6: scattered foci of restricted diffusion white matter bilaterally	Typical development	6 weeks
	7	Yes	No	Normal Day 4	Typical development	4 months
	7	Yes	No	Normal Day 7	Typical development	4 months
	5	Yes	Yes	Extra axial haemorrhage; single tubular focus right periventricular area of posterior frontal lobe	Typical development	4 months
	8	Yes	Yes	Day 15: generous ventricular size; normal parenchyma	Typical development	7 months
	2	Yes	No	Day 4: left cerebellar haemorrhage	Typical development	9 months
	7	Yes	No	Day 4: right cerebellar haemorrhage; punctate focus of ischemia right caudate nucleus	Typical development	10 months
		No	Yes	Diffuse diffusion restriction with loss of grey and white matter differentiation in cerebral hemispheres, corpus callosum, basal ganglia, thalami and corticospinal tracts	Died Day 9	
	0	Yes	Yes	Diffuse bilateral sagittal abnormality with reduced diffusivity in a predominantly central pattern	Died Day 12	
	5	Yes	No	Normal Day 6	Follow-up locally	6 months
	10	Yes	Yes	Normal Day 8	Follow-up locally	6 weeks
	9	Yes	Yes	Normal Day 6	Follow-up locally	6 months
	6	Yes	Yes	Not done	Died Day 3	

# Allied Clinical Services

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# Laboratory Medicine Service

## HEAD OF SERVICE

**Dr. Noel McEntagart**, Clinical Director of Laboratory

## STAFF

**Ms. Caroline Bosse**, Laboratory Administration Team Leader

**Ms. Susan Luke**, Laboratory Quality Manager

**Mr. John O’Loughlin**, Laboratory Manager

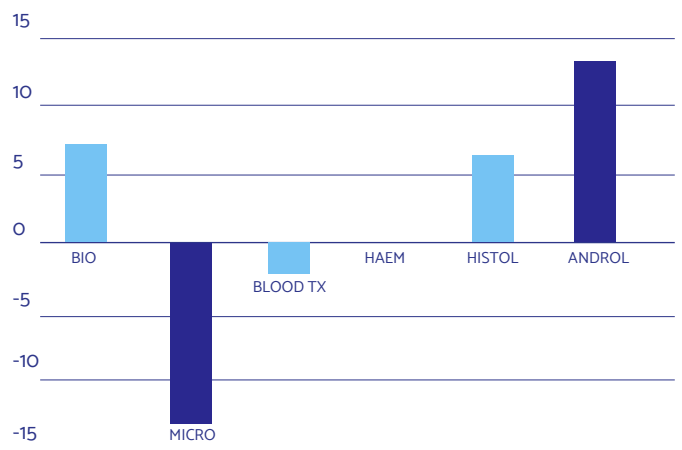
## SERVICE OVERVIEW

2022 heralded a new era for the laboratory as the service moved away from the challenges of the unfolding COVID-19 pandemic to a more stable post-pandemic service. Keeping up with changes in public health policy proved difficult, but the service had both the staff and equipment resources to keep abreast of public health policy in terms of COVID-19 testing changes. Local infection control measures again proved successful as there was no significant staff absenteeism due to COVID-19.

## CLINICAL ACTIVITY

There was a significant increase in workload in histology, biochemistry and andrology in 2022, but an overall drop in microbiology samples, primarily due to a reduction in COVID-19 testing as the year progressed. Additionally, the removal of varicella screening from routine antenatal booking bloods had a significant beneficial effect on laboratory workload. However, general microbiology testing was up over 9% due to the requirement to test for multi-drug resistant organisms (MDROs). A significant increase in biochemistry activity was due to expanded testing for antimullerian hormone (AMH), Vitamin D levels, thyroid antibody testing and fT3 testing, as well as the repatriation of tests such as procalcitonin, fT3, CA15.3 and CA19.9.

**FIGURE 1: CHANGE IN LABORATORY WORKLOAD 2021 – 2022**



### Abbreviations:

Bio = biochemistry; Micro = microbiology; Blood Tx = blood transfusion; Haem = haematology; Histol = histology; Androl = andrology

Point-of-care-testing (POCT) also saw large increases in 2022, including glucose testing and the introduction of a ROTEM analyser in the operating theatres. A new blood gas analyser represents a significant improvement due to the need for a much smaller blood volume for neonatal patients. While placental histology and postmortem workload decreased, in line with the declining birth rate, there was a net increase in histology caseload of 4% from last year.

The Laboratory Information Management System (LIMS), known as Apex, integrates with new laboratory instruments such as analysers, in compliance with the ISO15189 standard. New technologies and developments are incorporated into the Laboratory to promote lean practices and enhance efficiency.

## SUCSESSES & ACHIEVEMENTS 2022

In 2022, the major service improvement project was replacing the single older biochemistry analyser with two new smaller analysers, which was strategically crucial to provide back-up/redundancy in the event of equipment down-time. Additionally, in 2022 a successful tender was completed for replacement haematology blood count, with current analysers nearing end-of-life. Funding was also received for replacement of a flow cytometer and older microtomes in the histology laboratory. These equipment replacements should come into service in early 2023 after a comprehensive verification and validation process.

The Laboratory Service successfully retained its ISO15189 and ISO22870 accreditation with INAB and extended its scope of practice to include some new laboratory tests.

The laboratory recruited a new ICT coordinator, and successfully completed the ISO15189 accreditation for laboratory ICT functions

### CHALLENGES 2022

The single biggest challenge faced by the Laboratory Service in 2022 was the loss of some key members of staff. Recruitment of new medical scientists is proving to be very difficult, thereby making staff retention critical. To mitigate these challenges, foreign recruitment campaigns are underway and Laboratory Aides are being upskilled appropriately.

Laboratory infrastructure remains a significant issue, with the laboratory needing to expand and be upgraded to allow appropriate responses to emerging demands. These critical space issues are most pressing in Histology, Microbiology and Haematology/Blood Transfusion.

Another major challenge for the Laboratory Service is the increasing workload during 'out-of-hours' periods. This has increased in recent years, both in terms of workload and complexity. The Rotunda is one of the few remaining Dublin hospitals to only have one medical scientist working after hours, which will need to be reviewed in early 2023 as it is becoming a significant risk, as well as a cause of poor staff morale and staff turnover.

With only one staff member dedicated to ICT, there are significant challenges in prioritising new ICT projects.

### PLANS FOR 2023

The major Quality Improvement Projects planned for 2023 include:

- Introduce a second medical scientist 'on call' rota to deal with increased workload, increased 'Code Reds' and increased complexity of testing out-of-hours
  - Interfacing of Sysmex XN Haematology analysers with LIMS
  - Commissioning of CorVu statistical analysis software to provide turn-around times for the laboratory
  - Commissioning of Camtasia, video/screen capture software
  - Upgrade of LIMS from Apex version 5.8 to version 6.1
  - nPex software for sharing of patient results between laboratories and improved connectivity
- Validation of two new full blood count haematology analysers
  - Decommissioning the Faxitron X-ray machine in the mortuary
  - Validating the new flow cell cytometer for Blood Transfusion
  - Continuing the replacement of microtomes in histopathology
  - Undertake an environmental analysis of the laboratory in order to support MyGreen laboratory certification
  - Upgrading the Laboratory Information Management System (LIMS) to version 6.1 and introduce Corvue statistics software



# Division of Biochemistry and Endocrinology

## HEAD OF SERVICE

**Dr. Mohamed Elsamak**, Consultant Chemical Pathologist

## STAFF

**Mr. Eimhin Brady**, Laboratory Aide

**Ms. Ava Brazier**, Medical Scientist

**Ms. Sharon Campbell**, Senior Medical Scientist

**Mr. Ernest Czerkies**, Medical Scientist

**Ms. Nicola Finnegan**, Medical Scientist

**Ms. Grainne Kelleher**, Chief Medical Scientist

**Ms. Debbie O'De**, Medical Scientist

**Ms. Aiveen O'Malley**, Biochemist

**Dr. Ana Rakovac**, Consultant Chemical Pathologist

## SERVICE OVERVIEW

The Division of Biochemistry and Endocrinology provides an extensive range of routine and specialised biochemistry and endocrinology testing for the hospital and external organisations.

**TABLE 1: CLINICAL ACTIVITY 2021 - 2022**

	2021	2022	% Difference
Tests performed	355,537	382,371	+7%

Highlights for clinical activity in 2022 included:

- A 25% decrease in paediatric bilirubin requests, which occurred as a result of a patient-focused change control project
- Significant increases noted in requests for Vitamin D (24%), antimullerian hormone (15%) and FT3 (25%) as part of an increasing infertility workload
- A surge was noted with ROMA requests (16%) which is referred to an external laboratory at a notable cost

## SUCCESSSES & ACHIEVEMENTS 2022

In 2022, the Division had several notable achievements:

- Installation and verification of the first of two new biochemistry analysers
- Increased test capacity on the new analysers has allowed introduction of many new tests in house, including CA15.3, CA19.9, CEA, FT3, Vitamin D, Procalcitonin and HE4

- Implementation of a Biochemistry/Microbiology on-call rota to help alleviate the increased workload for the medical scientists
- The Division retained and excelled in INAB accreditation for laboratory testing for Biochemistry and Endocrinology
- Ongoing expansion of the MN-CMS electronic healthcare record to include new tests and improve functionality for clinical staff
- Ongoing projects at PhD and MSc level continue
- Repatriation of tests in-house with improved turnaround times for patients
- Introduction of two medical scientist staff on-call to manage increased workload

## CHALLENGES 2022

- Serious staffing constraints in 2022 led to significant strain on services in the context of a very competitive recruitment environment
- Staffing and time limitations during the verification of a new analyser and middleware
- Continued cost saving and income generation initiatives within the Division

## PLANS FOR 2023

- Installation and verification of the second Biochemistry analyser
- Introduction of ammonia and IL6 testing in-house
- Review the Biochemistry laboratory infrastructure and layout to ensure best use of limited space

# Division of Point of Care Testing

## HEAD OF SERVICE

**Dr. Mohamed Elsammak**, Consultant Chemical Pathologist

## STAFF

**Ms. Georgia Daly**, Laboratory Aide

**Ms. Lorna Pentony**, POCT Coordinator

## SERVICE OVERVIEW

The Point of Care Testing (POCT) Service supervises eight blood gas analysers, 33 glucose meters, seven haemoglobin meters, and a ROTEM device. The latter was introduced to the operating theatres with a view to optimising appropriate blood product selection in major obstetric haemorrhage.

POCT COVID-19 testing was also provided in 2022, but was wound down in the Q2 of 2022 in response to the declining prevalence of infection. Devices remain on-site should they be required for future use.

The POCT coordinator is also responsible for training and two-yearly proficiency testing of end-users of POCT devices.

**TABLE 1: POCT ACTIVITY 2021 - 2022**

	2021	2022	% Difference
Blood gas	19,622	10,628	-46%
Glucose	41,141	58,086	+29%
COVID-19	2,394	2,254	-6%
Haemoglobin	4,831	4,950	+2%
ROTEM	N/A	48	N/A

## SUCCESSSES & ACHIEVEMENTS 2022

In 2022, the Division had several notable achievements:

- Retention of INAB accreditation for POC testing
- Introduction of a ROTEM device to Theatre for management of blood product use in major obstetric haemorrhage
- Changeover of blood gas analysers from Roche to Radiometer, which require a significantly smaller sample volume (45ul total) for a full repertoire of 17 parameters, almost three times less than the previous Roche devices

- Training was provided to 346 end-users for the new Radiometer blood gas analysers, while 43 staff members were trained to use haemoglobin meters, and glucose meters

## CHALLENGES 2022

There is only one full time Medical Scientist dedicated to POCT, which is challenging given the increased workload in 2022 following introduction of ROTEM. A laboratory aide is shared with the Histology Division, which is of some added assistance.

The requirement to manually enter a patient's ID, rather than scan patient's ID bands, is a potential risk in terms of data non-compliance. Work is on-going to develop an automated ID feed for such cases.

Lack of interfacing of POCT devices to the MN-CMS electronic healthcare record is a risk in terms of scanning of documentation into the incorrect chart.

## PLANS FOR 2023

- To establish automated patient ID feed for various POCT devices
- To ensure POCT device outputs interface with laboratory information management systems

# Division of Clinical Microbiology

## HEAD OF DIVISION

**Dr. Richard Drew**, Consultant Microbiologist

## STAFF

**Dr. Meaghan Cotter**, Consultant Microbiologist

**Mr. David Le Blanc**, Chief Scientist

**Ms. Niamh Cahill**, Specialist Grade Medical Scientist

**Ms. Ailbhe Comyn**, Senior Medical Scientist

**Mr. Tom Murphy**, Senior Medical Scientist

**Ms. Jenny Tormey**, Senior Medical Scientist (Andrology)

**Ms. Lorraine White**, Senior Medical Scientist

**Ms. Blessing Adama**, Medical Scientist

**Mr. Stephen Byrne**, Medical Scientist

**Ms. Ita Cahill**, Medical Scientist

**Ms. Caroline Doherty**, Medical Scientist

**Ms. Maeve Fogarty**, Medical Scientist

**Ms. Gemma Tyrrell**, Medical Scientist

**Ms. Shauna Devine**, Laboratory Aide

**Ms. Janet Lamwaka**, Laboratory Aide

## SERVICE OVERVIEW

The Division of Clinical Microbiology provides serology, molecular and routine bacteriology testing for the hospital. The andrology laboratory provides initial semen analysis as part of subfertility investigations and screens patients following vasectomy.

**TABLE 1: CHANGES IN TEST VOLUME 2021 - 2022**

Location	2021	2022	% difference
Molecular testing	26,856	19,370	-39%
Serology	55,158	48,127	-15%
Andrology	8,492	9,527	+11%
Referral	10,232	11,494	+11%
Microbiology	65,530	72,482	+10%
<b>Total</b>	<b>166,268</b>	<b>161,000</b>	<b>-3%</b>

## SUCCESSES & ACHIEVEMENTS 2022

In 2022, the Division had several notable achievements:

- Continuation of SARS-CoV-2 Testing on four platforms (Seegene, GeneXpert, FilmArray and Luminex)
- Maintenance of ISO 15189 Accreditation for microbiology, serology, molecular testing and andrology

- Implementation of a microbiology/biochemistry medical scientist roster Monday to Friday 18.00pm until 23.00pm, and a seven-day service for microbiology
- Addition of hepatitis-C virus testing for routine booking antenatal bloods and removal of varicella zoster screening
- Reflex testing for bacterial vaginosis PCR on symptomatic patients
- Implementation of a dedicated scientist and testing area for quality control of all tests

## EDUCATION & TRAINING

- Continued staff training in all areas of laboratory operations, including introduction of SARS-CoV-2 IgG testing and HSV 1/2 testing
- Training and education for all staff in the new Andrology Laboratory and improved process flow for patients
- Continued professional education for all staff particularly in areas of molecular testing and CORU enrolment

## RESEARCH

- Peer-reviewed publications were produced on diverse areas including Mycoplasma genitalium, congenital Chagas disease, paediatric and neonatal sepsis, prevention of early onset group B streptococcus, herpes encephalitis, and routine hepatitis-C virus screening

## INNOVATION

- Dr. Richard Drew was shortlisted for the Health Service Executive Frontline Innovation Award for a project around machine learning and maternal bloodstream infections

## CHALLENGES 2022

The Division of Clinical Microbiology faced several challenges during the year, which included:

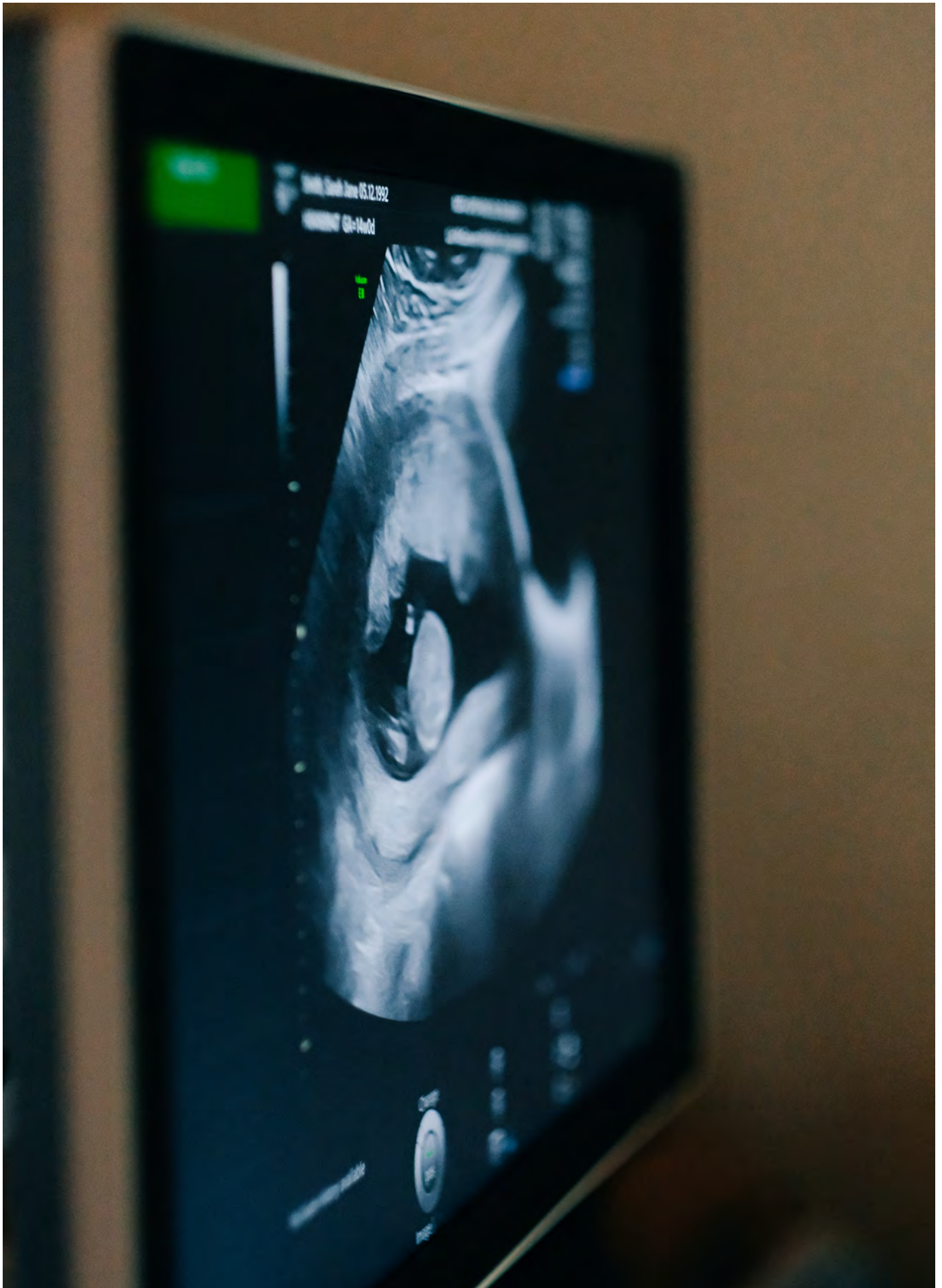
- Retention and recruitment of staff and maintenance of morale in an already fatigued team
- Space and infrastructure has become a particular concern, with the laboratory becoming increasingly cluttered

- Continuation of a seven-day service for microbiology was particularly challenging due to low staff participation with on-call rosters
- 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 2023

The Division's plans for 2023 include:

- Investigate the possibility of an upgrade to the Abbott Architect System
- Expand the duties of the Surveillance Scientist and investigate the potential of the MYLA Data Management Platform
- Streamline first antenatal visit urine testing to include GBS Screening





# Division of Haematology and Blood Transfusion

## HEAD OF DIVISION

**Prof. Fionnuala Ní Áinle**, Consultant Adult Haematologist

## STAFF

**Ms. Biljana Bates**, Laboratory Aide  
**Ms. Edel Cussen**, Medical Scientist  
**Mr. Knowledge Denehere**, Medical Scientist  
**Ms. Natasha Drury**, Senior Medical Scientist  
**Ms. Emily Forde**, Senior Medical Scientist  
**Dr. Barry MacDonagh**, Consultant Haematologist  
**Mr. Sarah Kelly**, Senior Medical Scientist  
**Ms. Deirdre Murphy**, Chief Medical Scientist  
**Ms. Ellen O'Connor**, Medical Scientist  
**Ms. Rose O'Donovan**, Haemovigilance Officer  
**Ms. Deirdre O'Neill**, Senior Medical Scientist  
**Ms. Lilliana Rasidovic**, Medical Scientist  
**Ms. Catriona Ryan**, Medical Scientist

## CLINICAL ACTIVITY

**TABLE 1: HAEMOVIGILANCE ACTIVITY 2021 - 2022**

Haemovigilance Activity	2021	2022	% Difference
Number of postnatal women transfused	196	183	-7%
Number of babies transfused	122	86	-29%

**TABLE 2: BLOOD TRANSFUSION ACTIVITY 2021 - 2022**

Activity	2021	2022	% Difference
Group and screen	18,844	19,006	+1%
Direct anti-globulin blood group	3,939	4,000	2%
FREDA (cffDNA Fetal RhD)	1,281	1,173	-8%
FMH estimation by flow cytometry	833	761	-9%
Anti-D /Anti-c quantitation	53	59	+11%

FMH = fetomaternal haemorrhage; cffDNA = cell free fetal DNA for fetal Rhesus D antigen

**TABLE 3: HAEMATOLOGY LABORATORY ACTIVITY 2021 - 2022**

Haematology Activity	2021	2022	% Difference
Full blood count	44,928	44,994	+0.1%
Haemoglobinopathy screen	5,738	5,101	+13%
Coagulation screen	3,286	3,446	+5%
Laboratory blood film	2,216	2,384	+7%
Lupus screen	259	268	+2%

## SUCCESSSES & ACHIEVEMENTS 2022

In 2022, the NICU moved towards a mandatory use of positive patient ID (PPID) for processing all samples. The removal of the option on the MN-CMS electronic health care record to select 'unable to scan barcode' option has resulted in a significant decrease in 'wrong blood in tube' (WBIT) samples being submitted.

An audit of blood sampling and labelling was repeated in 2022 and, with ongoing training in this area, it is hoped to further diminish WBIT numbers.

## PLANS FOR 2023

- The Division of Haematology will verify two new full blood count (FBC) analysers, which were installed in 2022
- A replacement flow cytometer will also be verified. As part of this verification, the laboratory will examine the feasibility of introducing an additional method for the estimation of fetomaternal haemorrhage (FMH) using an anti-HbF assay
- The laboratory is hoping to progress its 'Eco-Lab' agenda in 2023, by optimising green laboratory practices
- Haemovigilance training will be made more accessible and user-friendly with the use of available information technology

# 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

**Mr. Kieran Healy**, Chief Medical Scientist

**Mr. Michael Smith**, Senior Medical Scientist

**Ms. Lorna Thomas**, 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

**Ms. Georgia Daly**, 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 (e.g. autopsies). The Division also provides a diagnostic cytopathology service for surgical specimens. All diagnoses of malignancy and pre-malignancy are reported to the National Cancer Registry.

The Division of Histopathology provides diagnostic interpretation of human tissue specimens. These include routine surgical specimens, placentas and perinatal pathology cases (e.g. autopsies). The Division also provides a diagnostic cytopathology service for surgical specimens. All diagnoses of malignancy and pre-malignancy are reported to the National Cancer Registry.

## KEY PERFORMANCE INDICATORS (KPIs)

The Division of Histopathology routinely measures turnaround times 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 maintains accreditation to the ISO 15189 standard and participates in several External Quality Assurance schemes. The Division performed satisfactorily in all of these KPIs in 2022.

There was an increase again in the total workload of the Division, despite a reduction in post mortem and placenta examinations. The increased total workload is consistent with the overall hospital workload increase, and has been absorbed by the Division without any increase in resources.

## CLINICAL ACTIVITY

**TABLE 1: CLINICAL ACTIVITY 2021 - 2022**

	2021	2022	% difference
Surgical blocks	15,157	15,483	+2%
Surgical specimens	7,902	8,342	+6%
Surgical cases	6,165	6,718	+9%
Placental blocks	6,402	6,172	-4%
Placental cases	1,695	1,510	-10%
Full autopsy cases	81	66	-19%
Limited autopsy cases	14	7	-50%
Cytology cases	32	39	+22%
Total blocks	22,724	23,248	+2%
<b>Total cases</b>	<b>7,987</b>	<b>8,340</b>	<b>+4%</b>

## SUCCESSSES & ACHIEVEMENTS 2022

- Accreditation to ISO1589 was maintained
- Histopathology archive was audited and confirmed to be consistent with retention guidelines
- Aging equipment was replaced and more efficient, greener equipment was purchased
- Staff training in histodissection was continued
- Histopathology medical scientist staff continued to support the Hospital's out-of-hours roster

## PLANS FOR 2023

- Maintain ISO15189 accreditation
- Define space requirements for a new histology laboratory and identify how the current space can be optimised
- Continue to review and expand the repertoire of in-house stains



# Laboratory Medicine – Quality Management

## HEAD OF SERVICE

**Ms. Susan Luke**, Quality Manager

## STAFF

**Ms. Emily Forde**, Deputy Quality Officer

**Ms. Grace Hanniffy**, Quality Assurance Consultant

**Mr. Michael Maher**, ICT Coordinator

**Mr. John O'Loughlin**, Acting Training & Development Officer

**Ms. Aiveen O'Malley**, Health and Safety Officer

**Ms. Lorna Pentony**, Point of Care Testing Coordinator

## ACTIVITY

The Laboratory Medicine Service continued to operate to the requirements of ISO15189 and ISO22870 standards throughout 2022. The quality management system also must comply with the requirements of the AML-BB minimum requirements for Blood Transfusion EU Directive Article 14 (Traceability) and Article 15 (Notification of SAEs and SARs) of EU Directive 2002/98/EC.

The laboratory had its annual INAB assessment visit in April 2022, with seven assessors spending an entire day on-site, examining documentation relating to testing processes, suppliers, equipment and training records, testing processes, reviewing auditing and management of non-conformances and change control. Sites where point-of-care testing is performed, and laboratory stores were visited and inspected during this INAB assessment.

Findings and areas for improvement included optimising storage facilities both outside the laboratory and within the laboratory environment, and using only accredited suppliers for temperature mapping of temperature-controlled units. It was noted that a KPI for Haemovigilance training of clinical staff and proficiency in use of flexible scope should be considered and implemented. This was considered and is being adopted across the Rotunda's Quality Management System (QMS) for other areas, such as non-conformance records, document review, change control, adherence to audit calendar, and adherence to meeting schedules.

The QMS is based on the understanding that each individual is responsible for the quality of their contribution and that each Supervisor and Head of Department has a responsibility to ensure that this policy is understood and followed at all times. INAB recognised the broad base of knowledge and participation by all staff in the laboratory.

The laboratory submits a report to the HPRA annually, which is a legal requirement reporting on workload in blood transfusion, blood

usage and plans for 2022. The report was accepted by the HPRA with no issues.

The Division of Haematology and Blood Transfusion is audited by the Network Quality Officer, who is a medical scientist based at the Mater Misericordiae University Hospital (MMUH) and performs quarterly audits in these areas for the Rotunda.

## SUCCESSSES & ACHIEVEMENTS 2022

Key Performance Indicators (KPIs) are used to monitor the proficiency of the laboratory team in some of the key tasks required to maintain a robust QMS.

KPIs for 2022 included:

- Completion of non-conformance and change control records
- Revision of all documentation and issuing to staff with acknowledgement by staff being monitored
- Completion and close-out of all audits
- Cases of 'Wrong Blood in Tube' (WBIT) continued to be monitored, with a considerable reduction of incidences following PPID being made mandatory

## PLANS FOR 2023

To commence a gap analysis and begin implementation of ISO15189, with a requirement for laboratories to be compliant by end of 2025

- Upgrade to Q-Pulse 7.2 as implementation of version 7.1.3.2 has exposed a number of hidden bugs which caused the laboratory information system to crash periodically
- Assist laboratory management in working towards achieving 'My Green Lab' certification
- Continue to review current laboratory layout and improve existing testing areas, storage and archiving spaces



# Clinical Nutrition and Dietetics

## HEAD OF SERVICE

**Ms. Laura Kelly**, Dietitian Manager

## STAFF

- Ms. Naomi Hastings**, Senior Dietitian (Neonatology)
- Ms. Rachel Kennedy**, Senior Dietitian (Obstetrics)
- Ms. Hilary Devine**, Clinical Specialist Dietitian (Diabetes)
- Ms. Anna-Claire Glynn**, Clinical Specialist Dietitian (Neonatology)
- Ms. Ciara McNulty**, Staff Grade Dietitian (Obstetrics)
- Ms. Deirbhile Sherry**, Staff Grade Dietitian (Diabetes)

## SERVICE OVERVIEW

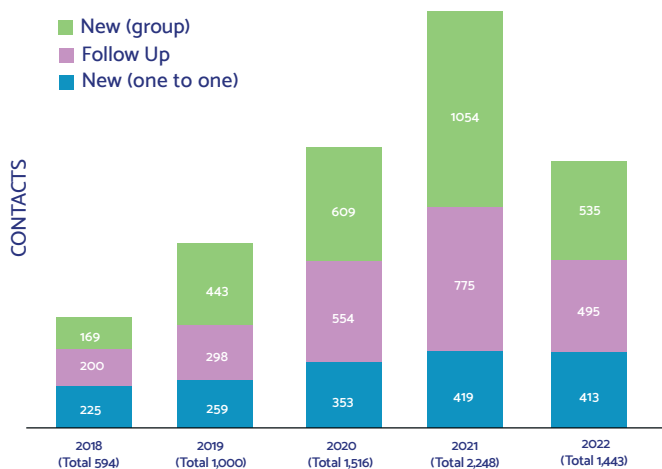
Our mission is to provide the highest quality dietetic service to women and infants attending the Rotunda, to improve clinical and quality of life outcomes.

## CLINICAL ACTIVITY

### OBSTETRIC SERVICES

A clinical dietetic service was provided to a wide range of maternity patients in both the outpatient (in-person and telehealth) and inpatient settings. The number of new consultations was stable compared to 2021. The number of review consultations decreased by 36% due to staffing issues and prioritising services.

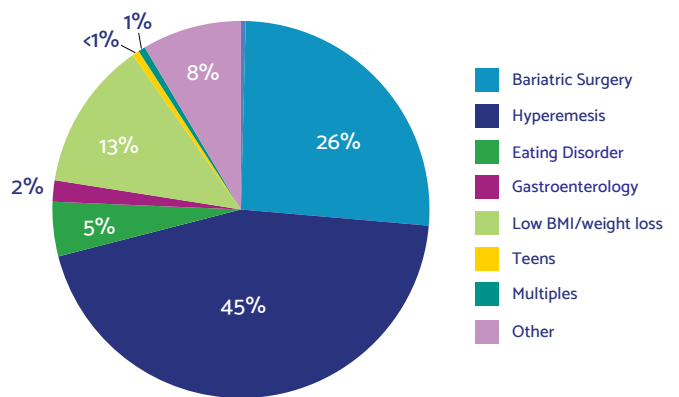
**FIGURE 1: OBSTETRIC SERVICES ACTIVITY (2018 - 2022)**



Attendance at the live nutrition antenatal classes decreased 49% as these classes were periodically suspended during periods of staff shortages. Participation with the recorded classes increased significantly to almost 6,000 views.

Services remain prioritised to patients at the highest nutritional risk, with the breakdown of activity detailed below.

**FIGURE 2: DIETETIC ACTIVITY: OBSTETRIC SERVICES (2022)**

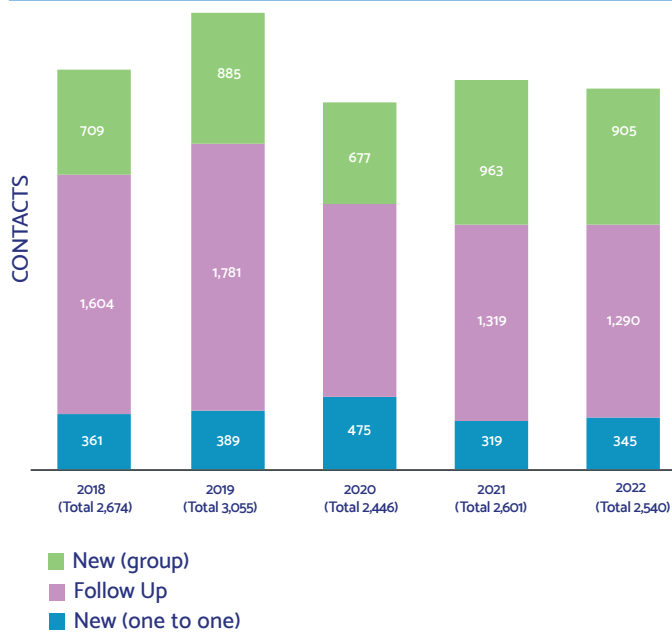


Hyperemesis gravidarum continues to dominate the demands for services, accounting for 45% of all dietetic obstetric encounters. There was a 170% increase in referrals for dietetic evaluation in pregnancy post-bariatric surgery, with this indication now accounting for 26% of all activity compared to 6% in 2021. This is due to the significant rise in rates of bariatric surgery 'tourism' nationally.

### DIABETES IN PREGNANCY SERVICES

The diabetes in pregnancy service activity was stable compared to 2021 and remains extremely busy. Intensive dietetic support (in-person and telehealth) is provided to women with diabetes in pregnancy at stand-alone dietetic clinics and at the weekly multidisciplinary diabetes clinic.

FIGURE 3: DIABETES SERVICES ACTIVITY (2018 – 2022)

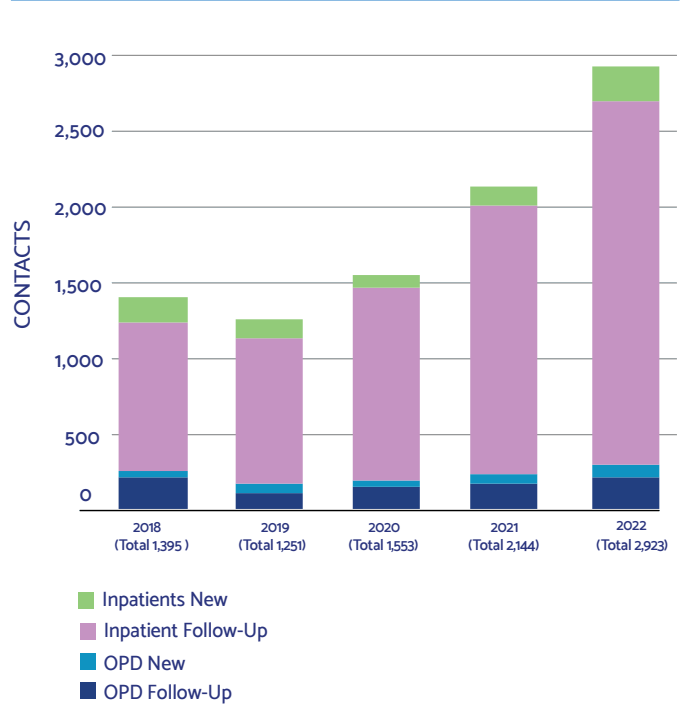


Education for gestational diabetes (GDM) continues to be provided in group webinar format.

**NEONATOLOGY/PAEDIATRIC SERVICES**

The neonatal dietetic service is predominantly based in the NICU and is currently prioritised to infants born <34 weeks’ gestation or birthweight <1,800g (service expanded from <1,500g in 2022). An outpatient service is also provided and this includes virtual, in-person and group sessions, for example with the ‘After the NICU’ MDT feeding support group.

FIGURE 4: NEONATAL SERVICES ACTIVITY (2018 – 2022)



In light of expansion of referral criteria for neonatal services, dietetic activity increased in 2022, with a 37% increase in inpatient activity compared with 2021. Additionally, there was a 28% increase in outpatient activity in 2022 compared with 2021.

**SUCCESES & ACHIEVEMENTS 2022**

- Upskilled and supported new staff members, who have proven to be a great asset to the department
- Further developed the gestational diabetes (GDM) lifestyle webinar, continued the weekly evaluation and re-recorded the new class format. The feedback regarding this class is very positive, with 99% of women reporting that it helped them better manage their gestational diabetes. Teaching resources were updated, including GDM, hyperemesis, diabetes in pregnancy with hyperemesis, diabetes technology, and anaemia
- Contributed to the National Model of Care for Diabetes in Pregnancy
- Assisted with updating the National Hyperemesis guideline, and liaised with catering to create a new hyperemesis inpatient menu

- Facilitated an undergraduate dietetic student from TU Dublin to undertake a project reviewing the use of urine specific gravity in hyperemesis management, with this marker now being routinely used in practice in the day assessment unit (DAU)
- Coordinated cross-departmental care of women following bariatric surgery including diabetes screening pathway and clinic, an OPD management guide, patient information booklet and GP letters
- Established the 'After the NICU' MDT feeding support group and information leaflet for mothers of infants discharged from the neonatal unit
- Provided input to the neonatal MDT developmental care group
- Collated outpatient neonatal dietetic resources
- Completed neonatal audits on very low birth weight (VLBW) feeding

#### CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

- Undertook area-specific CPD in line with CORU requirements
- Provided regular staff education to NCHD's, neonatal nurses, midwives, nursing and midwifery students. Topics included hyperemesis, diabetes, post bariatric surgery and neonatal nutrition enteral and parenteral nutrition
- Organised and presented a dietetic panel session for the Diabetes Ireland national conference on diabetes in pregnancy
- Organised a neonatal nutrition study day, national event supported by NWIHP
- Actively involved in the following national/international professional groups: Maternity Dietitians Ireland, UK Bariatric group, Neonatal Dietitians Ireland, Neonatal Dietitians Interest Group UK, UK Neonatal Dietitians Community of Practice
- Active involvement in the following local hospital groups: NEC working group, neonatal nutrition group, neonatal guidelines committee, breastfeeding committee and neonatal medication safety group

#### CHALLENGES 2022

- Challenging workload due to a senior obstetric dietetic position remaining unfilled for six months of the year
- Managerial duties needed to be shared amongst senior members of the department for the final six months of the year due to maternity leave
- Senior maternity leave cover was recruited at basic grade level as a result of challenges in attracting and recruiting temporary senior grade applications
- Staffing challenges prevented the facilitation of placements for MSc students
- Staffing limitations prevented a gynaecology dietetic support service being implemented
- The significant rise in number of pregnant women post-bariatric surgery and complexity of their care
- Unexpected supply chain issues for various neonatal nutritional products, with safe alternatives needing to be considered and procured in the interim
- While the dietetic team strives to provide quality care in-line with best practice guidelines, it is recognised that women and infants require more intensive dietetic support to optimise outcomes

#### PLANS FOR 2023

- Re-submit business case to secure additional dietetic staffing for gynaecologic and fertility services
- Support the National Integrated Care Programme for Chronic Disease office in developing a specific programme for diabetes prevention following GDM
- Lead the coordination of care for the growing population of women post-bariatric surgery including a national care plan
- Contribute to the review of the national guidelines for management of hyperemesis in pregnancy
- Plan and coordinate the introduction of new blood glucose meters for women with GDM in the hospital to allow for online

access of blood glucose readings to improve clinical efficiency and reduce risk

- Improve clinical care to women with Type 1 diabetes including audit women's experience of care, audit use of diabetes technology in pregnancy and improve resources and education in pregnancy
- Audit of specific aspects of neonatal nutritional care including head circumference measurements, metabolic bone disease of prematurity and feeding/growth of preterm infants following discharge from the NICU
- Review and update of specific neonatal nutritional guidelines, such as enteral feeding guideline and vitamin and mineral supplementation guideline
- Roll-out monthly 'After the NICU' MDT feeding group sessions alongside MDT colleagues, incorporating funding from the Spark Ignite programme
- Implement routine length measurements (for term and preterm infants) in the NICU, using quality improvement tools
- Deliver neonatal nutrition education both locally (for NCHD's and nursing staff) and nationally (NDI/NWIHP study day). Deliver teaching sessions on antenatal nutrition and diabetes to obstetric NCHDS, midwifery and midwifery students

# Medical Social Work Service

## HEAD OF SERVICE

**Ms. Sinead Devitt**, Head Medical Social Worker

## STAFF

**Ms. Laura Feely**, Medical Social Worker

**Ms. Susan Finn**, Medical Social Worker

**Ms. Stefanie Fobo**, Senior Medical Social Worker

**Ms. Pauline Forster**, Senior Medical Social Worker

**Ms. Rebecca Haughan**, Medical Social Worker

**Ms. Connie Mullen**, Medical Social Worker

**Ms. Clare Naughton**, Senior Medical Social Worker

**Ms. Louise O'Dwyer**, Senior Social Work Practitioner

## SERVICE OVERVIEW

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

## CLINICAL ACTIVITY

### CHILD PROTECTION

In 2022, the medical social work team was involved in 181 child protection cases. The main types of concerns where a referral was made or received from Tusla (Child and Family Agency) in 2022 are summarised in Table 1.

**TABLE 1: REASONS FOR TUSLA INVOLVEMENT**

	2018	2019	2020	2021	2022
Drug use	57	46	60	64	63
Child welfare	24	23	29	25	37
Domestic violence	48	38	30	37	34
Underage pregnancy	34	14	15	22	16
Previous children in care	9	6	6	9	8
Mental health	7	8	1	9	8
Adoption	0	2	1	0	4
Alcohol misuse	1	8	3	3	3
Sexual abuse					3
Retrospective disclosure	3	1	2	3	2
Physical abuse					2
Child neglect	3	6	2	4	1
Learning difficulty	1	1	3	2	0
<b>Total</b>	<b>187</b>	<b>153</b>	<b>152</b>	<b>178</b>	<b>181</b>

The majority of child protection cases are complex and involve a medical social worker working in partnership with parents, multidisciplinary/medical colleagues at 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 is explored to help them take care of their baby. Only in exceptional cases, are children separated from their parents, and then only after all alternative means of protecting them have been exhausted.

### INCLUSION HEALTH

The Rotunda has introduced an Inclusion Health senior medical social worker, with this model aiming to develop care pathways that are patient-centred, and focused on addressing the challenges faced by marginalised and socially excluded patients engaging with healthcare services. This is particularly useful for patients who are homeless or at risk of homelessness. It is hoped to continue to develop the Inclusion Health Service further by the introduction of a Clinical Midwife Manager for the service and to continue the development of a Hospital Homeless Discharge Protocol.

### PERINATAL MENTAL HEALTH

Women have access to the Specialist Perinatal Mental Health Service in pregnancy and for up to one year afterwards. In conjunction with the senior psychologist and other colleagues, the social worker continues to be involved in the co-facilitation of the antenatal anxiety group, 'Me to Mom'. This six-week intervention is now being run as

a hybrid model, with the first and the last sessions being in-person and the remaining four sessions being facilitated online. This 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 behavior therapy (CBT), compassion focused therapy and mindfulness to help mothers prepare for the social, emotional and psychological changes that accompany having a baby.

The mental health social worker continues to be involved in the facilitation of the Postnatal Depression Group which runs three times a year in partnership with Better Finglas. It is recognised that partners have a valuable role in supporting mothers experiencing postnatal depression and are therefore offered to participate in the programme.

The perinatal mental health social worker has completed training in Newborn Behaviour Observation and has started to offer this intervention to postnatal women who attend the Specialist Perinatal Mental Health Service.

### TEENAGE PREGNANCY SERVICE

The medical social worker provides emotional support and advice regarding unplanned pregnancies, relationship difficulties, domestic violence, housing concerns, and mental health issues for this vulnerable group, by signposting them to community services, such as the teen parent support programme.

Other young women over the age of 18 can also attend this service on a needs basis, such as those living with an intellectual disability or those with additional support needs.

Safeguarding, child welfare, and child protection issues remain to the forefront due to the demographic of women attending the service.

In 2022, there were 112 young women referred for medical social work support, with 20 consultations or referrals to Tusla being arranged for these patients.

### BEREAVEMENT MEDICAL SOCIAL WORKER

The bereavement medical social worker offers information and support to families who experience a pregnancy loss at any stage, including ectopic pregnancy, miscarriage, stillbirth or neonatal death. In 2022, this service was provided to 248 parents who experienced a pregnancy loss. This medical social worker provided face-to-face or telephone support to 97 bereaved families who wished to engage with the service following their pregnancy loss.

### 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. The most common reason for a referral to medical social work was a prenatal diagnosis of Down syndrome, trisomy 18 and trisomy 13, as well as fetal cardiac malformations. Many patients also receive support as a result of parental anxiety due to a previous pregnancy complicated by fetal malformation.

### 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 a service to over 400 families whose babies were admitted to the neonatal unit in 2022.

### PREGNANCY OPTIONS CLINIC

The availability in the hospital of impartial and non-directive counselling for women considering a termination of pregnancy is essential. A medical social worker specialising in crisis pregnancy offers confidential support and counselling to all women attending the Pregnancy Options Service, and to those who attend the Fetal Medicine Service seeking a termination for a fatal fetal abnormality, or who travel for a termination abroad.

### SUBSTANCE MISUSE

In 2022, the medical social worker attached to the Infectious Diseases/DOVE (Danger of Viral Exposure) service provided emotional and practical support to women attending this specialist clinic. As part of this role, the medical social worker helps parents to address their addiction issues, at a time where motivation to cease or reduce substance misuse can be high. A total of 48 women attending the DOVE clinic, and who delivered in 2022, were referred to Tusla by the medical social worker.

In 2022, Tusla held 32 Child Protection Conferences in relation to substance misusing Rotunda patients. These conferences are interagency and multidisciplinary meetings where a child protection plan is formulated. In 2022, there was a significant increase in mothers and babies being discharged home under the supervision of a non-drug using relative. This level of safety planning increased from seven in 2021 to 21 in 2022.



In 2022, there were six babies discharged to substitute care under a Court Order. The medical social worker attends Court and participates in these proceedings. It is ultimately a Judge who makes the difficult decision for a baby not to be discharged to the care of their parents.

The medical social worker worked closely with colleagues in the neonatal unit regarding Substance Misuse concerns, with 15 babies being admitted in 2022 treatment of Neonatal Abstinence Syndrome (NAS). 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: SOCIAL WORKER ACTIVITY FOR SUBSTANCE MISUSE CASES**

Year	2018	2019	2020	2021	2022
Deliveries to substance misusing women	61	56	56	60	63
Child Protection Referrals to and from Tusla	57	46	51	48	48
Mothers and babies returned home under supervision of non-drug using relative	10	19	9	7	21
Babies taken into care under a Court Order	1	1	10	5	6
Parent(s) signing baby into voluntary care	5	3	1	4	1

## SUCCESSSES & ACHIEVEMENTS 2022

The Maternity Project is a three-year pilot programme, involving the Rotunda working in partnership with Woman's Aid, the Coombe Women and Infants' University Hospital, the National Maternity Hospital and Cork University Maternity Hospital, to further enhance the maternity hospitals' response to pregnant women experiencing abuse, through the strands of training, awareness and referral. In 2022, as part of the training strand, the medical social work team developed bespoke and targeted staff training suitable for a maternity setting. Key themes arising from the preliminary sessions identified that training should be accessible, flexible, multi-disciplinary and should consist of blended learning.

As part of the awareness strand of the project, the Rotunda ran a 16-day awareness campaign from November to December, which included social media feeds and an on-site awareness promotion.

Another success in 2022 was the allocation of a Maternity Network senior social work post to the Rotunda Hospital in recognition of its lead role in developing care pathways across the RCSI Hospitals Group. Currently, the Rotunda works collaboratively with the RCSI Hospitals Group in progressing fetal medicine services in Our Lady of Lourdes Hospital Drogheda and Cavan General Hospital. The new post will be dedicated to supporting patients whose care is transferred from these, and other maternity units across the country, due to a complex fetal medicine diagnosis.

## EDUCATION & TRAINING

The medical social work team attended a number of courses and training days during 2022 to enhance their continuous professional development, including training by Ruhama on sex trafficking, use of Cognitive Behavioural Therapy (CBT) techniques, use of Newborn Behaviour Observation, 'Understanding trauma and supporting the needs of people fleeing war and/or persecution', 'Supporting Families After Traumatic Bereavement', and recurrent miscarriage updates.

In 2022, the Inclusion Health medical social worker presented at the Irish Association of Social Workers (IASW) National Social Work Conference, on 'Accelerating Inequalities, Impossible Choices: Exploring Anti-Poverty Practice in Social Work'.

## CHALLENGES 2022

A significant challenge faced by the medical social work team during 2022 was the level of homelessness faced by patients attending the hospital. While there is a medical social worker dedicated to developing a specialism around homeless presentations, the service is faced with on-going challenges in an environment characterised by significant accommodation deficits.

A number of refugees fleeing the war in Ukraine arrived in Ireland from February 2022. The Rotunda responded to the needs of those refugees who were pregnant by setting up a dedicated antenatal clinic. A challenge for medical social work was to ensure that this additional cohort of patients received a medical social work service, as required.

## PLANS FOR 2023

While bespoke training designed to raise staff awareness around domestic abuse in a maternity setting continues to be developed, Woman's Aid and the National Women and Infant's Health Programme (NWIHP) plan to launch a training workshop for maternity services in the interim. Places on the workshops will be offered to frontline staff in the Rotunda in 2023.



# Pharmacy Service

## HEAD OF SERVICE

**Dr. Brian Cleary**, Chief Pharmacist

## STAFF

**Ms. Emer Coll**, Senior Pharmaceutical Technician  
**Ms. Aileen Cullen**, Senior Antimicrobial Pharmacist  
**Ms. Elena Fernandez**, Chief II Pharmacist  
**Ms. Fiona Gaffney**, Senior NICU Clinical Pharmacist  
**Ms. Kamelia Krysiak**, Research Pharmacist  
**Mr. Tom Lynch**, Senior Pharmacist  
**Ms. Maria McCullagh**, Senior Pharmacist  
**Ms. Rachel McNamara**, Pharmaceutical Technician  
**Ms. Alison Meehan**, Pharmaceutical Technician  
**Mr. Fergal O'Shaughnessy**, Senior Pharmacist  
**Ms. Elaine Webb**, Senior Pharmaceutical Technician

## SERVICE OVERVIEW

The Pharmacy Service supports the safe and effective use of medicines for Rotunda patients. Along with ward-based clinical activities, the Service provides specialist medicines supplies, 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 Service 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 Service has 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 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 Pharmacists review drug charts and patient records daily, on a Monday – Friday basis, providing 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 2022

There were a number of significant achievements in 2022, across several areas, including:

- Continued development of the Irish Medicines in Pregnancy Service (IMPS) – a multidisciplinary collaboration to support the safe and effective use of medicines in pregnancy and lactation through medicines information services, advocacy and research. The team has engaged with national and international networks and have strengthened collaborations with the European Network of Teratology Information Services and the Health Products Regulatory Authority (HPRA)
- Expansion of MN-CMS prescribing and administration reporting functionality, and use of these reports to improve medication use processes
- Optimisation of MN-CMS alerts to minimise alert fatigue, optimise medication use processes and reduce the risk of medication errors
- Ongoing implementation of the hospital's Medication Safety Strategy
- Ongoing support and optimisation of the venous thromboembolism (VTE) risk assessment tool, (Thrombocalc), which is used to assess the risk of VTE in women delivering at the Rotunda
- Procurement and implementation of new standardised neonatal parenteral nutrition bags that optimise nutrition and minimise 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), developing a knowledge bank on medication use in pregnancy and lactation and an education resource for health professionals on medication use in pregnancy and lactation
- 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
- Preparation for the refurbishment of the pharmacy and the procurement of a Pharmacy robot, which will improve the efficiency and enhance safety to the dispensing process
- Preparation for the procurement process for the Hospital Medicines Management System – a national project to modernise the hospital pharmacy IT infrastructure
- Contribution to the development and review of National Clinical Guidelines in Obstetrics and Gynaecology by the National Women and Infants Health Programme (NWIHP) and the Institute of Obstetricians and Gynaecologists (IOG)
- Continuing to deliver clinical services while minimising costs of medicines in the challenging context of 2022
- Challenges with continuity of supply of medicines and medication shortages

### PLANS FOR 2023

The Pharmacy Service's plans for 2023 include:

- Refurbishment of the Pharmacy physical infrastructure
- Procurement and implementation of automation and pharmacy robotics
- Implementing the new National Hospital Medicines Management System (HMMS) as a pilot site for phase 1
- Continued development of Rotunda innovations on thrombosis risk assessment, NICU high risk infusions and medication safety
- Development and launch of the new app for NICU medication monographs
- Exploring the expansion of the pharmaceutical technician role
- Establish a new procurement process for epidural products
- Continue the development of the hospital's role within the European Network of Teratology Information Services, hosting the international ENTIS conference 2023 and further expanding the role of the Irish Medicines in Pregnancy Service
- Optimise insulin prescribing processes in MN-CMS and examine feasibility of standardised peri-partum insulin medication use processes
- Improving medication documentation and medication reconciliation at admission and discharge
- Testing the new MN-CNS interface which will be migrating to a cloud-based storage system in 2023

### RESEARCH, AUDIT AND EDUCATION

- Promotion of Pharmacy Service staff to Honorary Clinical Professor and Senior Lecturer in the RCSI School of Pharmacy and Biomolecular Sciences, and contribution to the delivery of women's health education to RCSI Pharmacy undergraduate students, in addition to medicines in pregnancy and medication safety teaching for postgraduate medical, midwifery and nursing students
- The Pharmacy Service is collaborating with, and providing 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
- Successful defence of PhD theses by Kamelia Krysiak and Joan Devin

### 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 2022

The Pharmacy Service faced several challenges in 2022 which included:

- Staffing challenges in 2022 led to significant strain on services in the context of a very competitive recruitment environment

# Physiotherapy Service

## HEAD OF SERVICE

**Ms. Cinny Cusack**, Physiotherapy Manager

## STAFF

**Ms. Paula Donovan**, Clinical Specialist  
**Ms. Brona Fagan**, Clinical Specialist (NICU)  
**Ms. Helen Feeney**, Senior Physiotherapist  
**Ms. Anna Hamill**, Clinical Specialist (NICU)  
**Ms. Katy Holmes**, Physiotherapist  
**Ms. Emma Houlihan**, Physiotherapist  
**Ms. Niamh Kenny**, Clinical Specialist  
**Ms. Nora McCreddie**, Clinical Specialist  
**Ms. Sadhbh Reynolds**, Physiotherapist  
**Ms. Grainne Sheil**, Clinical Specialist  
**Ms. Patricia Weldon**, Clinical specialist (NICU)

## SERVICE OVERVIEW

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

The inpatient service focuses on postnatal mothers who are at risk of pelvic floor dysfunction, as well as all patients who undergo major gynaecologic surgery being reviewed post-operatively.

The outpatient service provides assessment and treatment of pregnant women with musculoskeletal conditions, including pelvic girdle pain. Following triage of these referrals, patients are either booked to attend a virtual class or given individual appointments. Management of pelvic floor dysfunction includes exercises and lifestyle advice for urinary and faecal incontinence. Treatment for pelvic floor pain and dyspareunia may include manual therapy. Pessary fitting and teaching self-management of removable pessaries is now provided as an adjunct to prolapse management.

Postpartum women can self-refer for individualised treatment for pelvic floor dysfunction up to six months following birth, and up to six weeks following birth for musculoskeletal issues.

Physiotherapy is a member of the multidisciplinary team that provides a weekly Promotion of Continence clinic. The hospital's gynaecology waiting list is regularly triaged to select suitable patients who might benefit from a first line conservative course of physiotherapy. Patients are subsequently booked into the Promotion of Continence clinic as required.

## CLINICAL ACTIVITY

### ANTENATAL CLASSES

Health promotion and antenatal education form key components of the service. The team provides online virtual 'Preparation for Parenthood' classes

### POSTNATAL CLASSES

All new mothers are encouraged to attend specialist education classes, which provide education on good bladder and bowel health, pelvic floor muscle recovery and exercises to manage symptoms of incontinence and prolapse. Teaching is provided on how to assess diastasis of the rectus abdominus muscle (DRAM) and give advice on safe return to exercise, running and fitness. Two new videos on progressing postnatal exercises are available on the Rotunda website

**TABLE 1: ADULT INPATIENT PHYSIOTHERAPY ACTIVITY**

Adult New Inpatients	2018	2019	2020	2021	2022
Postnatal	7,690	7,747	7,488	8,069	7,921
Gynaecology	199	203	105	80	144
Pelvic girdle pain /carpal tunnel syndrome/respiratory	109	77	83	56	118

**TABLE 2: ADULT OUTPATIENT PHYSIOTHERAPY ACTIVITY**

Adult New Outpatients	2018	2019	2020	2021	2022
Pelvic girdle pain	2,011	2,145	1,845	2,247	2,242
Urinary incontinence (Gynaecology)	434	205	198	289	342
Dyspareunia/pelvic floor pain	87	134	197	234	294
Prolapse	115	152	141	261	264
Urinary incontinence (Pregnancy/postpartum)		206	161	202	260
Carpal Tunnel syndrome	96	37	108	156	122
Postpartum self-referrals				104	91
Direct gynaecology triage					85
Obstetric anal sphincter injury	114	113	124	84	59
Previous perineal tear	53	53	46	92	56
Faecal incontinence	17	26	14	16	48
Community clinic					40
<b>Total</b>	<b>2,936</b>	<b>3,071</b>	<b>2,834</b>	<b>3,685</b>	<b>3,847</b>

**PAEDIATRIC SERVICE****TABLE 3: NEONATAL/PAEDIATRIC PHYSIOTHERAPY ACTIVITY**

Neonatal New Inpatients	2018	2019	2020	2021	2022
NICU referrals	110	145	182	219	194
Talipes		27	53	30	38
Obstetric brachial plexus injury or upper limb fracture	77	15	21	25	22
Trisomy 21		14	13	25	20
Head and neck		4	13	5	6
<b>Total</b>	<b>187</b>	<b>205</b>	<b>282</b>	<b>304</b>	<b>280</b>

Paediatric New Outpatients	2018	2019	2020	2021	2022
Neurodevelopmental	38	30	26	191	172
Plagiocephaly and torticollis	79	50	59	68	78
Talipes	52	16	17	14	29
Other musculoskeletal		3	1	2	10
<b>Total</b>	<b>169</b>	<b>99</b>	<b>103</b>	<b>275</b>	<b>289</b>

**SUCCESSES & ACHIEVEMENTS 2022**

- Provision of undergraduate specialist lectures and placements for RCSI School of Physiotherapy students
- Commencement of a physiotherapy community service based in Corduff Health centre led by Ms. Niamh Kenny. This service provides pelvic girdle pain and postnatal classes
- Update of the patient information leaflet following gynaecological surgery
- Uploading of two postnatal videos on the Rotunda website promoting graded return to postnatal exercise
- Pathway completed for postnatal mothers to be assessed and fitted with a self-management pessary
- Introduction of tibial nerve stimulation to treat faecal incontinence and overactive bladder. Service presented at the Rotunda GP Study Day and article written in the Rotunda e-zine for GPs

- Physiotherapy management of obstetric anal sphincter injury re-audited and planned for presentation at the Audit Study Day in 2023
- Ms. Grainne Sheil appointed as perineal clinic liaison physiotherapist providing drop-in weekly appointments for urgent referrals and attends a weekly informal MDT meeting for complex patients
- A video recording on the role of physiotherapy completed for 'what's up mum'
- Audit of the patient experience of the online pelvic girdle class, which showed a high level of satisfaction with the class content. There is a high DNA rate for the class because of a low threshold to refer to the service and patient's symptoms are often resolved. It is an efficient way of ensuring that only one-to-one appointments are offered to those who remain symptomatic
- Ms. Canny Cusack is the Irish Society of Chartered Physiotherapists (ISCP) representative on the National Women's Health and Infants Programme
- Member of antenatal steering group ISCP
- Lead member of the physiotherapist ambulatory gynaecology steering group
- Chartered Physiotherapists in Women's Health and Continence (CPWHC) Secretary/committee members
- Chair of National Pessary Working Group
- Neonatal Physiotherapy National Network
- RCSI Physiotherapy Managers working group

### 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:

#### Paediatric courses

- Early intervention cerebral palsy course
- Prechtel and HINE (Neonatal assessment)
- Core training Early Detection and Intervention study (EDI)
- LAPI (Lacy Assessment of Preterm Infants)

#### Adult courses

- Advanced management of pelvic floor dysfunction
- Sinead Dufour approach to managing pelvic girdle pain
- Dry needling
- Fiona Rogers' pelvic floor education
- Taryn Hallam's Incontinence and Prolapse
- C-section scar management
- Biopsychosocial bowel course
- Trauma informed care

### PROFESSIONAL WORKING GROUPS

- Voluntary Hospitals Active Risk Management Forum for Minimal Handling Advisory Group

### CHALLENGES 2022

The main challenge for the Physiotherapy Service remains the ongoing busy clinical activity with limited physical space and administration support.

### PLANS FOR 2023

#### GYNAECOLOGY

- To develop a specialist physiotherapy service for endometriosis patients as part of the multi-disciplinary team
- To establish the triage and treat model of care for gynaecologic patients
- To introduce a new gynaecologic patient information class for those patients currently on the physiotherapy gynaecologic waiting list
- To upload a new patient information video for gynaecologic patients on managing bladder and bowel issues

#### OBSTETRIC

- To establish a second community physiotherapy-led service at the Roselawn Centre
- To re-audit physiotherapy management of obstetric anal sphincter injuries
- To monitor patient feedback of the outpatient physiotherapy service

#### PAEDIATRIC

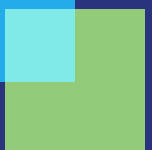
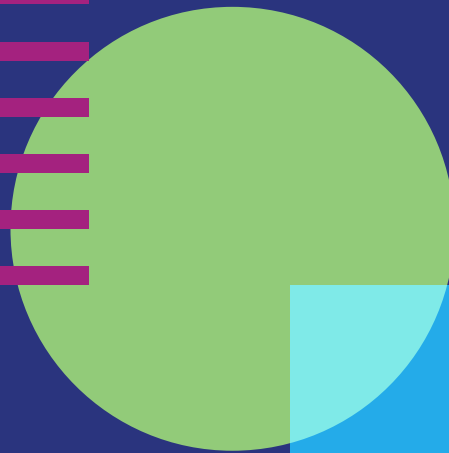
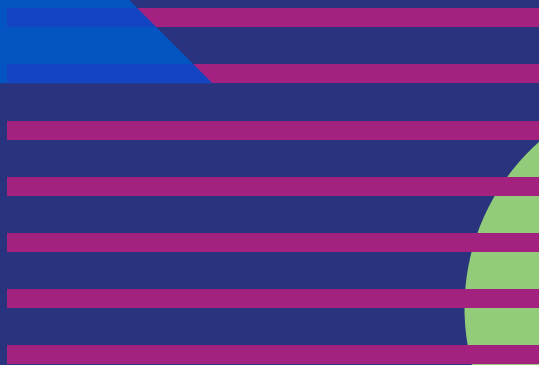
- To introduce the use of the Prechtel assessment of General Movements as part of the early detection and intervention of neonates with cerebral palsy





# Quality and Safety Services

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# Quality and Patient Safety Department

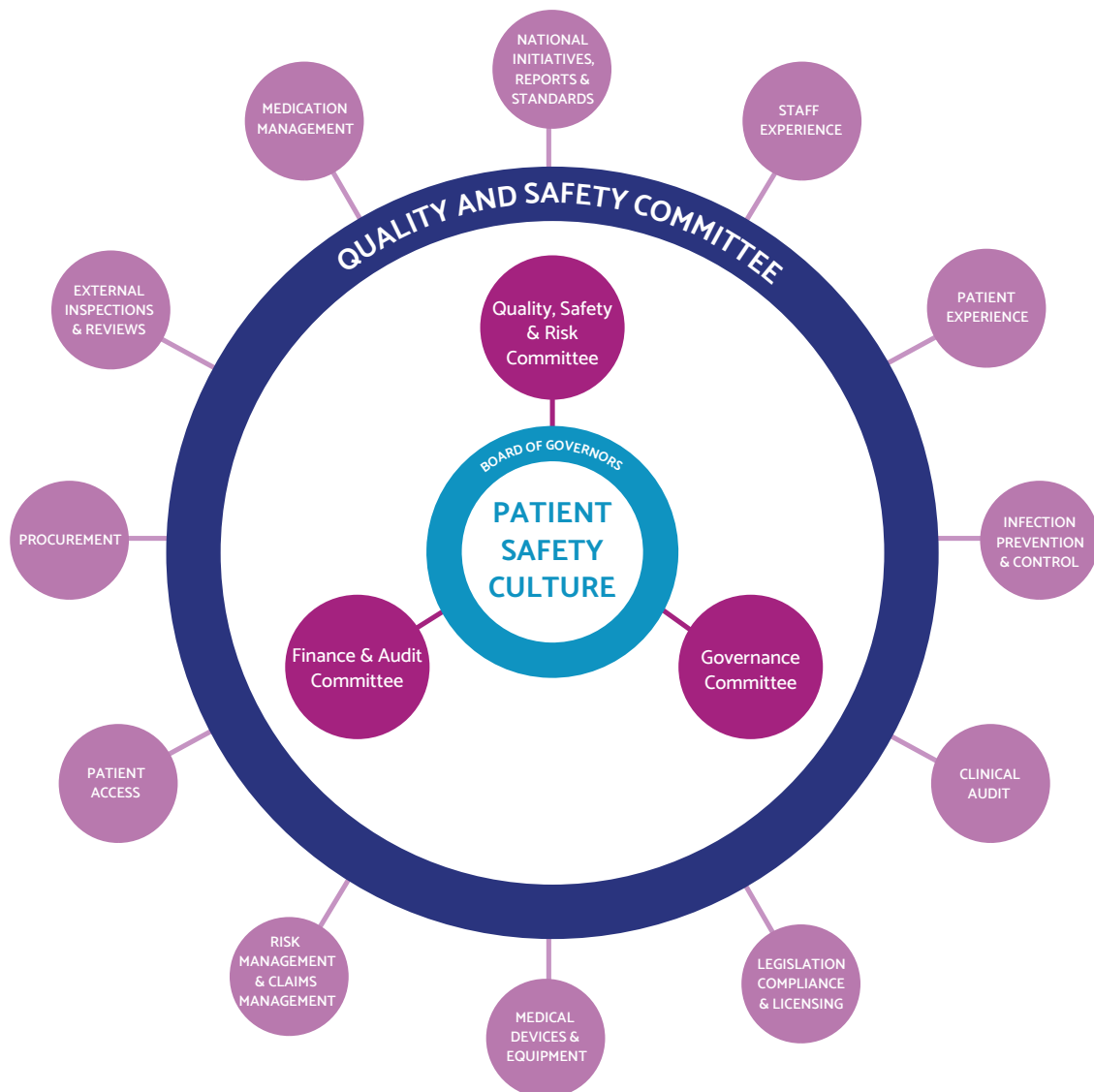
## HEAD OF DEPARTMENT

**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 Quality and Safety Committee manages quality and safety on behalf of the Executive Management Team. The Committee 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 2022 – 2026. It focuses on driving the implementation of improvements and safeguards in quality and safety. The Committee, which is Chaired by the Master, met on eleven occasions during 2022, with a specific list of standing agenda items that span all aspects of hospital clinical and administrative functions. The focus of this particular Q&S Committee is at all times to optimise patient safety improvement plans across the hospital.

### CUSTOMER FEEDBACK

The Rotunda Hospital is committed to ensuring that feedback, (comments, compliments and complaints), from those using hospital services is acknowledged, reviewed, and acted-upon, thereby ensuring that the learning derived from this feedback informs Quality Improvement Plans (QIPs).

Effective handling of service-user feedback is fundamental to the provision of a high quality service. A summary of all patient feedback received monthly is presented at the Quality and Safety Committee meetings. Relevant reports are also provided to other Committees on a regular basis, such as the Infection Prevention and Control Committee.

## COMPLAINTS MANAGEMENT

**TABLE 1: COMPLAINTS RECEIVED 2021 – 2022**

	2021	2022	% Difference
<b>Complaints received</b>	166	108	-35%
Written	164	104	-37%
Verbal	2	4	+100%
<b>Complaints closed</b>	159	105	-34%
% closed within 30 days	(98%)	94%	

There was a 35% decrease in the number of complaints received in 2022, compared to 2021. The most likely explanation for this change was the abnormally high number of COVID-19 related complaints received in 2021, mostly relating to restrictions on partners being present for appointments, inpatient stays, and accessing delivery rooms. This was confirmed by the fact that complaints increased by 41% between 2020 and 2021, and therefore it is likely that the 35%

decrease in complaints from 2021 to 2022 represents a ‘normalising’ of the complaints volume at the Rotunda.

Overall, 94% of complaints were closed within the required 30 working day timeframe, which demonstrates the commitment of managers and staff to reviewing concerns raised and responding in a timely manner. Two complaints were further escalated to the RCSI Hospitals Group for review, with one being referred to the Ombudsman’s Office.

Complaints management is included in the corporate induction programme for all new employees, which highlights the role that all staff members have in listening to concerns raised with them and trying to resolve the concern at source, escalating concerns to their senior colleagues as required, and assisting with any reviews or investigations undertaken. All staff are now encouraged to complete the HSeLanD e-learning programme – ‘Effective Complaints Handling’. Additional specialist training is provided on-site and by the RCSI Hospitals Group to staff who are responsible for formal responses to complaints.

As part of the Internal Audit Plan for 2022, a review of the complaints management process was undertaken. The purpose of the review was to assess the hospital’s complaints process and management, and the extent to which it supports the delivery of the organisation’s overall mission and vision, as articulated in the Strategic Principle 3 of the Rotunda’s 2022-2026 Strategic Plan. The internal auditors concluded that the complaints handling process was working effectively at the Rotunda, with substantial levels of assurance observed for design and effectiveness.

### OTHER PATIENT FEEDBACK

In addition to the 108 patient complaints received in 2022, a total of 1,001 positive feedback statements were received from patients and their families during the year. It is important to note that the volume of positive patient feedback is nine times greater than negative feedback at the Rotunda, validating the tremendously positive and professional care provided by the hospital. A total of 27 negative comments or suggestions for improvement were also received.

## SUCCESSES & ACHIEVEMENTS 2022

### QUALITY IMPROVEMENT PLANS (QIPs)

The Rotunda’s Strategic Plan 2022-2026 identifies four strategic principles which reflect the core focus of the hospital and the range of service for patients and their families, and staff who are key to the delivery of excellent care to all service-users. Strategic enablers support the delivery of the strategic principles. At the start of 2022, managers and staff throughout the hospital were asked to identify quality initiatives and service improvements that they would progress

and implement during the year, and to align them with the most relevant strategic principle or strategic enabler.

Throughout 2022, 306 initiatives or projects were identified in total, which were divided into two groups – strategic (179) and operational (127). Progress on their implementation was monitored regularly during 2022, and was reported to the Rotunda Board's Quality, Safety and Risk Committee. By year end, 68% of these initiatives (207) had been completed and fully implemented, with 27% (84) deemed to be progressing well, and with only 5% (15) deemed to have been either deferred or not progressed.

### AUDITS AND INSPECTIONS

No HIQA inspections were undertaken during 2022. However, preparations continued in anticipation for either announced or unannounced inspections which might occur in 2023. The annual Laboratory INAB inspection took place in April, and was again a resounding success for the hospital, with approval of all aspects of Laboratory Services for another year.

### NATIONAL MATERNITY BEREAVEMENT SURVEY

A new National Maternity Bereavement Survey was completed in 2022, with its purpose being to learn from the experiences of women and their partners in order to improve the standard and quality of Ireland's maternity bereavement services. The survey was open to women and their partners who experienced a second trimester miscarriage, the stillbirth of a baby, or the early neonatal death of a baby during the years 2019 to 2021. The survey was completed during the months of September and October 2022, with the results being expected in mid-2023.

### OPEN DISCLOSURE

Training for all staff on open disclosure is mandatory. All staff are encouraged to complete the HSeLanD Module 1 programme – 'Communicating Effectively Through Open Disclosure', or to attend a staff briefing session in this regard. This training was re-introduced towards the end of 2022, following the easing of COVID-19 restrictions. Members of the team involved in formal open disclosure meetings were encouraged to complete the HSeLanD Module 2 programme – 'Open Disclosure: Applying Principles to Practice', and to attend a face-to-face workshop, three of which were facilitated by year end. Uptake of open disclosure training is reported at monthly Quality and Safety Committee meetings and to the RCSI Hospitals Group quarterly. By the end of 2022, 80% of all Rotunda staff had completed mandatory Open Disclosure training, which is renewable every three years.

### NEW WAYFINDING PROJECT

The initial phase of the wayfinding initiative includes directional signage in the main hospital building (blue zone), external buildings (green zone), and outpatient areas (orange zone). Uniformity of signage throughout the campus will provide clear and concise directional information, provide intuitive visual cues, ensure compliance with the requirements of the Official Languages Act and meet best practice recommendations in relation to signage (includes Braille and tactile). Signage in the blue and green zones was completed in 2022.

### PLANS FOR 2023

- Wayfinding directional signage to be installed in the remaining outpatient area (orange zone). Identification signage for the public areas of the main hospital (blue zone) will be finalised and installed. The wayfinding requirements for the ambulatory building adjacent to the Rotunda campus will be completed
- Maximise the uptake of staff training in open disclosure by monitoring training uptake, facilitating face-to-face training and providing reports to Department Heads on compliance with training requirements for their staff
- On receipt of feedback from the National Maternity Bereavement Survey, identify areas for improvement and oversee the development of quality improvement plans and monitor their implementation

### INFORMATION GOVERNANCE SECTION

Information Governance brings together relevant legislation, guidance and best practice that applies to the handling of information, and offers to ensure implementation of standardised information governance policies, as well as compliance with relevant legal requirements.

**TABLE 2: FREEDOM OF INFORMATION (FOI) & SUBJECT ACCESS REQUESTS, 2021 – 2022**

	2021	2022	% Difference
Personal FOI requests received	275	292	+6%
Non-personal FOI requests received	36	23	-36%
Subject Access Requests received	1,236	1,355	+10%
<b>Total requests received</b>	<b>1,547</b>	<b>1,670</b>	<b>+8%</b>

Under legislation, the hospital is required to respond to FOI requests within 20 working days. In 2022, 87% of all FOI requests were completed within this timeframe. The Data Protection Act 2018 provides members of public with the 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 Act also gives individuals the right to obtain a copy of any information relating to them in electronic or manual format. All such requests are considered as Routine Access Requests.

The two top categories of requesters in 2022 were patients and legal representatives acting on patients' behalf. Overall, 99% of these requests were responded to within the required one calendar month timeframe for such routine cases.

### DATA PROTECTION

Data protection training is mandatory for all staff. Training is included in the corporate induction programme for all new hospital employees, and department-specific training is also facilitated, as relevant to the individual particular clinical area. Otherwise, staff are encouraged to complete the relevant HSeLanD module. As of December 2022, a total of 67% of all hospital staff were up to date on General Data Protection Regulation (GDPR) training, which represented a decrease compared to 2021.

### DATA PROTECTION BREACHES AND NON-CONFORMANCES

A personal data breach means a breach of security leading to the accidental or unlawful destruction, loss, alteration, unauthorised disclosure of, or access to personal data. The hospital's Data Protection Officer (DPO) reviews every breach to consider the likelihood and severity of the risk to the person's rights and freedoms. If it is likely there will be a risk, the DPO will report the breach to the Office of the Data Protection Commissioner.

By law, the hospital has 72 hours from the time of notification of any potential breach to report breaches that meet the threshold. In 2022, 17 data breaches and 80 non-compliances were reported. Breach management, and learning from breaches and non-compliances, is incorporated into mandatory data protection training.

### PLANS FOR 2023

- Develop further data protection audit tools to monitor compliance and increase staff awareness
- Continue supporting and delivering effective discharge summary distribution service to Public Health Centres
- Further assessment of data security and protection training needs across the organisation, with a target to reach at least 80% GDPR training compliance
- Review and update of relevant policies, which contain data protection elements

# Infection Prevention and Control Service

## HEAD OF SERVICE

**Dr. Meaghan Cotter**, Consultant Microbiologist

**Dr. Richard Drew**, Consultant Microbiologist

## STAFF

**Ms. Anu Binu**, Infection Control Midwife

**Ms. Alva Fitzgibbon**, Infection Control Midwife

## SERVICE OVERVIEW

The Infection Prevention and Control (IPC) team is responsible for ensuring that infection prevention and control standards are provided to the highest possible standards, consistent with national and international standards. As a key member of the frontline clinical healthcare staff, the IPC team provides support and specialist advice to all disciplines of staff, patients, and members of the public regarding the prevention and control of infections. The IPC team has a comprehensive and structured infection prevention programme aiming to minimise the risk of acquiring infections in the hospital. Training is provided to healthcare workers, and advice is provided to patients and visitors on how best to reduce the risk of healthcare associated infections (HCAI) through education, audit, surveillance, and consultation, utilising posters, leaflets and the development of guidelines.

## CLINICAL ACTIVITY

The main responsibilities for the IPC team include:

- Provide leadership and demonstration of best practices in the area of infection prevention and control
- Provide specialist knowledge, consultancy and expertise in IPC to hospital management and all healthcare staff
- Advise on nursing care of individual patients with infectious conditions or at risk of acquiring infection
- Advise hospital management and healthcare staff regarding the need for isolation facilities for patients with infectious diseases
- Maintain effective communication to ensure that infection control information is conveyed to relevant staff
- Provide education and advice to patients and families on specific infection risks and treatments
- Act as an advocate for patients and staff on IPC issues

- Assist and investigate outbreaks of hospital infection with particular reference to their source and root cause analysis of HCAs
- Implement an efficient infection control surveillance system to facilitate the prompt identification of patients and staff with infection
- Regularly evaluate control of infection measures by means of inspection, audit, and surveillance

## SUCCESSSES & ACHIEVEMENTS 2022

The ongoing COVID-19 pandemic represented a continued, ongoing challenge for the Rotunda in effective delivery of services while maintaining a safe IPC environment. Interventions included:

- A COVID-19 Committee organized by the Executive Management Team, met weekly initially and then monthly to monitor and update IPC responses
- The Hospital remained divided into Red, Orange, Yellow and Green zones for appropriate patient placements and PPE use
- Providing focused education and training for patients and staff around COVID-19 PIC issues
- Providing pre-admission COVID-19 swabbing for asymptomatic elective admissions as well as a testing service for symptomatic patients and staff
- Use of social media for education and sharing information about COVID-19
- Continued point-of-care molecular testing for COVID-19 in multiple clinical areas

In addition, important non-COVID-19 related IPC achievements included:

- Achieved 96% hand hygiene compliance in the national hand hygiene audits implemented at the Rotunda throughout 2022
- Worked with the hospital to open both the new Recovery Room and Operating Theatre with optimal IPC compliance
- Engaged with engineers/architects and Rotunda Estates and Facilities department on possible redevelopment of nearby premises for clinical use

- Ongoing weekly surveillance in NICU for multidrug resistant organisms, with prompt recognition and management of potential outbreaks

## CHALLENGES 2022

### ONGOING CHALLENGES INCLUDED:

- Staff shortages due to staff illness
- Increased activity level in the hospital
- Increased isolation requirements due to volume of symptomatic patients and 'close contacts' of COVID-19 cases
- Increased numbers of severe respiratory illness patients who required more specialised care at a time of reduced staffing numbers
- Ensuring safest clinical environment for all patients while balancing other risks and priorities during the COVID-19 pandemic
- Dynamic changes in SARS-CoV-2 prevalence and emergence of new more infectious variants
- Changes in public health guidance and measures for the general public, such as relaxed mask mandates and social distancing rules, while acute healthcare facilities were required to maintain strict IPC measures

## PLANS FOR 2023

- Optimise staff education and training about vaccinations
- Increase clinical IPC 'huddles' to monthly to increase awareness of multidrug resistant organisms
- Ongoing monitoring of the built environment, in particular with new buildings being developed for the hospital, to ensure compliance
- Introduction of an IPC tool-kit for all ultrasound probes
- Introduction of a hand hygiene technique training system
- Audit of all gel dispenser positions and availability







# Clinical Audit Service

## HEAD OF SERVICE

**Dr. Sharon Cooley**, Consultant Obstetrician Gynaecologist

## STAFF

**Ms. Mary Whelan**, Clinical Audit Facilitator and Assistant Director of Midwifery

**Mr. Colin Kirkham**, Research Officer

**Dr. Icchya Gyawali**, NCHD Representative

## 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 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 a clinical audit database.

## SUCCESSSES & ACHIEVEMENTS 2022

### ENHANCING PATIENT CARE

#### Register of Clinical Audit

In total, 76 clinical audits were registered in 2022 (47 first time audits, 24 re-audits and five continuous audits), compared with 67 audits registered in 2021.

**TABLE 1: NUMBER OF COMPLETED CLINICAL AUDITS 2018 - 2022**

Audit type	2018	2019	2020	2021	2022
First audits	41	38	23	21	42
Re-audits	14	17	13	15	27
<b>Total</b>	<b>55</b>	<b>55</b>	<b>36</b>	<b>36</b>	<b>69</b>

#### Clinical Audit Group weekly meeting

The core group within the Clinical Audit Service continues to meet on a weekly basis to discuss and approve audit applications. All reports and action plans received are also reviewed at that time.

#### Support and Mentoring

The team continues to provide advice, guidance and support to clinical audit personnel in other hospitals upon request.

## EDUCATION AND TRAINING

The clinical audit team regularly delivers in-house educational sessions on the clinical audit cycle for all disciplines. 2022 saw a return to in-person education sessions. An education session was delivered to Trinity College Dublin MSc Midwifery students.

The Biannual Clinical Audit and Research Meeting returned to in-person presentations. A large number of staff attended. These meetings provide a forum for audit leads to discuss their findings and actions for quality improvement. Additionally, clinical audit results and action plans were then disseminated to all key stakeholders, to ensure widespread learning.

A number of audits were presented at the Junior Obstetrics and Gynaecology Society (JOGS), national meeting in November 2022, including:

- Assessment of compliance with maternal medicine referral (Ching Yuan Ng and Claire McCarthy)
- Audit of management of severe mastitis (Shahad Al Tikriti)
- Audit of booking scans since the introduction of MNCMS (Amy Worrall)
- Audit of thromboprophylaxis following postpartum haemorrhage (Jasmeet Kumari and Claire McCarthy)
- Epilepsy in pregnancy: Patient safety challenges in contemporary practice (Aaron Ryan, Emma Malone and Nicola Maher)
- Audit of outpatient management of PPRM (Sowmya Mayigaiah and Ita Shanahan)
- Use of methotrexate in management of ectopic pregnancy (Icchya Gyawali, Roisin Gryson and Sharon Cooley)
- One year review of Anti-Ro/LA autoantibody testing in an obstetric population (Elizabeth Tunney, Clare Crowley)
- Impact of an outpatient Word catheter programme for Bartholin's abscess (Amy Worrall, Fatima Alaya)
- Audit of the management of gestational trophoblastic disease in the Rotunda Hospital (Patricia O'Dwyer and Karen Flood)

Other audit presentations included:

- Obstetric Anaesthetists Annual meeting, Wales, May 2022: Audit of compliance with OAA PDPH Guidelines on patient follow-up (Ankita Miglani et al)
- International Gynaecologic Cancer Society, New York, September 2022: Cervical glandular intraepithelial neoplasia incidence, management and outcomes (Aoife Corcoran et al)

The winners of the July 2022 Biannual Clinical Audit Competition were:

**1st Place**

Dr. Aaron Ryan – A review of the accuracy of Thrombocalc with respect to postpartum haemorrhage in caesarean section.

**2nd Place**

Dr. Muhammad Tahir – Audit of fibrinogen concentrate during treatment of postpartum haemorrhage from 2019-2021.

**Joint 3rd Place**

Dr. Liz Tunney – Postmenopausal bleeding and hysteroscopy – a review.

Ms. Maria Lozano Tornay – Re-audit of skin-to-skin contact in the Labour and Delivery Suite.

## CHALLENGES 2022

Reduced staff resources persist, limiting activity and development of the Clinical Audit Service.

## PLANS FOR 2023

It is hoped to:

- Re-convene Quarterly Interim Audit Results Meetings
- Seek restoration of previous staff resources to optimise service delivery
- Identify and implement further innovative methods for widespread dissemination of clinical audit results and their recommendations

# Clinical Risk and Patient Safety Service

## HEAD OF SERVICE

**Ms. Siobhan Enright**, Head of Clinical Risk and Medicolegal Service

## STAFF

- Ms. Aisling Brennan**, Clinical Risk Coordinator
- Dr. Aliona Villinsky**, Clinical Risk Coordinator
- 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 system across the hospital, as well as 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), as well as monitoring of serious incidents (SIs).

### CLINICAL RISK MANAGEMENT:

Risk management is a process of clearly defined steps, which serves to support decision-making through improved insight 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 works collaboratively with hospital staff and managers in performing risk analyses using the Rotunda Risk Assessment Form (adapted from the HSE Integrated Risk Management Policy, 2017). The resultant risk evaluation and rating, combined with the strength of any mitigating control measures, determines if a particular risk needs to be escalated to the Corporate Risk Register. The Head of Clinical Risk and Medicolegal Services is a member of the Hospital Risk Committee. In 2022, 19 clinical risk assessments were performed and reviewed, two of which were escalated to the Corporate Risk Register.

### INCIDENT MANAGEMENT:

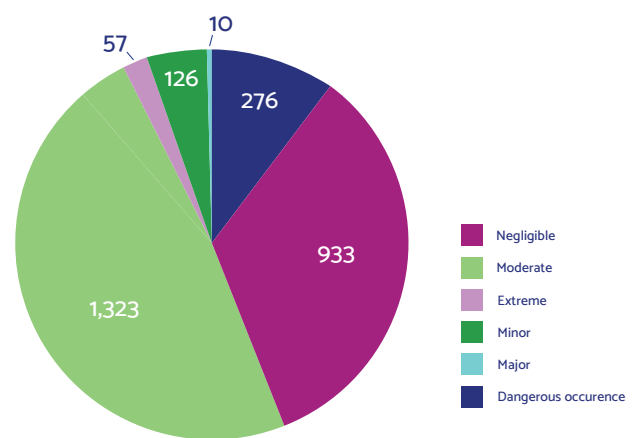
A clinical incident is an event or circumstance that could have resulted, or did in fact result, in unnecessary harm to a patient during the provision of care. All clinical incidents that fulfil established reporting criteria are recorded on the National Incident Management System (NIMS).

## ACTIVITY

Figure 1 provides a breakdown of the number of incidents reported to SCA through NIMS and the severity category. There was a 15% decrease in incident reporting compared to 2021 figures, consistent

with a 9% reduction in the number of babies delivered during the same time period.

**FIGURE 1: INCIDENTS REPORTED TO SCA 2022 (N = 2,725)**



Examples of incidents and severity category include:

- **Negligible:** incident where no intervention was required e.g. medication error
- **Minor:** delay in treatment with no impact on care
- **Moderate:** intervention was required e.g. medication for postpartum haemorrhage
- **Dangerous Occurrence:** incidents related to failure of equipment, security, resources etc.
- **Major/Extreme :** intrauterine death/stillbirth with birth weight > 500g

The majority of incidents reported were categorised as negligible or moderate. A small percentage (< 1%) of incidents reported required further in-depth review at the hospital’s weekly Initial Incident Review Meeting (IIRM). A key focus of the IIRM is to review adverse clinical incidents with a view to determining whether clinical and safety standards were followed and whether the adverse incident may have been prevented. It remains an unavoidable feature of healthcare that adverse patient outcomes will occur, the avoidance or prevention of which cannot be absolute. Therefore, the focus of the IIRM is to determine whether hospital systems or practices may have exposed a patient to a heightened risk of adverse outcome, and whether enhanced safety measures should be considered in light of this occurrence.

The Clinical Risk team prepares incident review reports (analogous to a Concise Desktop Review) for the weekly IIRM sessions. The process follows the SBAR (Situation, Background, Assessment, Recommendations) format, adapted from the template provided in the HSE Incident Management Framework (2020) and includes Scope of Review, Analysis, Findings and Outcome. The IIRM group in 2022 consisted of Prof. Fionnuala Breathnach and Prof. Sam Coulter-Smith (Consultant Obstetrician Gynaecologists), Dr. Breda Hayes (Consultant Neonatologist), Dr. Anne Doherty (Consultant Anaesthesiologist), Ms. Geraldine Gannon (Assistant Director of Midwifery/Nursing), the Assistant Masters and Clinical Risk representatives.

Through systematic analysis of clinical incidents, key learnings are identified and disseminated to clinical staff. In 2022, there were 189 cases reviewed at these Initial Incident Review Meetings. Clinical cases that were reviewed include stillbirth, neonatal encephalopathy, postpartum haemorrhage, shoulder dystocia, and unplanned return to the operating theatre. The outcomes of these reviews are presented to the hospital EMT at their weekly meetings, where timely decisions are taken regarding further review (comprehensive or concise systems analysis) that may be required or whether further risk mitigation steps need to be implemented. This system provides the most senior management of the hospital near real-time visibility into all adverse occurrences at the hospital, thereby allowing rapid management response to potential suboptimal performance, either at the level of individuals or wider teams and systems within the hospital. Table 1 provides data on the number of Systems Analyses performed from 2020 to 2022, with the reduction in the number being attributed to a more robust system for concise desktop review where analysis, findings and recommendations are efficiently made. There has been an increase in the total number and quality of reviews completed. This has been achieved through quality improvement initiatives within the Clinical Risk and Patient Safety Service to ensure the incident review process aligns with national and international best practices. Governance and oversight by the Rotunda Board, the EMT and senior multidisciplinary team members has ensured the high standard achieved through the incident review process is sustainable into the future.

**TABLE 1: CLINICAL RISK AND PATIENT SAFETY INCIDENT REVIEWS COMPLETED 2020 – 2022**

Review Type	2020	2021	2022
Preliminary assessment and review (Clinical Risk Coordinator/Consultant Review/Manager)	1,994	2,460	2,162
Concise desktop review	136	165	189
Concise systems analysis	5	2	2
Comprehensive systems analysis	3	1	5

Dissemination of learning and outcome from reviews is provided through direct, timely feedback to Obstetric, Neonatal, Anaesthesiology, and Midwifery teams. The review process also ensures appropriate support mechanisms are in place for affected patients, families and staff, including additional follow-up in relevant specialist postnatal clinics with senior clinical expertise, or care from other medical disciplines such as mental health support.

A monthly summary report is provided as part of the CEO’s report to the General Purposes Committee of the Board on Serious Reportable Events, 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’s Board.

During 2020 to 2021, the Rotunda’s risk monitoring systems noted an increase in the number of neonatal encephalopathy cases, in response to which the EMT immediately commissioned a Neonatal Encephalopathy Taskforce to perform an aggregate review of all cases. In 2022, the HIE taskforce completed a second comprehensive review report of all HIE cases for the period April 1, 2021 to March 31, 2022. All 11 of the key recommendations of the HIE Taskforce group have been broadly accepted and implemented through a HIE Taskforce Implementation Group. In response to these recommendations being implemented, there was a 60% reduction in the incidence of HIE for the remainder of 2022 compared to 2021. Through ongoing audit and review, HIE will remain a key focus of the Clinical Risk Service moving forward.

In February 2022, in response to a rise in the incidence of Postpartum Haemorrhage (PPH) greater than 1,000mls, a PPH Working Group was commissioned by the Executive Management Team. The group consisted of multidisciplinary team members across all relevant clinical teams in the hospital, with their objective being to examine the intrapartum and postpartum management of patients to identify the possible causes of increasing PPH rates. The strategic goal of the group was to implement specific recommendations to reduce the current rates of PPH and to evaluate the effectiveness of these recommendations. The group remains active at the end of 2022, with a number of significant clinical management changes planned for 2023. Achievements to date include introduction of formal measured blood loss for all deliveries, change to a larger swab size for perineal repair, and introduction of PPH Risk Assessment Score and Prophylactic Medication Plan to be launched in Q1 2023.

An overview of Serious Reportable Events and Serious Incidents 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 Clinical Risk and Patient Safety Service presented 36 cases at SIMF meetings during 2022.

**TABLE 2: SERIOUS REPORTABLE EVENTS 2020 - 2022**

Serious Reportable Events	2020	2021	2022
Encephalopathy	21	20	13*
Stillbirths	8	8	12
Neonatal Death	4	0	3**

(\*9 Hypoxic Ischaemic Encephalopathy cases, \*\*1 baby transferred in to Rotunda from external hospital)

#### CLAIMS MANAGEMENT:

Claims management relating to clinical incidents is also a key function within the Clinical Risk and Patient Safety 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 further learning and dissemination to clinical staff. In 2022, there were 30 medico-legal claims settled, which was a 100% increase compared to 2021, while 26 new proceedings were served.

There were three Coroner's cases heard in 2022, with the service still being impacted by the COVID-19 pandemic resulting in delayed hearing of cases.

#### SUCCESSSES & ACHIEVEMENTS 2022

- A Multidisciplinary Team approach to Review of Hypoxic Ischaemic Encephalopathy (HIE), Postpartum Haemorrhage (PPH), and Management of High Dependency Unit (HDU) patients was implemented in response to clinical risk monitoring data
- Implementation of electronic Clinical Incident Reporting in all clinical areas leading to faster turnaround time for completion of incident investigations
- Introduction of Zoho Electronic System for management of Clinical Risk Assessments

#### PLANS FOR 2023

- Further development of Zoho Incident Management System including implementation of Quality Improvement App
- Continuation of the Quality Improvement Projects with Multi-disciplinary Teams

- Quality Improvement Plans for other areas include:
  - Improving management of PPH in response to the findings of the PPH Working Group
  - Improving patient care for HDU admissions
  - Optimising wound infection management
  - Optimising medication management through focussed areas of error reduction





# Clinical Information Service

## HEAD OF SERVICE

**Ms. Kathy Conway**, Head of Clinical Reporting

## STAFF

**Ms. Martina Devlin**, HIPE Clinical Coder

**Ms. Carmen Gabarain**, HIPE Clinical Coder

**Ms. Mary O'Reilly**, HIPE Clinical Coder

**Ms. Aideen Preston**, 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 Inpatient Enquiry system (HIPE). There are routine periodic reports produced for the hospital Executive Management Team, various committee meetings and for various 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 are also produced as needed

## EXTERNAL REPORTS

The following reports are provided by the Clinical Information Service for various external entities:

- RCSI Hospitals Group Senior Incident Management Forum (SIMF)
- Irish Maternity Indicator System report to the HSE
- Monthly Patient Activity Statement to the RCSI Hospitals Group and to the HSE, as published on the Rotunda website
- Business Intelligence Unit reporting 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)

## SUCCESSSES & ACHIEVEMENTS 2022

There were 12,639 day cases and 13,150 inpatients coded during 2022. An efficient mechanism was developed to identify infants receiving care and treatment on postnatal wards.

## CHALLENGES 2022

The main challenge for the service in 2022 was to complete clinical coding in a timely manner. Ms. Mary O'Reilly retired during this year which left a major knowledge gap. The post will be replaced by a new clinical coder in early 2023.

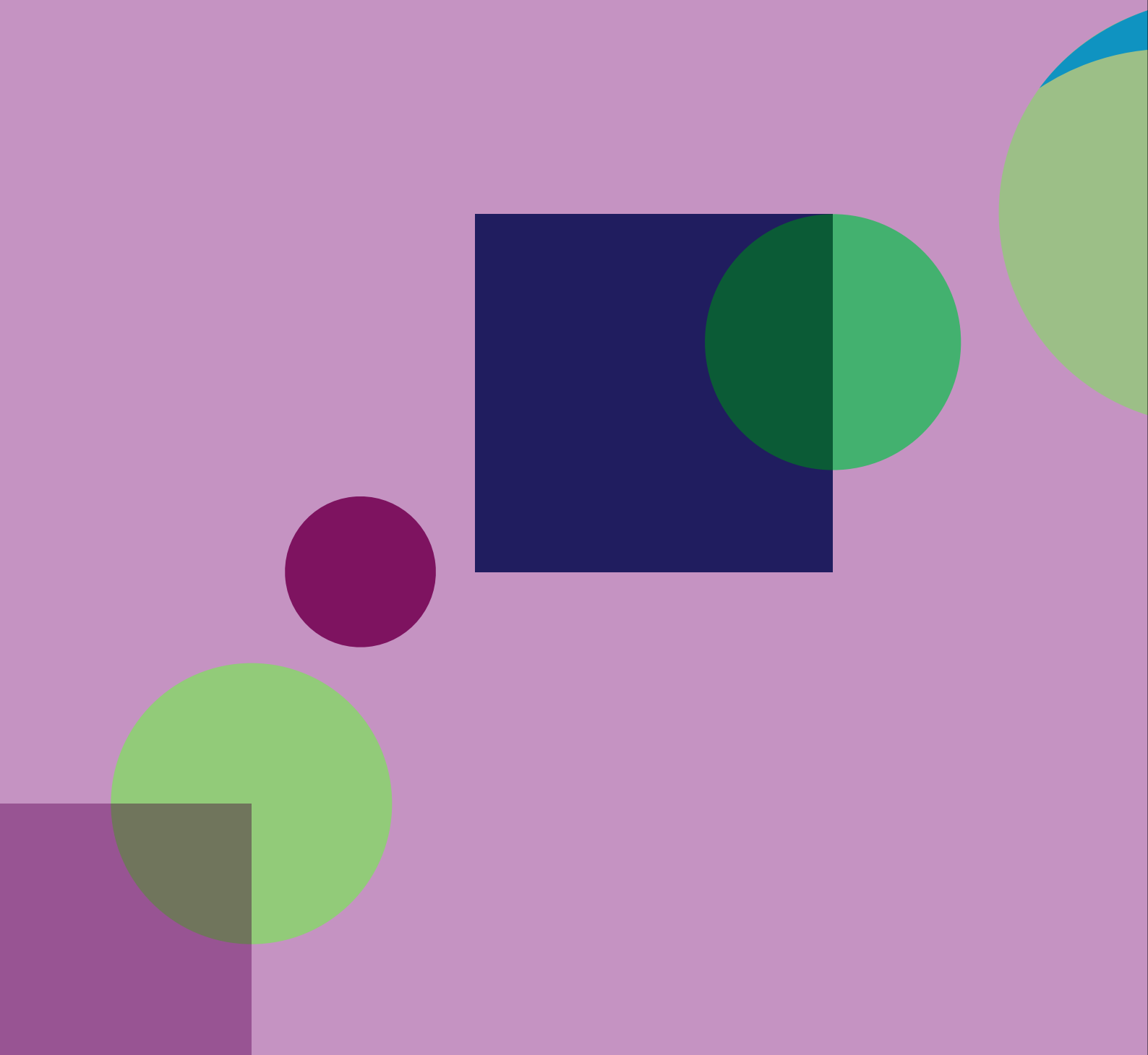
## PLANS FOR 2023

- To ensure that all reports are appropriately validated before issuing internally or externally
- To continue to ensure that all reports are produced in a timely fashion
- To continue to meet all HIPE deadlines for coding
- To reconcile all documented and reported obstetric neonatal risks and complications to ensure accurate data is provided for the Irish Maternity Indicator System (IMIS)
- To ensure all relevant data on women referred with postmenopausal bleeding are recorded on iPMS at time of referral in order to complete a national template
- Compiling a quarterly report on caesarean section wound surveillance to facilitate more in-depth analysis and data gathering



# Academia

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# Department of Research

## HEAD OF DEPARTMENT

**Dr. Zara Molphy**, Director of Obstetrics and Gynaecology Research (RCSI)

## STAFF

**Ms. Denisa Ramona Asandei**, RCSI Clinical Operations Manager

**Ms. Elisa Belmonte**, RCSI Communications Manager

**Mr. Mark Kerins**, Graphic Designer

**Ms. Hollie Byrne**, Research Administration Assistant

**Ms. Leah Doyle**, Visiting Research Scientist

**Ms. Meadhbh Aine O'Flaherty**, Communications Advisor

**Ms. Sirisha Bellamkonda**, Clinical Research Coordinator

**Ms. Eimear Curtin**, Clinical Research Coordinator

**Ms. Susan Hatt**, Clinical Research Coordinator

**Mr. Adhin John Varghese**, Clinical Research Coordinator

## SERVICE OVERVIEW

The Department of Research is jointly run operationally between the Rotunda Hospital and 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 a number of observational and pilot studies. In 2022, the Department of Research continued to grow, innovate and recover from a challenging period of conducting clinical research during the COVID-19 pandemic.

### INTERVENTIONAL CLINICAL RESEARCH 2022

- **IRELAND** – This is a multicentre RCT investigating the role of aspirin in pregnancy outcomes of women with pre-gestational diabetes. The trial is led by the Rotunda Hospital and is also recruiting patients at the Coombe Women & Infants University Hospital, National Maternity Hospital, Our Lady of Lourdes Hospital Drogheda, Galway University Hospital and Cork University Maternity Hospital
- **HOME IND** – A randomised open-label trial to assess different methods of outpatient induction of labour and compare the efficacy of a prostaglandin vaginal insert (Propess) versus a non-pharmacologic cervical dilator (Dilapan) for induction of labour at 39 weeks' gestation in normal risk nulliparous women
- **HIGHLOW** – An open label RCT comparing different doses of low-molecular-weight heparin (LMWH) to prevent recurrence of potentially life-threatening blood clots in pregnant women

- **PARTUM** – A pilot trial to determine whether low-dose aspirin (ASA) is efficacious and safe at preventing postpartum venous thromboembolism (VTE) in women at increased risk of VTE, compared to placebo
- **PIPELLE** – A single site RCT to investigate whether the Pipelle endometrial sampling device is of benefit in patients with postmenopausal bleeding and an atrophic-appearing uterine cavity

### OBSERVATIONAL CLINICAL RESEARCH 2022

- **AI-PREMIe** (Artificial Intelligence to prevent preterm birth due to preeclampsia while protecting mothers lives). This is an SFI-funded award-winning project launched in 2020, in which the Rotunda has partnered with UCD, National Maternity Hospital and the Coombe Women and Infants' University Hospital, to evaluate a combination of patient biomarker testing and risk assessment powered by machine-learning to diagnose preeclampsia and predict patients' outcome
- **DIONYSUS** (International Registry for the Management and Clinical Outcomes in Hemolytic disease of the fetus and newborn). This is an international multicentre observational cohort study to assess differences in prenatal and postnatal management strategies and clinical outcomes of haemolytic disease of the fetus and newborn (HDFN) in cases with moderate to severe HDFN due to Rhesus, Kell or other types of red blood cell antigen alloimmunization, managed at expert fetal therapy centres worldwide

### CLINICAL INNOVATION UNIT (CIU)

The Clinical Innovation Unit, led by Prof. Richard Drew (Consultant Microbiologist), is an informal collaborative of staff based in the Rotunda laboratory that aims to facilitate, support and develop research projects with the goal of introducing the latest diagnostic advances to the Rotunda. By working with colleagues across different disciplines and academia, we can ensure that the Rotunda is a leader in diagnostics for obstetrics, gynaecology and neonatal care. The CIU works closely with Children's Health Ireland through cross-appointed laboratory consultants given the significant overlap in terms of clinical problems.

In 2022, the research output of 12 peer-reviewed papers centred around three key themes, in partnership with Children's Health Ireland and the Irish Meningitis and Sepsis Reference Laboratory.

The three main research themes for 2022 were:

#### Artificial intelligence and clinical prediction tools

- Introduction of a C-section calculator to predict risk of C-section wound infections
- Calculator for predicting risk of congenital CMV transmission

#### Neonatal and Paediatric infections

- Treatment of Clostridium difficile infection in children
- Chagas disease
- Role of platelets in paediatric and neonatal sepsis
- Neurological involvement in children with haemolytic uraemic syndrome
- Meningitis associated with urinary tract infections
- Ophthalmia neonatorum
- Use of full-blood count in screening asymptomatic infants for early onset sepsis
- Haemophilus influenzae type F infections

#### Obstetric and gynaecologic infections

- Mycoplasma genitalium infection
- Assessing standards for prevention of Group B streptococcus infection
- Herpes encephalitis in pregnancy
- Hepatitis C screening in pregnancy

### RESEARCH COMMUNICATIONS

In 2022, the Department of Research continued its responsibility for the management and development of the Rotunda Hospital website. Rotunda.ie had over 1.6 million page views in 2022, with over 743,000 unique users. The Rotunda Hospital gained over 572 new followers on Twitter, reaching a total of over 6,400 followers by the end of the year. The Rotunda Hospital Facebook community grew by over 413 users in 2022, resulting in a total of 15,027 followers at year-end. The Rotunda Hospital Instagram channel, set up in 2019, has expanded by over 1,300 followers, with a total of 13,811 followers at the end of 2022.

### FUNDING SUCCESS

The Rotunda Research Department had a very successful year in 2022 with awards received from a number of funding bodies for the following projects:

- BIAS: Inequalities in Women's Health and Research, Science Foundation Ireland (SFI) Science Week Programme, €35,000
- Early Pregnancy Information Day, Health Research Board (HRB), Conference and Events Sponsorship Scheme 2022, €5,000
- Research Communication: A Novel Approach, Health Research Board (HRB), Conference and Events Sponsorship Scheme 2022, €5,000
- GRACE: Global Research Consortium of Artificial Intelligence in Cardiotocography (CTG) for Enhanced Maternal-Fetal Outcomes, Rotunda Foundation Research Call 2022, €60,000
- PERIMETER: Perinatal Outcomes of Early-Onset Fetal Growth Restriction, Rotunda Foundation Research Call 2022, €18,113
- Improving the prenatal detection of critical congenital heart defects (CCHD) across Ireland – Investigation of current policies and implementation of a national consensus-based targeted fetal echocardiography screening strategy, Rotunda Foundation Research Call 2022, €7,500

### AWARDS & ACHIEVEMENTS

- The findings of HIGHLOW, an investigator initiated, multicentre, international, open label randomised trial were published in The Lancet in November 2022
- BIAS: Inequalities in Women's Health and Research 2021 SFI Science Week event was shortlisted in the Equality Initiative of the Year category at the Irish Healthcare Awards in December 2022
- BIAS, Debunking The Myths and The Breakfast Club were all presented at SCI:COM, a Science Foundation Ireland-sponsored science communications event at the Aviva Stadium in December 2022

### RESEARCH EVENTS

During the COVID-19 pandemic, the research team quickly adapted to hosting research events online. As restrictions eased during 2022, a number of training events and workshops were hosted in-person while a selection of events continued online due to the large numbers engaging with content via The Rotunda website and social media platforms (Instagram, Twitter and Facebook).

### NATIONAL FETAL ECHO STUDY DAY

Hosted by RCSI's Department of Obstetrics and Gynaecology, in collaboration with the Rotunda Hospital and the Coombe Women and Infants' University Hospital, a National Fetal Echo Study Day was established to train clinical teams in detecting Critical Congenital Heart Disease (CCHD) during pregnancy. The study day was held in April 2022 where training was delivered in the state-of-the-art clinical simulation suite at the RCSI National Surgical and Clinical Skills Centre. On the day, presentations were delivered by world-class obstetric and paediatric consultants and fetal medicine and sonographer specialists. Live fetal scanning sessions were also conducted on pregnant patients, some of whom had a CCHD diagnosis and had been attending the Rotunda Fetal Cardiology Service. Training was provided to attendees on how to examine a normal fetal heart and how to recognise cardiac pathology. The study day was accredited by RCPI (Royal College of Physicians in Ireland) for six CPD points and was a great success.

### Science Week 2022

The Department of Research was awarded €35,000 in funding from Science Foundation Ireland to run a weeklong festival titled 'BIAS: Inequalities in Women's Health and Research' during Science Week 2022. This event aimed to encourage national dialogue and debate around biases that still exist in society and which prevent women from pursuing a career in STEM (science, technology, engineering, maths), receiving adequate healthcare, and benefiting from research findings. Topics discussed included breastfeeding, contraception, menopause, endometriosis and PCOS among others with a team of experts from the Rotunda Hospital. The project was hosted on various platforms including a dedicated website, the Rotunda Facebook page and a dedicated Instagram page. BIAS was a huge success with over 56,000 people tuning into Instagram Lives with Dr. Ronan Daly, Dr. Vicky O'Dwyer and Prof. Afif El-Khuffash during the weeklong event alone. Obstetric and gynaecologic stories and interviews from women who have experienced bias in healthcare were also presented on social media platforms, and the week concluded with a live panel discussion with Prof. Maeve Eogan, Ms. Geraldine Gannon and Dr. Caoimhe Hartley on 'Improvements in Women's Healthcare in 2022'.

### Debunking The Myths – The Science Behind Our Sexual Health

RCSI Department of Obstetrics and Gynaecology in collaboration with colleagues at the Rotunda Hospital developed the 'Debunking the Myths' programme, to provide clear and reliable information in relation to sexual health while also stimulating open discussion and curiosity around the topic. The programme consists of a series of interactive two-hour workshops and online engagement tools. Delivered by RCSI and Rotunda Hospital consultants, non-consultant hospital doctors, community GPs and researchers, the workshops explore a range of topics, including Human Papilloma Virus (HPV) vaccine, contraception,

menstruation, sexually transmitted infections (STI) prevention, fertility and SATU services, to help teenagers learn more about these subjects in a non-biased and non-judgemental way. In 2022 alone, over 1,900 students attended Debunking workshops.

### Charter Day 2022

The Rotunda celebrated the return of an in-person Charter Day event where the research team presented a number of posters including:

- Term Induction of Labour in Nulliparous Women: When to draw the line?
- Smartphone Apps for Surveillance of Gestational Diabetes
- The Breakfast Club Comic
- Debunking The Myths – The Science Behind Our Sexual Health
- BIAS: Inequalities in Women's Health and Research

### CHALLENGES 2022

The main on-going challenge in 2022 remains how to maintain and grow sufficient diverse funding streams that enable the hospital to address important clinical research questions

### PLANS FOR 2023

- Continue to support multiple MD, PhD and MSc research projects across both the Department of Obstetrics and Gynaecology and the Department of Paediatrics
- Continue to identify strategic sources of research funding via national funding bodies and commercial partnerships
- Host a number of public patient involvement and community outreach events
- The Debunking The Myths national campaign will continue to host numerous in-person and online events
- To host a second national Fetal Cardiac Study Day where sonographers, radiographers, consultants and NCHDs from the 19 national maternity units will convene in the RCSI Simulation Centre for a series of expert-led talks followed by a live patient scanning event





# Research Ethics

## HEADS OF COMMITTEE

**Dr. Sharon Cooley**, Co-Chair  
**Prof. David Corcoran**, Co-Chair

## COMMITTEE MEMBERS\*

**Dr. Sean Armstrong**  
**Dr. Aoife Corcoran**  
**Dr. Richard Duffy**  
**Ms. Fiona Hanrahan**  
**Dr. Graham King**  
**Mr. Colin Kirkham**  
**Prof. Fergal Malone**, Master  
**Dr. Zara Molphy**  
**Ms. Anna Mooney**  
**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 2022 there were 20 REC applications considered, 16 of which were approved to commence. The Research Ethics Committee met nine times and meetings were scheduled to ensure that there is continuing timely and effective focus on research within the Hospital. Dr. Sharon Cooley, Consultant Obstetrician Gynaecologist and Prof. David Corcoran, Consultant Paediatrician, Co-Chairs of the REC, chaired alternate meetings.

There were 32 applications considered by the Research Advisory Group (RAG) and brought to the attention of the Research Ethics Committee. The RAG process focusses on review and approval of clinical audit proposals, and provides a pathway of visibility and approval by the overarching REC.

Dr. Zara Molphy and Dr. Graham King joined the committee during 2022. An invitation was extended to Dr. Niamh Daly to also join the Committee and the plan is for her to do so in 2023.

## CHALLENGES 2022

In 2022, the Research Ethics Committee maintained an active and safe research programme at the Rotunda Hospital, despite the continued challenges of the COVID-19 pandemic greatly impacting on the ability to conduct clinical, patient-facing research. The REC meetings continued in person with the appropriate social distancing and mask wearing, with a gradual relaxation as the year progressed.

## PLANS FOR 2023

The REC has been rotating non-consultant hospital doctors onto the committee to provide experience and training in the area of critical review of research proposals, and it is expected that this will continue throughout 2023.

The relationship of the Rotunda REC with the newly formed National Research Ethics Committee, which now has responsibility for approving many trials involving new medications and treatments is evolving and is under constant scrutiny. Operating protocols on how the Rotunda REC interacts with the National REC by providing an opportunity for the Rotunda to re-affirm its acceptance of previously approved research will be clarified in 2023.

# Royal College of Surgeons in Ireland

## Department of Obstetrics and Gynaecology

### HEAD OF DEPARTMENT

**Prof. Fergal Malone**, Professor & Chairman

### STAFF

**Prof. Fionnuala Breathnach**, Associate Professor  
**Dr. Naomi Burke**, Senior Lecturer  
**Dr. Niamh Daly**, Senior Lecturer  
**Dr. Karen Flood**, Senior Lecturer  
**Prof. Sam Coulter-Smith**, Honorary Clinical Professor  
**Prof. Michael Geary**, Honorary Clinical Professor  
**Prof. Maeve Eogan**, Honorary Clinical Associate Professor  
**Prof. Edgar Mocanu**, Honorary Clinical Associate Professor  
**Prof. Hassan Rajab**, Honorary Clinical Associate Professor  
**Dr. Kushal Chummun**, Honorary Senior Lecturer  
**Dr. Sharon Cooley**, Honorary Senior Lecturer  
**Dr. Jennifer Donnelly**, Honorary Senior Lecturer  
**Dr. Conor Harrity**, Honorary Senior Lecturer  
**Dr. Sieglinde Mullers**, Honorary Senior Lecturer  
**Dr. Meenakshi Ramphul**, Honorary Senior Lecturer  
**Dr. Rishi Roopnarinesingh**, Honorary Senior Lecturer  
**Dr. Claire Thompson**, Honorary Senior Lecturer  
**Dr. David Mackin**, Maternal Fetal Medicine Subspecialty Fellow  
**Dr. Brendan McDonnell**, Maternal Fetal Medicine Subspecialty Fellow  
**Dr. Ronan Daly**, Specialist Registrar/Tutor  
**Dr. Sara Elnimr**, Specialist Registrar/Tutor  
**Dr. Dan Kane**, Specialist Registrar/Tutor  
**Dr. Sarah Nicholson**, Specialist Registrar/Tutor  
**Dr. Suzanne Smyth**, Specialist Registrar/Tutor  
**Dr. Zara Molphy**, Head of Research Programmes  
**Ms. Ann Fleming**, Midwife Sonographer  
**Ms. Claire O'Rourke**, Midwife Sonographer  
**Ms. Fiona O'Donohue**, Sonographer  
**Ms. Fiona Cody**, Research Sonographer  
**Ms. Sophie Conheady**, Research Phlebotomist  
**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 the current year, a total of 3,297 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

168 medical students participated in the RCSI Obstetrics and Gynaecology core six-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, Coombe Women & Infants University 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 2022. This included further integration of our shared research endeavors with the Rotunda Hospital, encompassing perinatal research both at local site and national levels. Please see the section on the Rotunda/RCSI Research Department for further information

### SUCCESSSES & ACHIEVEMENTS 2022

In 2022, the Department published 19 scientific articles in international publications with major scientific impact, and again participated at the world's largest obstetric research meeting, the Society for Maternal Fetal Medicine, held virtually from the United States due to the COVID-19 pandemic, where four scientific projects were presented.

Four postgraduate research theses were in progress in 2022, with three active PhD and MD candidates at year end.

### CHALLENGES 2022

The main challenge for the Department in 2022 remained trying to maintain high standards of clinical teaching for undergraduate medical students despite the COVID-19 pandemic. This caused significant disruption to face-to-face teaching at the bedside which for many years has been the hallmark of our strong clinical exposure

for students. The quality of teaching has however been maintained through the recruitment of additional academic staff and dynamic tutor registrars, as well as harnessing the 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, in a small group setting. As the face-to-face restrictions from COVID-19 were eliminated during 2022, it was reassuring to see a full return to bedside clinical teaching, together with significant engagement by both staff and students alike.

### PLANS FOR 2023

As the number of medical students continues to grow, the structure of clinical placements will likely evolve in an attempt to maintain the primacy of bedside clinical teaching. This will likely involve increasing the number of six-week clinical teaching rotations by spreading these out through an expanded academic teaching year.

Further expansion of the Department's clinical research trials portfolio is of major importance for the academic team, including attracting the best talent for research and education of our undergraduate and postgraduate teams.



# Library and Information Service

## HEAD OF SERVICE

**Ms. Anne 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 facilities as part of their residency programmes. Trinity College Dublin's midwifery students also use the facilities during their courses of study.

Facilities include the following services:

- Study facilities (20 study spaces)
- Networked computer access (six 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

LIS has qualified library staff to assist in the dissemination of library and information services to users, as well as training on evidence-based resources.

The impact of the COVID-19 pandemic still resonates with daily activities of LIS at the Rotunda. However, there has been a near complete return to face-to-face educational and academic meetings where it is safe to do so and to a new norm of living with COVID-19. The principles of social distancing remain, with a reduced number of study spaces. In general, users have adhered to these principles, in mutual respect for each other. To increase access to services and to combat reductions, loan facilities and access to the 'LIS Discovery Platform' have been increased. The latter continues to be invaluable in providing access to users working out-of-hours and remotely. Resources accessed electronically continue to be provided to users and to support the Rotunda's research activities. The LIS continues to welcome RCSI medical students to the Rotunda, working

in cooperation with the RCSI administrative office with induction and preparation for each new student intake. A similar process has provided new midwifery and nursing student intakes, facilitated through the further development of online induction and training programmes. In addition, new NCHD groups commenced in January and July 2022, with these staff being registered fully to avail of access to onsite electronic platforms and remote ATHENS authenticated resources.

## SUCSESSES & ACHIEVEMENTS 2022

Culture Night at the Rotunda for 2022 was organised as a 'Virtual Culture Night' in September 2022, with a superb series of recorded presentations provided from the Rotunda's historic chapel. Feedback from this event was very positive, with virtual viewing numbers consistent with 2021 activity, thereby confirming ongoing interest and demand from members of the public in the Rotunda.

The LIS team increased access to further training via the 'Discovery Page', with extended training to increase access to MEDLINE, CINAHL, Browzine App and ZOTERO.

The LIS communication tool 'Trimester' newsletter continues to inform and advise users through its quarterly production which is available online to all staff.

The LIS team keeps in contact with peers through online training initiatives including Systematic Review Webinars (SCHARR UK), OVID PICO, OVID Expert Tools, OVID Grey Literature Searching, and OVID Search Strategies.

The Annual Health Sciences Libraries Group (HSLG) Conference was held in March 2022 for the first time since 2019, which was a great success, reminding LIS staff of the need for human contact, communication and sharing.

The LIS Team contributed to the work of Dr. Sam Coulter-Smith, former Master of the Rotunda, in publishing 'Delivering the Future: Reflections of a Rotunda Master'.

## CHALLENGES 2022

Ms. Elaine Peppard left the LIS team in December 2022, and we wish her every success in her new post, trusting that her work experience has been a positive one at the Rotunda. Replacing the role of senior library assistant will be a significant challenge for 2023.

The impact of COVID-19 restrictions, while decreasing, still causes a significant challenge for use and access of LIS resources.

### PLANS FOR 2023

Feeding into the Hospital's current Strategic Plan, The Historical Committee, chaired by the Head Librarian, plans to re-visit events to commemorate the Hospital's 275th Anniversary.

Further to this the Rotunda hopes to secure permission from Dublin City Council and the Plaques Committee to place a commemorative plaque at the site of the Rotunda's first hospital building in 2023. The LIS hopes to contribute to the next Rotunda Strategic Plan (2022-2027) in terms of LIS service planning and delivery.

# The Rotunda Foundation



## BOARD OF DIRECTORS

**Dr. Mary Holohan**, Secretary/Director

**Ms. Frances Barron**, Director

**Ms. Marie Malone**, Director

**Ms. Margaret Philbin**, Director

**Mr. Mark Simpson**, Director

## STAFF

**Ms. Sheila Costigan**, General Manager

**Mr. Chetan Chauhan**, Marketing and Development Executive

## OVERVIEW

The Rotunda Foundation raises funds to support the outstanding care delivered at the Rotunda Hospital. Its main objectives aim to provide a sustainable funding base to promote maternal and child health, to support the hospital's high-quality research programme, and to support the specialist clinics and services provided by the Rotunda. The Charity has implemented the Charities Governance Code and has completed the Compliance Record Return for year ending 31st December 2022. As a limited company, the Board of Directors comply with all statutory and financial requirements as deemed necessary by the Charities Regulatory Authority and the Revenue Commissioners. In 2022, the Foundation held nine Board Meetings, an Inter-Board Liaison Committee Meeting with representation from the Hospital's Board and Executive Management Team (EMT), and an Annual General Meeting (AGM).

Supporters are actively encouraged to engage in fundraising activities to enable the charity to carry out minor building projects and to make improvements within the hospital's infrastructure. Funding is also made available to support the hospital's annual requirements for the purchase of any additional equipment that is not funded by the State.

The Foundation works closely with Rotunda staff and its donors to help develop and fund patient care initiatives such as the 'Beads of Courage Initiative', 'Aidan & Donnacha's Wings – Ceramic Hand and Foot Prints', 'Tentacles for Tinies', 'The Journey Initiative', and several social welfare and bereavement support services.

The Foundation welcomes opportunities to collaborate with corporate groups, other charities and professional organisations to help meet its strategic objectives and fundraising goals.

## ACTIVITY

Government restrictions concerning the holding of gatherings eventually began to ease during the last quarter of 2021 and the Foundation was well prepared to enter 2022 having faced

unprecedented fundraising challenges since the start of the COVID-19 pandemic.

The Pillar Room complex had remained closed to commercial letting until late October 2021, resulting in a substantial loss of unrestricted income to the Foundation. However, other new income streams were recognised which compensated for some of this loss. The venue was returned to the Foundation's operational management and commercial letting slowly resumed by the end of 2021. However, in January 2022, the situation had dramatically changed and following the approval of the hospital's Board, the Foundation agreed an exclusive 12-month rental agreement for the facility, commencing in February 2022. With this fortunate opportunity, the Foundation was further enabled to support the hospital's on-going needs throughout 2022.

## SUCCESSES & ACHIEVEMENTS 2022

The Foundation held its annual golf outing at Milltown Golf Club which raised a profit of over €10,000. Christmas Donations for a Lifestart System in aid of the NICU raised €15,000. Rotunda Staff raised over €1,200 from Christmas Pudding Sales in aid of the Medical Social Work Service goals, and a New Year's Swim fundraiser raised over €6,000. A new retinal camera and five 'Angel Eye' cameras were funded for the NICU, and a grant of €13,500 from The Hospital Saturday Fund was secured for specialist nurse training on use of the retinal camera. The Rotunda's Autumn Luncheon was also a tremendous success and raised almost €40,000 in aid of the Bereavement Support Services' Solas Suite Project.

2022 Equipment Purchased from the Foundation's Restricted Donation Funds and Community Grant Awards:

- Retcam Envision: MED1070 with ROP lens Retcam Envision for NICU (€135,062)
- Angel Eye Cameras: Five Angel Eye cameras and monitors for NICU (€30,928)
- Lifestart System: Lifestart and Neopuff TM Infant Resuscitator System for NICU (€13,491)
- Jaundice Meter: Drager Jaundice Meter JM105 (€5,551)
- Recliner Chair: Astrar Stellar Recliner (€3,735) for Specialist Perinatal Mental Health Service
- Matris Crib for Bereavement Support Services (€2,087)

2022 Rotunda Hospital's Equipment and Service Support List was supported by grants from the Foundation's Unrestricted Funds:

1. Household Service – €17,727
2. Sexual Assault Treatment Unit – €1,822
3. Specialist Perinatal Mental Health Service – €23,493
4. Medical Social Work Service – €250
5. Operating theatres – €25,000
6. Gynaecology Service – €35,000
7. Colposcopy Service – €1,000
8. Library Service – €7,664
9. Obstetric Emergency Services – €6,107
10. Catering Service – €11,453
11. Rotunda staff welfare initiatives – €55,400
12. Laboratory Medicine Service – €353
13. Projects and Facilities – €2,500
14. Technical Services – €4,000
15. Infectious Disease Service – €911
16. Porterage Services – €500

## PLANS FOR 2023

The Foundation hopes to continue to grow its fundraising capability and strengthen its digital communications strategy throughout 2023. A new Digital Marketing & Communications post will be advertised and a staff development programme will continue. The Board of Directors will seek to expand their membership and skills set by inviting two new members to join the Board.

A new website is under development for the Foundation which will incorporate a new e-commerce platform for the sale of branded merchandise.

The Foundation intends to continue to develop a business plan for the Pillar Room which has been booked for a further period of 12 months, commencing February 2023. This is a very significant income stream for the Foundation and will enable the Foundation's Board to continue to support the hospital's on-going needs throughout 2023 together with a commitment to provide seed funding for its annual research programme. The Foundation's new website will be designed

to incorporate a new reservations system for future Pillar Room bookings.

Many fundraising events are planned for 2023, including:

- Rotunda Golf Outing – The Master's Cup at Milltown Golf Club
- VHI Women's Mini Marathon
- Rotunda Hospital Charity Lunch at the Mansion House
- Irish Life Dublin Marathon
- Christmas Jumper Day
- Rotunda Hospital Christmas – New Year Giving Campaign



# Corporate Services

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# Human Resources Department

## HEAD OF DEPARTMENT

**Ms. Johanne Connolly**, Head of Human Resources and People Development Manager

## STAFF

- Ms. Cathy Ryan**, Engagement, Wellbeing and Communications Manager
- Ms. Denise Mc Namara**, HR Business Manager
- Ms. Laura Best**, HR Business Partner
- Ms. Dervla Daly**, HR Business Partner
- Ms. Niamh Gilleece**, HR Business Partner
- Ms. Anne Leen**, HR Business Partner
- Ms. Lesley Owens**, HR Business Partner
- Ms. Sinead Smyth**, HR Business Partner

## SERVICE OVERVIEW

The Human Resources Department takes care of all essential people management tasks at the Rotunda within three key functions:

- Employee Engagement and Wellbeing, inclusive of communications – the employee experience to foster a positive environment and culture
- Operational business requirements – to work efficiently within HR processes and ensure compliance to legislation and national policies
- Data and Information – to manage future planning, including use of data and metrics to plan for staff development and growth

As leaders in people services, the HR team is committed to delivering a professional and relevant human resource service. Through building strong relationships with staff, the team is able to meet the needs of hospital staff, who can then meet the needs of the Rotunda’s service users. The HR Department fosters strong employer-employee relations, by working alongside local line managers and staff, complementing and supporting them where needed.

The current HR Department resources include:

- 1.0 WTE Head of HR and People Development Manager
- 1.0 WTE Employee Engagement, Wellbeing and Communications Manager
- 1.0 WTE graphic designer/communications support
- 1.0 WTE social media specialist/communications support

- 1.0 WTE HR Operations Manager
- 5.0 WTE HR Operations Business Partners
- 1.0 WTE HR administrative support
- 1.0 WTE HR Data and Information Business Partner



## SUCCESSES & ACHIEVEMENTS 2022

The Whole Time Equivalent (WTE) staff headcount in the hospital at the end of 2022 was 987, which was equivalent to a total headcount of 1,215. During 2022, a total of 221 separate recruitment competitions were actioned, with 192 interview competitions completed (Table 1). The average employee absence rate was 4.6%, which was reassuring given the ongoing challenges of COVID-19.

TABLE 1: INTERVIEW COMPETITIONS COMPLETED

Area	Competitions	Interviews	New Starters
Management/administration	39	35	47
Medical	25*	28*	134
Nursing/midwifery	68	55	74
Paramedical	43	31	29
Patient care	11	16	20
Support services	35	27	43
<b>Total</b>	<b>221</b>	<b>192</b>	<b>347</b>

\*excluding non-consultant hospital doctor recruitment processes

Key metrics reported on throughout 2022 included compliance rates with a range of mandatory training requirements, as described in Table 2.

**TABLE 2: COMPLIANCE WITH MANDATORY TRAINING REQUIREMENTS 2021 - 2022**

Mandatory training parameter	2021	2022	% Difference
Hand hygiene	95%	95%	0%
Children First	92%	86%	-6%
Fire safety	61%	82%	21%
Open disclosure	N/A	80%	-
Cybersecurity	N/A	78%	-
General Data Protection Regulation (GDPR)	66%	71%	5%
Manual/patient handling	52%	70%	18%

Other key achievements in 2022 included the following areas:

### RECRUITMENT AND RETENTION

- Workforce planning recruitment strategy ensured the hospital was resourced to the highest level for service continuity, managing all resourcing via the Employment Control Committee
- Detailed HR inputs into sourcing funding applications and business cases for new service required posts
- Robust succession planning process implemented to avoid gaps in resourcing and retain specialised skill-sets, while promoting career progression
- Gender Pay Gap reporting to ensure measures are in place to improve gender representation across all elements of the workforce

### PEOPLE DEVELOPMENT

- Encouraged competency upskilling through eLearning, promoting a learning culture and staff development
- Shared policy knowledge and best practice for local area managers through the delivery of monthly HR Clinics
- Implementation of Performance Achievement, as a strong tool for both employer and employee to strengthen and support the working relationship

- Maximising mandatory training compliance across all staff grades and areas to deliver safer and better healthcare for all

### STAFF PAY AND REWARD

- Optimising processing of pay and remuneration, by aligning to national regulations, thereby ensuring staff receive entitlements in a timely manner
- Implemented a Rotunda Employee Recognition Scheme which promotes a culture of thanks and appreciation in working lives
- Processed the COVID-19 recognition payment to recognise staff for the efforts and commitment to service needs during the pandemic

### STAFF EXPERIENCE

- A new focus was commenced for staff health and wellbeing, to ensure staff are emotionally and physically well in their working lives
- Employee Engagement Committee established to plan and prepare for a roll-out of new initiatives in early 2023
- Equality, Inclusion and Diversity Policy implemented through participation on the Diversity Committee with an initial focus on the Rainbow Badge initiative

### INTEGRATION OF SERVICES TO HUMAN RESOURCES

- Integration of Communications to the Human Resources Department supports the enhancement and optimisation of the Rotunda brand and promote the Rotunda as a great place to work

### PLANS FOR 2023

New priorities and developments for 2023 include:

- Implementing a Staff Pay and Reward recognition programme
- Further developing the staff engagement forum
- Launching the Rotunda educational sponsorship programme
- Commencing a Blended Working Policy to support work life balance

# Finance and Procurement Department

## HEAD OF DEPARTMENT

**Mr. Peter Foran**, Head of Finance and Procurement

## STAFF

**Ms. Pauline Brady**, Employee and Relations Manager

**Mr. Yoichi Hoashi**, Procurement and Supplies Manager

**Mr. Alan Holland**, Finance Accounting and Systems Manager

**Mr. Edward Smith**, Financial Operations Manager

## SERVICE OVERVIEW

The Finance section of the Department is responsible for financial oversight in the Rotunda Hospital. It is broken into the following three areas: Financial Accounting and Systems, Financial Operations, and Employee Pay and Relations.

The Procurement section is responsible for oversight of the Rotunda Hospital's procurement and related obligations for the hospital.

The Department continuously strives to improve the service delivery to our patients, staff and external suppliers and our funders. In 2022, successes were achieved in each of these categories.

## SUCCESSES & ACHIEVEMENTS 2022

The Finance Department achieved many of its goals for 2022 including:

- Ensuring appropriate funding for capital and equipping
- Introduction of a finance manual available to all staff
- Increased reporting capabilities in financial matters
- Rollout of Microsoft Excel training to non-financial staff
- Increased face-to-face service delivery in Employee Pay and Relations

## FINANCIAL POSITION AT THE END OF 2022

The hospital achieved an effective breakeven in 2022 with a shortfall of €0.2m which leaves the hospital with an accumulated surplus of €0.03m. Providing a demand-led medical service on an effective breakeven budget with a deficit of only €218,000 on an overall budget of €100 million is an extremely strong achievement and reflects very positively on the hospital's management systems, as well as the commitment to efficient procedures on the part of each and every member of staff. 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 to source

additional funding. The impact of the COVID-19 pandemic financially was comprehensively collated, validated and reported in a timely transparent fashion to the RCSI Hospitals Group which ensured we were successful in being reimbursed or funded for all additional costs incurred due to COVID-19 activities. Financial breakeven was achieved without impacting on quality and safety of patient services which is critical in a demand-led service such as obstetrics.

**TABLE 1: FINAL BUDGETARY OUTTURN 2022**

Category	€'000
Deficit Carried Forward	246
Pay	82,510
Non-Pay	19,207
Income	(15,508)
Net Position for year	86,209
HSE Budget	(85,991)
Surplus/(Deficit) in Year	(218)
Cumulative Surplus/(Deficit) at Year End	28

The hospital continued to work with the RCSI Hospitals Group and the National Women and Infants Health Programme (NWIHP) to source additional funding to augment current services and for new service developments. In 2022, new service enhancements were funded with regard to developing the Midwifery services in the hospital and also through Allied Health services.

## EMPLOYEE PAY AND RELATIONS (PAYROLL/PENSIONS/TMS)

The Employee Pay and Relations team contains payroll processing and management, pensions management and the 'Time Management System' (TMS) implementation project. The team is overseen by Ms. Pauline Brady.

During 2022, the payroll team had to contend with multiple changes to pay scales from public sector collective agreements and the unwinding of FEMPI measures. These changes, while welcome to all staff, required a lot of extra work to be put in by the team. Due to the payroll team working effectively with colleagues in HR, the Rotunda was able to implement these pay increases as soon as the scales were available which was not mirrored in many other sites. Also introduced during 2022 was a staff savings scheme via payroll. Staff were able to withhold an amount from their pay to be paid in November which has increased in popularity for 2023.

The pension function continued to operate during 2022 acting as a service support to staff and ensuring compliance with regulatory

requirements for pensions. The pensions team worked hard with hospital management, the Board of Governors, to ensure that our non-public sector pensions are compliant with the requirements under IORP II. Also, along with payroll, new outreaches were done in 2022 to meet with staff to understand the often daunting topic of pensions.

In 2022, the TMS project continued to grow. With an upgrade planned for 2023, the hope is that all hospital will be using TMS for their time and attendance requirements.

#### FINANCIAL ACCOUNTING & SYSTEMS (FINANCIAL REPORTING/MANAGEMENT ACCOUNTING/FINANCIAL SYSTEMS)

Financial Accounting and Systems, managed by Mr. Alan Holland, is responsible for all of the financial reporting, management accounting and management of the various systems owned by the Finance and Procurement Department.

During 2022, the hospital met all of its obligations for reporting financially to the HSE and to the RCSI Hospitals Group due to the hard work of this team. The 2021 set of financial statements was one of the first to be signed off in the country according to our auditors. All three sets of accounts were signed off by May which had continued the improvement in 2021, reducing the timeline considerably for the Ancillary and Consolidated Financial Statements.

The management accounts team have worked closely with over 80 cost centre owners to give them an understanding and ownership of the costs going through their areas.

The Financial Accounting and Systems team continues to support the whole department in achieving its aims and assisting where improvements are identified.

#### FINANCE OPERATIONS (PATIENT ACCOUNTS/ACCOUNTS PAYABLE)

Finance Operations, overseen by Mr. Ed Smith, is responsible for the Patient Accounts (Accounts Receivable) and Accounts Payable functions.

During 2022, Patient Accounts made great strides in reducing the debtor days for the hospital. The beginning of 2022 saw a number of high debtor days due to the backlog caused by the HSE Cyber Attack in 2021. Due to hard work and diligence, the Patient Accounts team brought this down by 33% until the end of 2022. The Patient Accounts team has begun an initiative which will further reduce the debtor days figure in 2023. Due to increasing staffing in the Accounts Payable team, 2022 saw a big reduction in the bad debts recognised.

Over the past number of years, great advances have been made in Accounts Payable to get all of the supplier accounts up to date which has resulted in very few escalations from suppliers. Increasing activity and prices have led to challenges at times with cash flow. This is something that the Accounts Payable team have dealt with professionally.

#### PROCUREMENT & SUPPLIES

In 2022, under the management of Mr. Yoichi Hoashi, the procurement function has grown and continues to be an effective support for the hospital in resourcing products and services required.

The supplies team has improved their service delivery by taking on the dispatching of goods from within the team. A new ordering system has been put in place for the hospital using a GS1 system which has streamlined the ordering of stock in wards and departments.

The Tendering Manager, Ms. Sue Murphy, has been working closely with internal stakeholders to ensure that contract management is in place using the Accord system. Also, multiple tenders have been successfully completed including a pharmacy robot, internal audit services and many more.

#### CHALLENGES 2022

##### ENSURING ADEQUATE FUNDING IN PLACE

The costs for the hospital are increasing due to increased pay, better recruitment and rising prices in goods and services. The HSE have funded us previously for this. The hospital must continue to justify the rising costs and ensure that adequate allocations from the HSE are provided.

##### CAPITAL FUNDING

The hospital has made great inroads with capital projects and related funding. In a hospital as long-standing as the Rotunda, there is always a requirement for more capital funding due to the age of our buildings. It will be an obligation of the Finance Department to assist in ensuring funding is sourced via HSE or one of its programmes, the Rotunda Foundation or indeed other external sources.

##### MEDICAL EQUIPMENT REPLACEMENT PROGRAMME (MERP)

In 2022, the hospital received additional funding through MERP. Much like capital funding, there is a constant need for ensuring the appropriate equipping is in place to enable the hospital to function at maximal safety and efficiency. Finance will continue to assist in sourcing such funding.

### FINANCE AND PROCUREMENT RISKS IN 2022

Lack of funding is always a risk for the Finance team. With increased expenditure, the Finance team will have to ensure commensurate growth in funding

Great progress has been made with compliance with Public Procurement Guidelines. While sidestepping these can prove quicker, the obligation is on the hospital to spend taxpayer money responsibly and within the rules.

### PLANS FOR 2023

- Ensure appropriate funding to provide safe quality services
- Ensure sufficient cash flow to meet all obligations
- Source funding for essential medical equipment replacement and minor capital works programme
- Manage capital budgets including cash flow for major capital works
- Complete rollout of Time Management System to all staff as possible
- Helpdesk function to track queries and the responses within the Employee and Relations team in collaboration with HR
- Further staff engagement on pay and pensions
- Complete GS1 rollout
- Implement 'track and trace' on medical and surgical items





# 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 ICT function throughout the hospital. To facilitate this, the team provides Helpdesk support for over 1,000 active users and manages an estate of over 1,700 connected devices.

The IT Department is divided into a number of functional areas, including Infrastructure Management, Project Management and Service Support. Data security is essential in a healthcare setting and the team works closely with external partners to strengthen the IT service from both an administrative and clinical device perspective. All hospital staff are reminded of the vital role that they play in ensuring the confidentiality, integrity, and availability of information systems.

## SUCCESSES & ACHIEVEMENTS 2022

With the reduction in COVID-19 restrictions in early 2022, many IT service modifications returned to normal operation, although the use of virtual clinics and remote/hybrid working are set to remain in place for longer, primarily due to the efficiencies they afford to both patients and staff. The IT Service is working to ensure that appropriate IT processes, policies and resources are in place to support such a blended work environment. This will require enhancement of Virtual Private Network (VPN) services, standardisation of remote equipment offerings, and mobile device management solutions.

Following the fallout from the HSE Cyberattack of May 2021, the IT Service was able to successfully complete the retirement of its NHN-I (National Health Network) and NHN-II connections, which were then upgraded to dual 1 Gbit GCN (Government Cloud Network) connections, thereby enabling a tenfold increase in bandwidth in addition to a resilient failover connection.

The long-awaited NIMIS 2.0 upgrade for radiology services commenced in June 2022, with the replacement of a number of onsite servers, enabling a more resilient virtual server install base as well as validating software for use on Windows-10 client workstations. Further NIMIS upgrades are scheduled for 2023 to address the retirement of Internet Explorer 11 and enabling of Internet Explorer functionality in Microsoft Edge.

Throughout the year, work has continued to enhance the resilience and security of the Rotunda's core networking infrastructure. Any potential single 'points-of-failure' were removed, by upgrading the core firewall to a redundant High Availability Firewall Pair, which are installed in separate data centre locations. To ascertain hospital employees' susceptibility to Phishing emails and scams, the IT Service has implemented simulated Phishing exercises, which sends scheduled test emails to staff and records how they interact. If staff fall victim to a simulated email, click on an unsecure link, or open a suspicious attachment, they are provided with focused feedback on how they could have recognised that the message was malicious. The results of these simulated tests allow the IT Service to determine overall IT security risks and the type of education required. In addition to the above the HSE has also created a mandatory online training course for Cyber Security which is hosted on HSELand.

Another significant achievement in 2022 was the implementation of the Defero text messaging system from Grapevine solutions. A project team consisting of members from Grapevine, Patient Services and Information Technology met weekly to scope out the procedural and technical requirements. One of the major enhancements of this system is the ability to automate the daily creation and scheduling of messages, thus freeing clinic managers from what was previously a manual time consuming task. Further enhancements are planned for 2023 with the implementation of Bi-Directional messaging to allow patients to respond to messages in real-time. It is hoped that this functionality will improve the 'Did Not Attend' (DNA) rate of specific clinics by allowing patients to cancel or reschedule appointments via return text message.

## PLANS FOR 2023

Several of the projects initiated in 2022 will progress into subsequent phases throughout 2023. The most notable being:

- NIMIS – Microsoft Edge Compatibility Mode
- Defero – Bi-Directional Text message functionality
- ICT Design Brief and functional specifications for proposed Rotunda campus developments

In 2023, the most significant IT undertaking will be the transition of the MN-CMS electronic healthcare record system from its existing hosting solution at HSE datacentres to a comprehensive managed solution located in Cerner's datacentre in Sweden. This migration presents an opportunity to upgrade several end-of-life IT components to supported versions, ensuring a more robust and up-to-date IT system. These include:

- Fetalink CTG Tracing connectivity engine upgrade
- BMDI (Bedside Medical Device Integration) hardware upgrade
- 7/24 Downtime solution upgrade
- PowerChart Code base upgrade to 2018 version
- Enhanced cyber security protection backed by 24/7/365 Security Operations Centre





# Support Services Department

## HEAD OF DEPARTMENT:

**Mr. Ray Philpott**, Support Services Manager

## SERVICE OVERVIEW

2022 was another extremely busy year for the Support Services Department with several capital projects completed, including:

- Installation of new autoclaves and washer dryer equipment in the Central Sterile Services Department (CSSD)
- Extensive hospital painting programme
- Upgrade of Private Clinic areas
- Snagging of the new three storey Theatre Extension and Delivery Suite building
- Installation of new hot water boilers in the main boilers house
- Refurbishment of Prenatal Ward bathrooms
- Installation of new lamps and correction works to existing railings and pillars at front entrance

The management of the campus estates was extensive and culminated in a number of upgrades, renovations, installations and refurbishments throughout 2022. This included the completion of the new three storey Theatre Extension and Delivery Suite building, which integrates seamlessly across three floors to the main hospital building. This was the culmination of three years' work on an extremely complicated, logistically and technically difficult build. The result is a state-of-the-art building befitting of a modern healthcare environment in the 21st century.

The following services are managed 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**

## PLANS FOR 2023

The following projects are planned in the coming year:

- New boiler for air handling units serving Operating Theatres
- New flooring in corridors of several departments including the Gynaecology ward, Lillie Suite, Postnatal wards, Prenatal ward, and NICU corridors
- Upgrade of network cards and back-up batteries on fire alarm system
- Undersink water heaters to be installed in all kitchens
- Installation of a replacement main lift
- Replacement of all water tanks
- Continuous upgrade programme of bathroom facilities to meet current IPC standards
- Repair of roof drainage systems

## TECHNICAL SERVICES DEPARTMENT

### HEAD OF DEPARTMENT

**Mr. Brendan Memery**

### SERVICE OVERVIEW

The Technical Services Department provides a wide range of technical, logistical and support services throughout the hospital campus, including operational maintenance, internal projects, working with external contractors to achieve hospital objectives, and managing essential utility systems across the hospital. The Technical Services team consists of a range of disciplines including carpenters, electricians and plumbers.

Significant progress has been made on the development of systems to transition from a reactive maintenance approach to a preventative maintenance model. These newly implemented measures will result in increasingly accurate management of facilities and plant machinery while also identifying the resources required to further develop the campus from a facilities perspective.

In 2022, the Technical Services Department completed almost 5,000 requisitions focusing on daily operational maintenance. In addition to these requests, the department completed many internal projects, including:

- Refurbishment of the Semi-Private Clinic consultation rooms
- Redevelopment of the restaurant 'Green Room'
- Refurbishment of the Technical Services Department bathroom facilities
- Refurbishment of the Clinical Placement Coordination office
- Refurbishment of the Laboratory 'On-Call' Room
- Refurbishment of the Prenatal Ward nurses station

The Technical Services Department also worked in partnership with external contractors providing logistical and technical support on various projects, including:

- Installation of a new recovery room located in the Gynaecology Ward
- Installation of a new automatic door system at the hospital main reception
- Installation of new lighting systems throughout the hospital

## CHALLENGES 2022

The easing of COVID-19 restrictions during the year resulted in an increase in demand for the Technical Services Department, and facilitated the progression of operational initiatives and proposed projects. Unfortunately, the ongoing impact of the Ukrainian - Russian war resulted in steep inflation of materials costs and increasingly complex supply issues, which has seen a further layer of difficulty in achieving objectives. However, despite these economic and logistical obstacles the Technical Services Department achieved all of its objectives to develop an increasingly efficient service on an almost three hundred year old campus.

## PLANS FOR 2023

Along with the continued operational maintenance of the Rotunda site, the Technical Services Department will participate in a number of significant new projects in the forthcoming year, including:

- Renovation of the Pharmacy
- Re-Development of the Lillie Suite
- Re-Development of the Medical Residence
- Installation of new water tanks
- Installation of new main lift

## CATERING DEPARTMENT

### HEAD OF DEPARTMENT

**Ms. Deborah Cullen**

### SERVICE OVERVIEW

The Rotunda Catering Department is committed to providing fresh, wholesome, nutritious food to all of its service users, with the core focus being on providing an excellent patient experience. This year the Catering Department produced 93,944 patient meals, with continuing challenges due to the impact of COVID-19 restrictions. Food Safety and training are key operational priorities, with the Catering Department being committed to providing the highest standard of food hygiene, in accordance with IS:340:2007 standards.

### SUCSESSES & ACHIEVEMENTS 2022

- Maintained a distinction in the Food Safety Assurance Award operated by the Food Safety Professionals Association
- Continued to training within the department on food safety levels 5 and 6
- Continued to receive positive feedback from patients through the catering comments email (cateringcomments@rotunda.ie), such as:

*"I am a vegetarian and was delighted there was always something available for me to have. Each meal was delicious and I was pleasantly surprised. I found myself looking forward to reading the menu for each day. The staff were always very friendly, respectful and polite."*

*"The level of service the catering staff has is both friendly and professional, which in a job like that, is what's needed. Thanks for all the friendly chats when passing by my bed or even just the simple smile when placing my tray down. It's really appreciated more than you know. You ladies were always so kind and helpful."*

*"Throughout my pregnancy I've had the pleasure of trying the majority of the patients menu. I was on the diabetes diet prenatal menu and the normal postnatal menu. Both menus provided excellent food, and well exceeded my expectations. I'm delighted to be going home today but I will miss the food as it's been so tasty."*

*"I have been a patient in the Rotunda for nearly two weeks, going between being able to eat and not. The catering team you have here could not have been nicer to me, offering to get me toast if I could eat, or fruit and anything I could manage. At one point the chef made me*

*an omelette which was just so kind. The omelette was beautiful, fresh and well made. Just what was needed."*

- A digital menu, with images of each dish, translated into the three main languages of patients attending the hospital, was introduced in May and has been well received by patients where English is not their first language
- Introduced a hyperemesis menu, offering a variety of hydration products and snack options more suitable to these particular patients
- Hosted a number of staff appreciation events throughout the year, including specially reduced price meals, free lunches, 'Elf Hunt' and 'Easter Egg Hunt', and the staff summer BBQ
- Converted the Green Room in the restaurant to a more comfortable rest room for evening and night staff

## CHALLENGES 2022

The main continued challenge relating to the COVID-19 pandemic was around staff absences, which triggered last minute revision of services and occasional reductions in service. Despite this challenge, patient service remained the core focus at all times.

## PLANS FOR 2023

- The Catering Department will continue to provide a high quality catering service, with a view to continuously develop and become more environmentally sustainable
- The provision of a memorable dining experience for both patients and staff is the primary focus, emphasising provision of an excellent patient experience, continuing improvements to the staff dining area, and expanding on staff appreciation and wellness events
- The Department will endeavor to keep up the service demands of the hospital and meet the challenges that are expected of the service now and into the future

## CLINICAL ENGINEERING DEPARTMENT

### HEAD OF DEPARTMENT

**Mr. Henry Gelera**

### SERVICE OVERVIEW

The Clinical Engineering Department is responsible for managing the medical equipment in the hospital.

### DEPARTMENTAL ACTIVITY

There has been a significant amount of new and replacement medical equipment installed in the hospital in 2022, including:

- Patient monitors in the NICU and new Recovery Ward
- 3 new obstetric/gynaecologic ultrasound machines
- 5 Fabian CPAP ventilator systems
- 30 replacement adult hospital beds
- 60 replacement baby cots
- 4 cordless stations for monitors in delivery suite
- Various laboratory equipment

### SUCCESSES & ACHIEVEMENTS 2022

The HSE National Equipment Management System was implemented, and is now fully operational for equipment requisitions on all wards. The three-year National Equipment Replacement (NERP) for 2023-2025 was updated and submitted for funding allocation by HSE National Equipping. Some servicing of equipment has been taken in-house for more efficient management.

### PLANS FOR 2023

- To continue to provide efficient and reliable service within the Department's current resources
- To continuously seek more funding from HSE to upgrade or replace critical medical equipment

## CENTRAL STERILE SERVICES DEPARTMENT

### HEAD OF DEPARTMENT

Mr. John Oyedeji

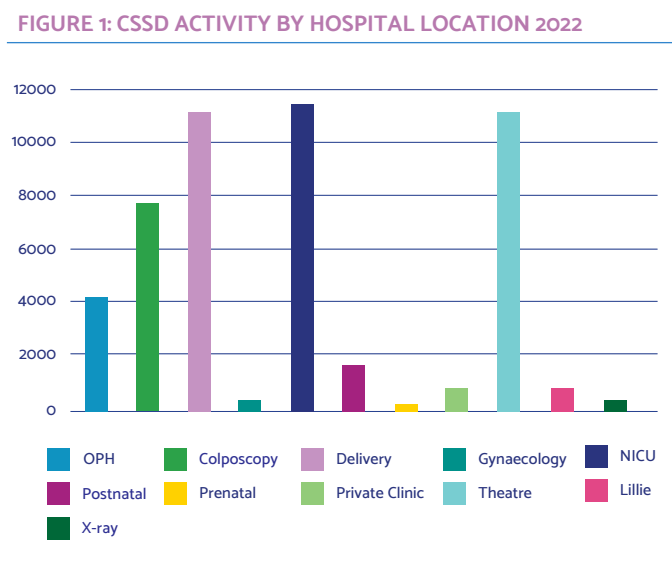
### SERVICE OVERVIEW

The Central Sterile Services Department (CSSD) is the core department within the hospital in which re-usable invasive medical devices (RIMD), both sterile and non-sterile, are decontaminated.

CSSD staff are responsible for controlling and monitoring medical devices, infection control and the administration of safety practices that benefit healthcare workers and patients. The team is responsible for cleaning and disinfection, inspection and sterilisation of all RIMDs. The team also advises on hospital purchases and healthcare practices by being responsible for ensuring that patient equipment is available and sterile for use at all times.

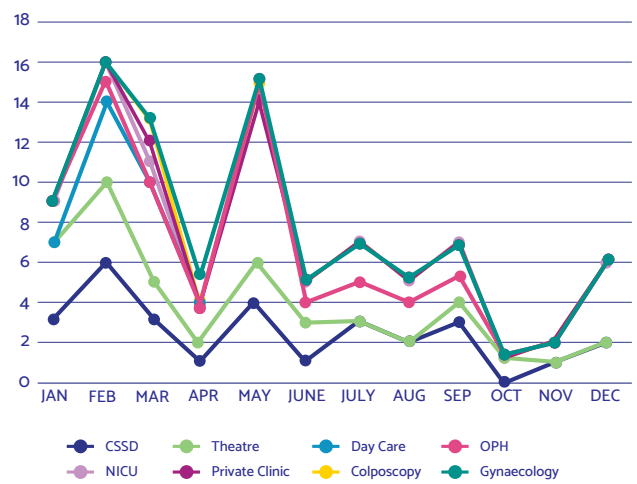
### DEPARTMENTAL ACTIVITY

In 2022, 487,69 RIMDs were reprocessed, including 26,488 trays and 22,281 single-use RIMDs in the department. A summary of these requirements, by hospital area, is provided in Figure 1:



All decontamination equipment was validated and periodically tested by outside contractors (Sterval) and all validation reports were audited both quarterly and annually. A total of 91 non-conformances were recorded, which is consistent with the HSE Code of Practice. Follow-up action was taken in all cases, with all issues being resolved appropriately. Trends in non-conformances showed significant

improvement throughout the year, as demonstrated in Figure 2, likely reflecting the impact of regular departmental quality improvement meetings.



**FIGURE 2: TRENDS IN NON-CONFORMANCES IN 2022**

### SUCCESSSES & ACHIEVEMENTS 2022

- The old Getinge autoclave was decommissioned, and was replaced with two Lautenschlager autoclaves
- Continued in-house training for new staff and refresher training for existing staff throughout the year, including completion of a TU Dublin course for Sterile Service Management

### CHALLENGES 2022

The main challenges in 2022 related to difficulties around maintaining service while replacing the old autoclave and commissioning two new replacement autoclaves. While the replacements increased the reprocessing turnaround time, it was still possible to meet all users' demands.

### PLANS FOR 2023

It is hoped to continue providing a quality standard of practice in the decontamination and sterilization of RIMDs, while maintaining an ongoing commitment to providing a service that is consistent with the highest possible standards.



## HEALTH AND SAFETY DEPARTMENT

### HEAD OF DEPARTMENT

**Mr. Kevin Kelly**

### SERVICE OVERVIEW

The purpose and function of the Health and Safety Department is to provide quality advice and implement strategies to improve occupational health and safety for employees, confirming that physical and environmental risks are managed appropriately to ensure the protection of employees, patients and visitors from harm. The Rotunda Hospital is committed to enabling improvements in the working environment of employees to ensure that their welfare is protected at all times. The Rotunda Hospital safety management system is constantly evolving to encompass all aspects of risk management and mitigation. The Health and Safety Department is committed to being proactive in the management of risks and the prevention of harm.

### DEPARTMENTAL ACTIVITY

The Health and Safety Department reviews all significant non-clinical incidents, with the vast majority of these incidents being minor in nature and not requiring any form of intervention. These non-clinical incidents are considered low grade incidents that require minimal actions to mitigate. All reported incidents are subject to investigation by the Health and Safety Manager. Harm reduction interventions are initiated regardless of impact grade to reduce the likelihood of incidents recurring.

### SECURITY

Regular meetings are held with the external provider of security services, SAR. There were a number of personnel changes during 2022 which have been challenging for the hospital, with the focus being on creating consistency and maximising the explicit and tacit knowledge of the security personnel assigned to the Rotunda.

Regular review of the CCTV system continued in 2022, with training being provided to end-users on the newly installed system. Access system upgrades were also undertaken, and a further review of personnel access will be carried out in due course.

### HEALTH AND SAFETY COMMITTEE

The Health and Safety Committee consists of Department Managers and staff from a range of disciplines. The purpose and function of the committee is to bring representations from employees to the committee and to identify Health, Safety and Welfare issues for the attention of the Executive Management Team. The Health and Safety Committee actively engages in risk management activities to optimise the safe working environment of the hospital.

### CHEMICAL AND FIRE SAFETY MANAGEMENT

Dangerous Goods Safety Advisor (DGSA) audits and training has been provided by an external consultant throughout 2022. The findings of these audits have been implemented and are managed through the hospital's risk management framework. There have been no significant chemical safety incidents during 2022.

Fire Safety Management continues to be a priority and was continually reviewed in 2022.

### SUCCESSES & ACHIEVEMENTS 2022

- An evaluation and testing programme for a new emergency paging system was performed
- Consolidated health and safety policies and procedures into a bespoke safety statement that compliments the HSE Corporate Safety Statement
- Developed a bespoke online Fire Safety Training module and developed Fire Extinguisher Training for employees
- Provided 10 sessions of Evacuation Chair and emergency equipment training in-house
- Undertook global risk assessments of the entire Rotunda site and operations
- Rationalised the management of contractors to ensure high levels of safety compliance
- Evaluated and consolidated access control permissions to ensure security of site

### PLANS FOR 2023

- Continue to engage with staff with regards to various mandatory risk assessments
- Continue to provide Fire Safety Training sessions
- Continue to provide training in evacuation chair and other equipment
- Continue to engage with outside contractors in order to maintain high standards in safety compliance

## HOUSEHOLD DEPARTMENT

### HEAD OF DEPARTMENT

**Ms. Catherine L'Estrange**

### SERVICE OVERVIEW

The Household Services Department plays a key role in ensuring that the Rotunda Hospital achieves the highest possible hygiene standards. 2022 proved to be one of the most challenging years for the Household Department, due to requirements to meet the targets set by national hygiene standards. These were all successfully achieved, enabling the Rotunda to confirm that all patients are cared for in a hygienically clean environment that reflects a modern healthcare facility.

The Household Department has a robust auditing programme in place, 'MICAD Credits for Cleaning', which is used daily to confirm that supervisory audits are undertaken, that standard checks are performed in all areas on a frequent basis, and ultimately resulting in higher consistent hygiene standards throughout the hospital. Any 'action required' reports are circulated to the appropriate household staff members before being completed and confirmed with the household supervisor.

### SUCCESSES & ACHIEVEMENTS 2022

The Household Department achieved a perfect 100% completion target for all household staff completing mandatory training by the end of 2022. All new staff members received three full days of training by the Household Management team in all aspects of their roles. Staff are also trained for two weeks in every clinical area throughout the hospital before being assigned to work independently in their allocated area.

All household staff receive refresher training every year on all aspects of cleaning, with core documentation being signed off by the trainer and the individual staff member, and retained for potential future audit or review.

### CHALLENGES 2022

The main challenge for the Household Department in 2022 was staff turnover, with 17 new starters and 20 leavers. There were seven staff absent on long-term sick leave, as well as three on maternity or parental leave.

### PLANS FOR 2023

- Filling staff vacancies to ensure adequate staffing to uphold high standards of hygiene

- Restructuring of the department by assigning specific areas of responsibility to each supervisor to ensure work is spread evenly and completed in a timely manner
- Household Management staff to receive appropriate training in all new management systems
- Ensuring all Household staff uphold their high levels of mandatory training completion
- To review and update all old hospital hygiene policies on Q-Pulse and ensure these are all still applicable to new standards of practice

## HOUSEHOLD LINEN DEPARTMENT

### HEAD OF DEPARTMENT

**Ms. Catherine L'Estrange**

### SERVICE OVERVIEW

The Household Linen Department plays a key role in ensuring that all items are stored, handled and laundered to the highest standards in line with national hygiene standards. The priority for the department is to ensure that risks of infection are minimized by implementing best practice recommendations in relation to services.

### DEPARTMENTAL ACTIVITY

The Linen Department remained extremely busy over the past year. The department has a schedule of daily and weekly linen audits including:

- Linen delivery transport
- Green linen delivery bins
- Quality and cleanliness of linen deliveries and linen rejects
- Linen trolleys used internally used to transport linen around the hospital
- Linen storage presses and trolleys to ensure proper stock

These audits are also being included in the overall Household Department audits. The auditing tools and systems that are used have been updated and all supervisors have been given training to ensure proper managerial continuity is given to the Linen Department.

The department was responsible in 2022 for providing over 130,000 scrub suits, 100,000 pillowcases, 77,000 towels, 64,000 long sheets, and 25,000 blankets.

### SUCCESES & ACHIEVEMENTS 2022

A major achievement over the past year was managing to keep up the consistently high standard of linen services despite COVID-19 and supply difficulties.

### PLANS FOR 2023

To continue to service the hospital's linen needs to the highest possible service standards.

## PORTERING SERVICES DEPARTMENT

### HEAD OF DEPARTMENT

**Mr. Paul Shields**

### SERVICE OVERVIEW

The Portering Services Department provides a multitude of logistical and utility support services in the hospital. These services can be categorized into patient-centered services and facilities-based services, both of which are provided on a 24-hour basis.

Patient-centered services involve direct engagement with our patients and staff in terms of patient transportation, communication and general assistance, focusing on contributing to a positive patient experience. Porters service the entire hospital, with certain porters servicing specific departments on a continuous basis. These porters are specially trained to perform specific processes in their respective departments, such as NICU or Operating Theatres.

The facility-based services undertaken by portering services include daily operational tasks such as waste disposal, maintaining curtain hygiene, transportation of furniture and equipment and grounds-keeping.

### DEPARTMENTAL ACTIVITY

As general hospital clinical activity increases, there is a proportionate increase in demands for Portering Services, in particular in 2022 in clinical areas such as the additional operating theatres, and additional recovery areas. These increased activities include increased patient transportation, equipment transportation, gas distribution and waste disposal.

Two annual 'Waste Awareness Days' were completed in 2022 with external support agencies in attendance (Stericycle and Thornton's Recycling). These initiatives proved useful as staff could directly communicate and ask relevant operational questions about the procedures of waste management resulting in a more efficient service.

The Rotunda's recycling rate has stabilized at approximately 80%, with further surveys planned on how to gain further improvements in this regard.

### SUCCESES & ACHIEVEMENTS 2022

The department recruited several new members of staff to service both clinical and non-clinical areas on a twenty-four hour basis. The recruitment of additional night porters to provide support in non-clinical areas mitigates potential issues with operating theatre porters not required to leave their clinical area to attend to other non-clinical duties.

### PLANS FOR 2023

As hospital services continue to expand it is expected that Portering Services meet that demand and continue to provide the highest standards, likely underpinned by a proportionate increase in staffing resources.



# Patient Administrative Service

## 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. Yasmin McEvoy**, Deputy Patient Services Manager

**Ms. Caroline Bosse**, Laboratory Medicine

**Ms. Yvonne Burke**, Colposcopy Service

**Ms. Moira Carberry**, SATU

**Ms. Catherine Finn**, Anaesthesiology & Maternal Medicine

**Ms. Denise Gleeson**, Adult Obstetric Outpatients

**Ms. Lorraine Hanley**, Radiology Service

**Ms. Kathy Hayes**, Paediatric Outpatients

**Ms. Julie McEvoy**, Admissions/Reception

**Mr. Paul Nugent**, Central Appointments & Gynaecology Outpatients

**Ms. Rita O'Connor**, SATU

**Ms. Louise O'Hara**, Adult Obstetric Outpatients

**Ms. Susan Penny**, Healthcare Records & Ward Clerks

\*The team leaders oversee administrative assistant staff across the spectrum of clinical services at the Rotunda Hospital

## SERVICE OVERVIEW

The Patient Administrative Services Department provides frontline receptionist, appointment scheduling, waiting list administration and administrative support and services to ensure the smooth operation of scheduled and non-scheduled patient appointments and clinical services. The service is also responsible for the admission of all patients, and management of their medical records and information. This includes 24-hour support at the main hospital reception and switchboard, as well as all scheduled clinical appointments and medical typing. Patient Administrative Services also provide support to all allied health professionals in the hospital.

## SUCCESSES & ACHIEVEMENTS 2022

As 2022 commenced, the team was still functioning under a range of mandatory restrictions from the COVID-19 pandemic. However, as these restrictions were gradually wound down throughout 2022, the team thankfully reverted to more normal working methods. The Patient Services team continued to administer the scheduling of patients for COVID-19 swabbing prior to admission, in an efficient and seamless process for patients.

The Patient Services team also worked with the National Census Office to undertake the census for all patients who were resident in the hospital on census night 2022.

The team worked with the National Treatment Purchase Fund (NTPF) validation team to ensure that all waiting lists for new gynaecology referrals were validated on two different occasions during 2022. All internal waiting lists were validated ensuring that only patients who still required clinical service remained on the list.

An In-Patient waiting list was implemented on the iPMS electronic scheduling system for all public and private gynaecology patients who were referred for operating theatre services. This also required implementation of an electronic operating theatre scheduling process to capture all data more efficiently. This remains a work-in-progress but is proving to be of immense benefit across the hospital, and in particular for the operating theatre scheduling team.

Due to the unfolding events in Ukraine, which commenced in the Spring of 2022, the Patient Services team assisted in implementing a special antenatal booking visit clinic specifically for refugees from the conflict, on a weekly basis.

A new automated text-messaging platform was implemented which allows for a two-way communication with patients.

The Patient Services team worked with clinical colleagues on a project to identify those patients who required inter-hospital transfer for diagnostics which is working well and provides weekly reports on this subset of patients.

Considerable resources were allocated to a new project to decant the outpatient ambulatory and support services to a new location adjacent to the Parnell Square campus.

## CHALLENGES 2022

Patient Services staffing levels continued to be a major challenge throughout the year, particularly as traditional face-to-face services increased again following the COVID-19 pandemic.

Some Allied Health professional services have increased their patient activity by up to 60% without any increase in the administrative hours available, which represents a significant challenge for the Patient Services Team.

An additional administrative allocation from the NWIHP for new gynaecology services was received in 2022, with focus particularly on endometriosis and menopause clinics.

## PLANS FOR 2023

The major project for the Patient Services team in 2023 will be preparing for the relocation of multiple busy ambulatory services to

a newly developed building adjacent to the Parnell Square campus. Administrative support for obstetric outpatients, paediatric outpatients, perinatal mental health, social work, and colposcopy services will need to be planned accordingly.

A scoping exercise will be completed for a new Call Centre office, ensuring sufficient resources are deployed in the old healthcare records library. This should greatly improve the turnaround time for patient call queries. The new digital telephone system will support this new development.

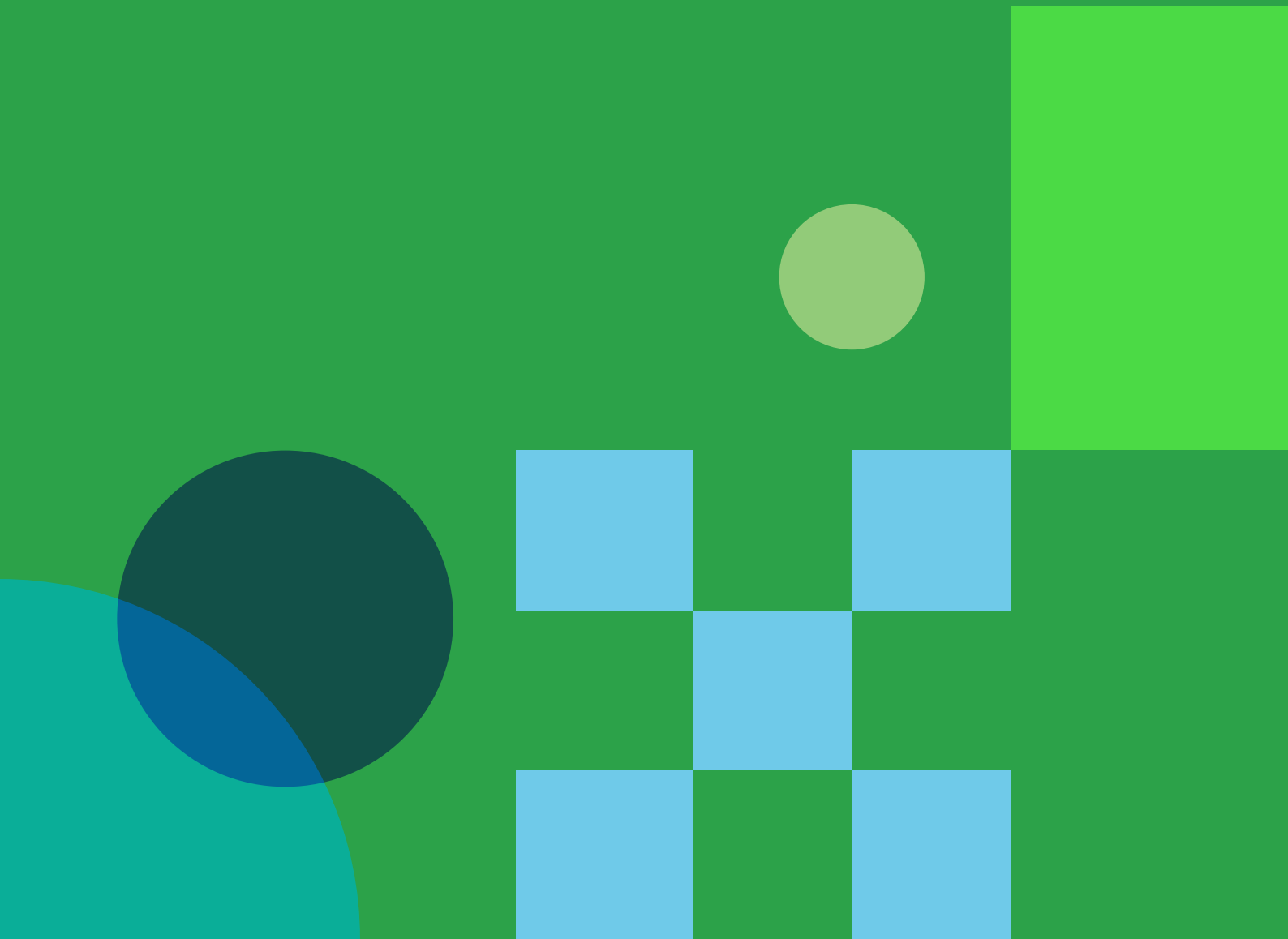
The T-Pro Connect project to streamline patient dictation services, and a new mailing option solution to reduce reliance on traditional postage, will continue hospital progress towards a completely paperless work environment.

A total of 14 Quality Improvement Plans (QIPs) have been developed by the Patient Services team, in line with the Hospital Strategic Plan, which will be completed in 2022.

In combination with the Human Resources Service, the organisational structure of the Patient Services department will be reviewed to optimise succession planning and career pathways, thereby improving staff retention and morale.

# Governance

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# 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:

- Quality, Safety and Risk Committee
- Governance Committee
- Finance and Audit Committee

## ROTUNDA HOSPITAL BOARD OF GOVERNORS 2022

**Prof. Tom Matthews**, Chairman (ratified Feb. '22 Board)

**Dr. David Abrahamson**

**Dr. Maria Wilson Browne**

**Mr. David Browne**

**Dr. Cliona Buckley**

**Mr. Cedric Christie**

**Cllr. Alison Gilliland**, Lord Mayor of Dublin

**Prof. Sam Coulter Smith**

**Mr. John Diviney**

**Prof. Fred Falkiner**

**Ms. Niamh Gallagher**

**Dr. James Gardiner**

**Prof. Michael Geary**

**Mr. Barry Holmes**

**Archbishop Michael Jackson**

**Cllr. Darcy Lonergan**

**Mr. Richard Nesbitt**

**The Very Reverend Dr. William Wright Morton**

**Ms. Margaret Philbin**

**Ms. Hilary Prentice**

**Mr. Denis Reardon**

**Mr. Ian Roberts**

**Mr. Stuart Switzer**

**Dr. Melissa Webb**

**Ms. Lucinda Woods**

## EXTERNS BOARD SUB COMMITTEES

**Ms. Jennifer Cullinane**, Finance and Audit Committee

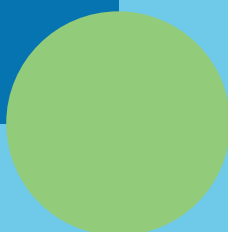
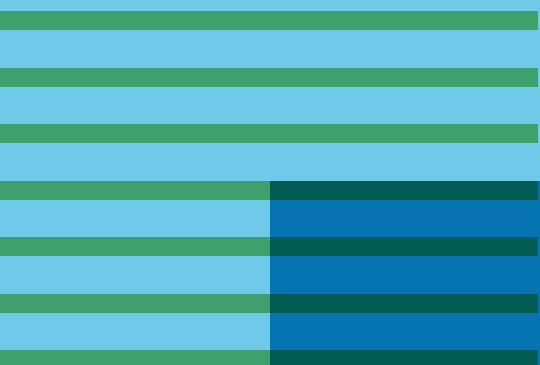
**Mr. Bill Collins**, Finance and Audit Committee

**Ms. Mary Connolly**, QSR Committee



# Appendices

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# Appendix 1

## CLINICAL SUMMARY DATA

1. TOTAL MOTHERS DELIVERED	TOTALS
Mothers delivered babies weighing >500 grams	8,151
Mothers delivered babies weighing <500 grams (including miscarriages)	1,477
Hydatidiform moles	11
Ectopic pregnancies	118
<b>Total Pregnancies</b>	<b>9,757</b>

2. MATERNAL DEATHS	TOTALS
Direct Maternal Deaths	1
Indirect Maternal Deaths	2
Late Maternal Deaths	1
<b>Total Maternal Deaths</b>	<b>4</b>

3. BIRTHS	TOTALS
Singletons	8,011
Twins	273 (137 sets)
Triplets	8 (3 sets)
Quadruplets	0
<b>Total babies delivered weighing 500g or more</b>	<b>8,292*</b>

\*some multiple pregnancies resulted in the birth of one infant who weighed < 500 and did not survive. Totals adjusted accordingly

4. OBSTETRIC OUTCOME	%	TOTALS
Spontaneous vaginal delivery*	46%	3,711
Forceps	4%	310
Vacuum	12%	951
Caesarean section	39%	3,179
Induction of labour	40%	3,292

\*Breech Deliveries included in spontaneous vaginal delivery

5. PERINATAL DEATHS	TOTALS
Antepartum deaths	36
Intrapartum deaths	0
Stillbirths	36
Early neonatal deaths	22
Late neonatal deaths	9
Congenital anomalies	28

6. PERINATAL MORTALITY RATE (PER 1,000 BIRTHS)	TOTALS
Overall perinatal mortality rate	7.0
Perinatal mortality rate corrected for lethal congenital anomalies	3.6
Perinatal mortality rate including late neonatal deaths	8.0
Perinatal mortality rate excluding unbooked cases	6.9
Corrected perinatal mortality rate excluding unbooked cases	3.5
Perinatal mortality rate in normally formed babies >2,500g	1.2

7. AGE OF WOMEN	Nulliparous	Multiparous	Total Mothers Delivered >500g	%
<20 yrs	133	34	167	2%
20-24 yrs	466	260	726	9%
25-29 yrs	758	741	1,499	18%
30-34 yrs	1,260	1,429	2,689	33%
35-39 yrs	762	1,612	2,374	29%
40+ yrs	203	493	696	9%
<b>Total</b>	<b>3,582</b>	<b>4,569</b>	<b>8,151</b>	<b>100%</b>

8. PARITY	TOTALS	%
Para 0	3,580	44%
Para 1	2,787	34%
Para 2-4	1,683	21%
Para 5	101	1%
<b>Total</b>	<b>8,151</b>	<b>100%</b>

9. COUNTRY OF BIRTH/NATIONALITY (FROM MOTHERS DELIVERED > 500g)	TOTALS	%
Irish	5,048	62%
EU	1,179	14%
Non EU	1,924	24%
Unknown	0	0%
<b>Total</b>	<b>8,151</b>	<b>100%</b>

10. BIRTH WEIGHT (g)	TOTALS	%
< 500	0	
500 - 999	53	0.6%
1,000 - 1,499	55	0.7%
1,500 - 1,999	135	2%
2,000 - 2,499	358	4%
2,500 - 2,999	1,194	14%
3,000 - 3,499	2,834	34%
3,500 - 3,999	2,737	33%
4,000 - 4,499	813	10%
4,500 - 4,999	105	1%
>5,000	8	0.1%
<b>Total</b>	<b>8,292</b>	<b>100%</b>

11. GESTATIONAL AGE	NULLIPAROUS	MULTIPAROUS	TOTALS	%
<26 weeks	15	12	27	0.3%
26 - 29 weeks + 6 days	23	23	46	0.6%
30 - 33 weeks + 6 days	54	65	119	1%
34 - 36 weeks + 6 days	193	266	459	6%
37 - 41 weeks + 6 days	3,292	4,200	7,492	92%
42 + weeks	5	3	8	0.1%
<b>Total</b>	<b>3,582</b>	<b>4,569</b>	<b>8,151</b>	<b>100%</b>

12. PERINEAL TRAUMA AFTER VAGINAL DELIVERIES	NULLIPAROUS	MULTIPAROUS	TOTALS	%
Episiotomy	1,257	316	1,573	32%
First degree laceration	163	511	674	14%
Second degree laceration	469	874	1,343	27%
Third degree laceration	45	28	73	1%
Fourth degree laceration	2	0	2	0%
Other laceration or grazes	81	322	403	8%
Intact	124	798	922	18%
<b>Totals</b>	<b>2,141</b>	<b>2,849</b>	<b>4,990</b>	<b>100%</b>

CS Deliveries not included in the above. Total Vaginal deliveries: 4,972

**13. THIRD & FOURTH DEGREE TEARS**

	NULLIPAROUS	MULTIPAROUS	TOTALS
Occurring spontaneously	21	26	47
Associated with episiotomy	24	7	31
Associated with forceps	16	1	17
Associated with vacuum	6	1	7
Associated with vacuum and forceps	4	0	4
Associated with occipito-posterior position	0	0	0
<b>Total 3rd &amp; 4th degree tears</b>	<b>47</b>	<b>29</b>	<b>75</b>

**14. PERINATAL MORTALITY: STILLBIRTHS IN NORMALLY FORMED INFANTS**

	NULLIPAROUS	MULTIPAROUS	TOTALS
Placental causes	1	6	7
Cord accident	4	3	7
Infection	1	3	4
Extreme prematurity	0	1	1
Unexplained / unknown	0	2	2
<b>Total</b>	<b>6</b>	<b>15</b>	<b>21</b>

**15. PERINATAL MORTALITY: CONGENITALLY MALFORMED INFANTS**

	NULLIPAROUS	MULTIPAROUS	TOTALS
Genetic	4	5	9
CNS lesions	0	3	3
Cardiac	4	6	10
Renal	0	3	3
Diaphragmatic hernia	0	0	0
Other	1	2	3
<b>Total</b>	<b>9</b>	<b>19</b>	<b>28</b>

**16. PERINATAL MORTALITY: EARLY NEONATAL DEATHS IN NORMALLY FORMED INFANTS**

	NULLIPAROUS	MULTIPAROUS	TOTALS
Prematurity	3	3	6
Cord	1	0	1
Placental	1	0	1
<b>Unknown</b>	<b>1</b>	<b>0</b>	<b>1</b>
<b>Total</b>	<b>6</b>	<b>3</b>	<b>9</b>



17. HYPOXIC ISCHAEMIC ENCEPHALOPATHY*		
	GRADE 2	GRADE 3
<b>Totals</b>	<b>8</b>	<b>2</b>

\*inborn babies only

18. SEVERE MATERNITY MORBIDITY	TOTALS
Massive obstetric haemorrhage	30
Severe sepsis	24
Pulmonary oedema/acute respiratory dysfunction	3
Peripartum hysterectomy	12
Pulmonary embolus	2
Acute renal or liver dysfunction	4
Cardiac arrest	0
Eclampsia	4
Coma	1
Uterine rupture	2
Transfer to ICU/CCU	11

19. BODY MASS INDEX (KG/M <sup>2</sup> )	2021	2022
Underweight: <18.5	146 (2%)	153 (2%)
Healthy: 18.6 - 24.9	4,098 (44%)	4,110 (47%)
Overweight: 25 - 29.9	2,864 (31%)	2,713 (31%)
Obese class 1: 30 - 34.9	1,271 (14%)	1,178 (13%)
Obese class 2: 35 - 39.9	546 (6%)	436 (5%)
Obese class 3: >40	224 (2%)	187 (2%)
Unrecorded	81 (1%)	5 (0.1%)
<b>Total booked</b>	<b>9,230</b>	<b>8,782</b>

# Appendix 2

## COMPARATIVE TABLE FOR 10 YEARS

YEARS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Babies born	8,841	8,980	8,538	8,589	8,409	8,514	8,410	8,317	9,148	8,292
Perinatal deaths	63+6*	68+2*	71	54+5*	51+1*	45+1*	59+6*	50	51	57+1*
Perinatal mortality rate	7.8	7.7	8.3	6.9	6.2	5.4	7.7	6.0	5.6	7.0
Corrected perinatal mortality rate	4.5	4.5	4.8	4.1	3.6	3	4.1	2.9	3.4	3.6
Total mothers delivered	10,314	10,814	10,078	10,024	9,915	9,760	10,200	9,915	10,715	9,757
Direct maternal deaths	3	2	1	0	0	0	0	0	0	1
Caesarean delivery %	31	31	32	35	34	34	35	37	37.3	39
Forceps/vacuum %	17	17	17	16	16	16	16	16	16	16
Epidural %	47	47	47	45	48	45	48	49	45	49
Induction %	29	30	29	29	31	31	35	36	37	40

\* Unbooked

# Appendix 3

## PERINATAL DEATHS

### GESTATIONAL AGE AT DELIVERY (WEEKS)

STILLBIRTHS		
20 0/7 - 23 6/7	2	6%
24 0/7 - 27 6/7	12	33%
28 0/7 - 31 6/7	5	14%
32 0/7 - 36 6/7	5	14%
37 0/7 - 39 6/7	11	31%
>= 40 0/7	1	3%
<b>Total</b>	<b>36</b>	<b>100%</b>

EARLY NEONATAL DEATHS		
20 0/7 - 23 6/7	2	9%
24 0/7 - 27 6/7	8	36%
28 0/7 - 31 6/7	4	18%
32 0/7 - 36 6/7	2	9%
37 0/7 - 39 6/7	4	18%
>= 40 0/7	2	9%
<b>Total</b>	<b>22</b>	<b>100%</b>

## WEIGHT AT DELIVERY (GRAMS)

STILL BIRTHS		
500 - 999g	14	39%
1,000 - 1,499g	7	19%
1,500 - 1,999g	2	6%
2,000 - 2,499g	3	8%
2,500 - 4,999g	10	28%
>/= 5,000g	0	0%
<b>Total</b>	<b>36</b>	<b>100%</b>

EARLY NEONATAL DEATHS		
500 - 999g	11	50%
1,000 - 1,499g	1	5%
1,500 - 1,999g	1	5%
2,000 - 2,499g	2	9%
2,500 - 4,999g	7	32%
>/= 5,000g	0	0%
<b>Total</b>	<b>22</b>	<b>100%</b>

# Appendix 4

## OUTPATIENT ACTIVITY DATA 2022

DESCRIPTION	NEW ATTENDANCES	RETURN ATTENDANCES	TOTAL	TELEMEDICINE
Obstetrics	8,457	18,660	27,117	6,750
Diagnostic clinics *	4,834	15,782	20,616	0
Midwifery clinics	2,521	14,663	17,184	338
Gynaecology	4,832	5,121	9,953	2,911
Paediatrics	4,802	4,319	9,121	167
Allied health	3,638	5,363	9,001	1,754
Colposcopy and smear clinics	2,673	2,884	5,557	0
Endocrinology	3,043	2,045	5,088	0
Antenatal parent education	2,598	1,621	4,219	5,139
Psychiatry	704	1,166	1,870	2,900
Nurse-led clinics	863	404	1,267	758
Anaesthesiology	771	23	794	1,611
Haematology	250	413	663	325
Infectious diseases service	250	413	663	325
Nephrology	151	408	559	0
Gastroenterology	23	23	46	5
<b>Total</b>	<b>40,410</b>	<b>73,308</b>	<b>113,718</b>	<b>22,983</b>

# Appendix 5

## FINANCIAL INFORMATION

### THE ROTUNDA HOSPITAL, DUBLIN

#### NON CAPITAL INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2022

	2022 €'000	2021 €'000
<b>PAY</b>		
Salaries	74,712	68,286
Pensions	7,798	6,758
	<u>82,510</u>	<u>75,044</u>
<b>NON-PAY</b>		
Direct patient care	7,908	8,583
Support services	7,466	6,971
Financial and administrative	3,833	4,316
	<u>19,207</u>	<u>19,869</u>
<b>TOTAL EXPENDITURE FOR THE YEAR</b>	<b>101,717</b>	94,913
Income	<u>(15,508)</u>	<u>(16,400)</u>
<b>NET EXPENDITURE</b>	<u>86,209</u>	<u>78,513</u>
HSE Funding for year	<u>(85,991)</u>	<u>(78,675)</u>
<b>SURPLUS / (DEFICIT) FOR THE YEAR</b>	<b>(218)</b>	162
<b>DEFICIT CARRIED FORWARD</b>	<u>246</u>	<u>84</u>
<b>SURPLUS BROUGHT FORWARD</b>	<u>28</u>	<u>246</u>

# Appendix 6

## COMPLETED AUDITS 2022

### TITLE OF AUDIT

#### ADMINISTRATION

Re-audit of perineal and abdominal wound infections

Intrapartum documentation

Re-audit of delivery suite ward rounds

#### ANAESTHESIOLOGY

Enhanced maternal recovery after caesarean section – addressing hypothermia

Re-audit of oxytocin infusion compliance and PPH rates following the standardisation of oxytocin infusion regime for all intrapartum caesarean sections

Re-audit of postpartum anaemia following postpartum haemorrhage

An audit of pre-anaesthetic assessment documentation

Re-audit of fibrinogen usage in primary post-partum haemorrhage

Re-audit of difficult airway equipment

#### CLINICAL NUTRITION

Re-audit of occipital frontal circumferences (OFC) measurements

#### GYNAECOLOGY

Postmenopausal bleeding referrals: an audit of current practice in the outpatient hysteroscopy and ultrasound setting

Audit of management of cervical glandular intraepithelial neoplasia - preinvasive disease

Cervical gynaecology clinic referrals and outcomes

Re-audit of methotrexate use in ectopic pregnancy

An audit on the referral of pre-menopausal women to the ambulatory hysteroscopy clinic

Postmenopausal bleeding referrals: an audit of inpatient hysteroscopy

#### MENTAL HEALTH

Re-audit completion of Edinburgh Postnatal Depression Scale (EPDS) on postnatal discharge

#### NEONATOLOGY - MEDICAL

Re-audit of management of infants >35 weeks returning to the paediatric outpatient department for jaundice review

Re-audit of feeding practices in VLBW infants the Neonatal Unit

Re-audit of hyperbilirubinaemia in near term infants

#### NEONATOLOGY - NURSING

Re-audit of documentation practices in relation to gastric tube feeding on the Neonatal Unit following MN-CMS electronic healthcare record introduction

#### NURSING/MIDWIFERY

'See and treat LLETZ' service for abnormal cervical findings

Usage of ISUOG guideline recommendations for electronically-saved fetal anatomy ultrasound images

Audit of IMEWS (Irish Maternity Early Warning System) on MN-CMS electronic healthcare record

To evaluate the introduction of a home-based intervention in the specialist perinatal mental health service

**NURSING/MIDWIFERY (CONT.)**

Audit of telephone calls from women seeking information on induction of labour pre and post antenatal education video implementation

Audit of postnatal discharge education documented on MN-CMS and the time of departure from the clinical environment

Evaluation of wound care documentation

Re-audit of mastitis management

Re-audit of intrapartum CTG fetal surveillance

Implementation of Enhanced Recovery After Surgery (ERAS) for caesarean delivery

Re-audit of early skin-to-skin contact in the delivery suite

Re-audit of swab count and perineal repair documentation

Abdominal palpation before vaginal examinations

Fluid balance in labour

Completion of IMEWS before transfer to postnatal wards following vaginal birth

Re-audit of IMEWS

Audit of bladder care in postnatal patients

**OBSTETRICS**

Audit of use of Fetal Blood Sampling (FBS) in labour

Re-audit of the management of the Next Birth After Caesarean (NBAC) consultant-led antenatal clinic

Re-audit of management of preterm premature rupture of membranes (PPROM)

Re-audit of bHCG use in the Early Pregnancy Assessment Unit

Antibiotic prophylaxis following operative vaginal deliveries

Re-audit of the completeness of documentation regarding shoulder dystocia in the MN-CMS electronic healthcare record

An audit of the impact of routine Hepatitis C screening in pregnancy

Re-audit of sequential instruments for operative vaginal delivery

Management of molar pregnancy

Epilepsy or seizure history at booking and pregnancy management

Accuracy of Thrombocalc in the setting of postpartum haemorrhage in caesarean deliveries

Evaluation of Anti-Ro and Anti-La antibody testing in antenatal patients

Assessment of compliance with the specialist Maternal Medicine Antenatal Clinic referral system

**RADIOLOGY**

Sonographer reporting versus final radiologist report for Developmental Dysplasia of the Hip (DDH)

**SATU**

Audit of patients who attended a scheduled first STI review appointment following their first Sexual Assault Treatment Unit (SATU) attendance

Asymptomatic STI screening for chlamydia and gonorrhoea in female patients who attend the Sexual Assault Treatment Unit (SATU)

Re-audit of the classification and documentation of wounds/injuries during a forensic clinical examination carried out in the Sexual Assault Treatment Unit



# Appendix 7

## ROTUNDA HOSPITAL STAFF PUBLICATIONS 2022

**Barcroft M, McKee C, Berman DP, Taylor RA, Rivera BK, Smith CV, Slaughter JL, El-Khuffash A, Backes CH.** Percutaneous Closure of Patent Ductus Arteriosus. *Clinics in Perinatology*, 49: 149-166, 2022.

**Bistervels IM, Buchmuller A, Wiegers HMG, Ni Áinle F, Tadry B, Donnelly J, Verhamme P, Jacobsen AF, Hansen AT, Rodger MA, DeSancho MT, Shmakov RG, van Es N, Prins MH, Chauleur C, Middeldorp S, Highlow Block writing committee, for the Highlow Investigators.** Intermediate-dose versus low-dose low-molecular-weight heparin in pregnant and post-partum women with a history of venous thromboembolism (Highlow study): an open-label, multicentre, randomised, controlled trial. *Lancet*, 400: 1777-1787, 2022.

**Breakwell L, Marke D, Kaiser R, Tejada-Strop A, Pauly MD, Jabbi S, Yambasu S, Kabore HJ, Stewart B, Sesay T, Samba TT, Hayden T, Kamili S, Jambai A, Drobeniuc J, Singh T, Tohme RA, Wasley A.** Assessing the impact of the routine childhood hepatitis B immunization program and the need for hepatitis B vaccine birth dose in Sierra Leone, 2018. *Vaccine*, 40: 2741-2748, 2022.

**Brehony C, Eogan M, Lambert JS, Drew RJ.** Evaluation of molecular testing for *Mycoplasma genitalium* for symptomatic women. *Irish Journal of Medical Science*, 191: 1771-1775, 2022.

**Brennan K, Craven S, Cheung M, Kane D, Noone E, O'Callaghan J, Molloy EJ, Walsh PT, McAuliffe FM, Doyle SL.** Cytosolic dsRNA improves neonatal innate immune responses to adjuvants in use in pediatric vaccines. *Journal of Leukocyte Biology*, 112: 523-537, 2022.

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**Ceulemans M, Sillis L, Foulon V, Panchaud A, Winterfeld U, Pomar L, Cleary B, O'Shaughnessy F, Passier A, Richardson JL, Nordeng H.** Comment to 'Pregnancy and COVID-19, focus on vaccine and pharmacological treatment'. *Journal of Reproductive Immunology*, 152: 103639, 2022.

**Chauhan SK, Monaghan M, McCaul CL.** Evaluation of a novel emergency front of neck access device in a benchtop model of obesity. *Irish Journal of Medical Science*, 1: 1-8, 2022.

**Collins J, Bailey K, McCaul C.** Successful scalpel cricothyroidotomy to manage hypoxic cardiac arrest secondary to severe epiglottitis. *Trends in Anaesthesia and Critical Care*, 46: 30-32, 2022.

**Comer SP, Le Chevillier A, Szklanna PB, Kelliher S, Saeed K, Cullen S, Edebiri O, O'Neill T, Stephens N, Weiss L, Murphy CA, Rajakumar S, Tierney A, Hughes C, Lennon Á, Moran N, Maguire PB, Ni Áinle F, Kevane B.** Case report: hypergranular platelets in vaccine-induced thrombotic thrombocytopenia after ChAdOx1 nCov-19 Vaccination. *Frontiers in Cardiovascular Medicine*, 9: 824601, 2022.

**Costigan C, Raftery T, Carroll AG, Wildes D, Reynolds C, Cunney R, Dolan N, Drew RJ, Lynch BJ, O'Rourke DJ, Stack M, Sweeney C, Shahwan A, Twomey E, Waldron M, Riordan M, Awan A, Gorman KM.** Neurological involvement in children with haemolytic uremic syndrome. *European Journal of Pediatrics*, 181: 501-512, 2022.

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# Appendix 8

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 Dr. Ching Ng  
 Dr. Zelda O'Brien  
 Dr. Patricia O'Dwyer  
 Dr. Naomi Okigbo  
 Dr. Julia O'Leary  
 Dr. Luricke Potgieter  
 Dr. Orla Power  
 Dr. Sarah Redmond  
 Dr. Aidan Shanahan  
 Dr. Lorna Tate  
 Dr. Elizabeth Tunney  
 Dr. James Walshe  
 Dr. Amy Worrall

#### SENIOR HOUSE OFFICER IN PAEDIATRICS

Dr. Nadia Abdullah  
 Dr. Manal Al Tareef  
 Dr. Kristi Constantinou  
 Dr. Madeleine Daly Devereux  
 Dr. Katriona Fox  
 Dr. Tara Green  
 Dr. Aisha Hassan  
 Dr. Iqra Idress  
 Dr. Lizeri Jansen  
 Dr. Genevieve Leon  
 Dr. Saeedah Mahmoud  
 Dr. Lauren McDonagh  
 Dr. Jessica McGirr  
 Dr. James Morgan  
 Dr. Pdraig Morrissey  
 Dr. Sinead Mulroy  
 Dr. Ailbhe Murphy  
 Dr. Rabha Naveed  
 Dr. Ligia Nechifor  
 Dr. Sella Ogoda  
 Dr. Tara Raouf  
 Dr. Ali Raza

#### SENIOR HOUSE OFFICER IN ANAESTHESIOLOGY

Dr. Mirza Baig  
 Dr. Anser Ghafor  
 Dr. Rebecca Keane  
 Dr. Mary Moore  
 Dr. Elvin Moynagh  
 Dr. Donal Roche

#### ASSISTANT DIRECTOR MIDWIFERY AND NURSING

Ms. Anu Binu  
 Ms. Suzanna Byrne  
 Ms. Mary Deering  
 Ms. Geraldine Gannon  
 Ms. Catherine Halloran  
 Ms. Marie Keane  
 Ms. Aideen Keenan  
 Ms. Janice MacFarlane  
 Ms. Annmarie Sliney  
 Ms. Mary Whelan  
 Ms. Patricia Williamson

#### CLINICAL MIDWIFE MANAGER GRADE III

Ms. Caitriona Cannon  
 Ms. Christine Corcoran  
 Ms. Aileen Fleming  
 Ms. Jane Hickey  
 Ms. Chantal Murdoch  
 Ms. Fionnuala Nugent  
 Ms. Ciara Roche  
 Ms. Amy Rochford  
 Ms. Fiona Walsh

#### CLINICAL NURSE MANAGER GRADE III

Ms. Siobhan Mulvany  
 Ms. Orla O'Byrne  
 Ms. Jennifer O'Neill  
 Ms. Paula Penrose

#### CLINICAL MIDWIFE MANAGER GRADE II

Ms. Nadia Arthurs  
 Mr. Trevor Barrett  
 Ms. Virginie Bolger  
 Ms. Patricia Butler  
 Ms. Lisa Carroll  
 Ms. Sarah Cass  
 Ms. Laura Cooney  
 Ms. Sinead Corbett

Ms. Emer Croke  
 Ms. Marina Cullen  
 Ms. Eilidh Dobbins  
 Ms. Sinead Donaghy  
 Ms. Elizabeth Doran  
 Ms. Mary Dwyer  
 Ms. Catherine Edwards  
 Ms. Helen Enyinnaya  
 Ms. Noelle Farrell  
 Ms. Alva Fitzgibbon  
 Ms. Mary Fogarty  
 Ms. Suzanne Gillen  
 Ms. Louise Hanrahan  
 Ms. Susan Hogan  
 Ms. Elizabeth Iredale  
 Ms. Monica Kavanagh  
 Ms. Nollaig Kelliher  
 Ms. Denise Kildea  
 Ms. Ruth Larkin  
 Ms. Margaret Lawless  
 Ms. Eimear Lawlor  
 Ms. Helen Lonergan  
 Ms. Deidre Lyster  
 Ms. Emma MacBride  
 Ms. Barbara Markey  
 Ms. Esther McWilliams  
 Ms. Ciara Muddiman  
 Ms. Jacqueline Murrin  
 Ms. Sangeetha Nagarajan  
 Ms. Joan O'Beirnes  
 Ms. Avril O'Connor  
 Ms. Annette O'Connor  
 Ms. Fiona O'Neill  
 Ms. Ajita Raman  
 Ms. Aidene Rogers  
 Ms. Nicolas Roper  
 Ms. Paula Scully  
 Ms. Joanne Taylor  
 Ms. Elizabeth Tobin  
 Ms. Deirdre Ward

#### CLINICAL NURSE MANAGER GRADE II

Ms. Hazel Cooke  
 Ms. Maria Figueroa  
 Ms. Karen Finegan  
 Ms. Anu Garg  
 Ms. Sile Gunning  
 Ms. Caroline Hendricken  
 Ms. Julie Heslin  
 Ms. Rosamma Joseph

Ms. Christina Kilpatrick  
 Ms. Magdalani Lini  
 Ms. Helen Lonergan  
 Ms. Susan Mathews  
 Ms. Ruth McLoughlin  
 Ms. Tara Moore  
 Ms. Ailish O'Leary  
 Ms. Siji Philip  
 Ms. Jannice Reyes  
 Ms. Prabin Singh  
 Ms. Jeyanthi Sukumaran  
 Ms. Joanne Taylor  
 Ms. Princy Thomas  
 Ms. Margaret Thorne  
 Ms. Derval Toomey

#### ADVANCED MIDWIFE PRACTITIONER

Ms. Debra England  
 Ms. Bernadette Gregg  
 Ms. Ursula Nagle

#### ADVANCED NEONATAL NURSE PRACTITIONER

Ms. Jean Coffey  
 Mr. Mark Hollywood  
 Ms. Christine McDermott  
 Ms. Edna Woolhead

#### PARAMEDICAL HEAD OF DEPARTMENT

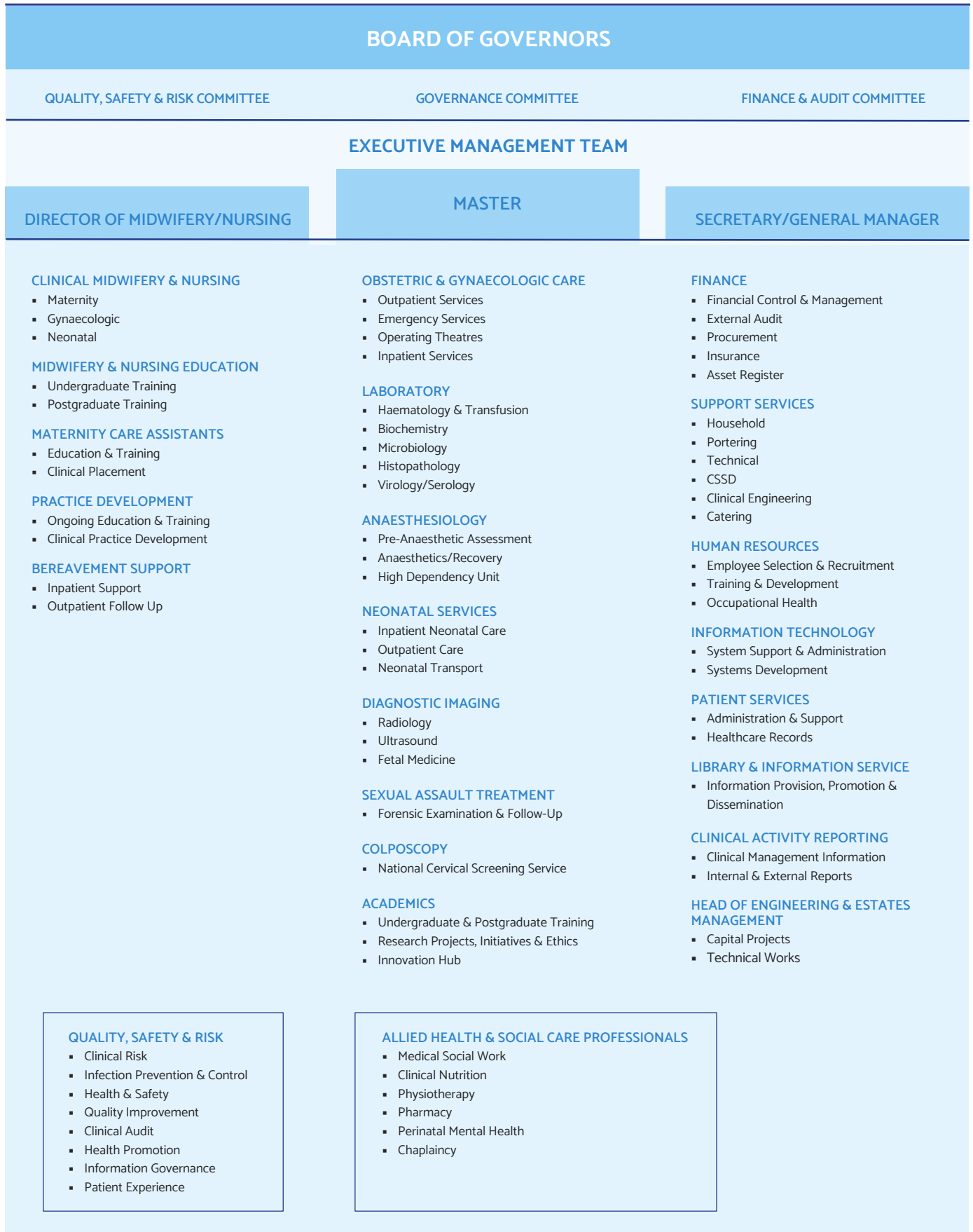
Mr. Brian Cleary (Chief Pharmacist)  
 Ms. Canny Cusack (Senior Physiotherapist)  
 Ms. Sinead Devitt (Head Medical Social Worker)  
 Ms. Laura Kelly (Head of Clinical Nutrition)  
 Mr. John O'Loughlin (Laboratory Manager)

#### ADMINISTRATIVE HEAD OF DEPARTMENT

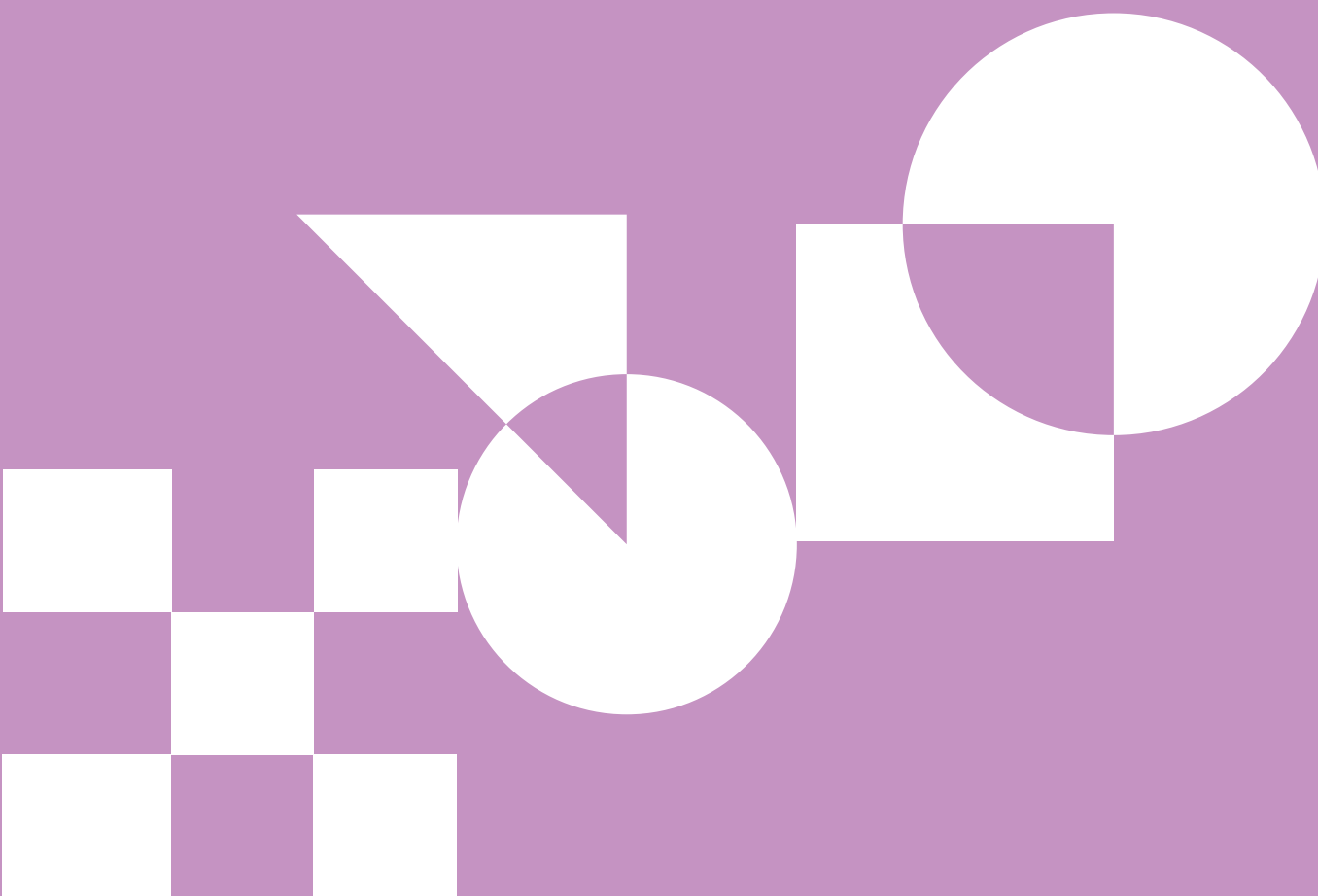
Ms. Sheila Breen (Quality and Patient Safety Manager)  
 Ms. Johanne Connolly (Human Resources Manager)  
 Ms. Kathy Conway (Clinical Reporting)  
 Ms. Siobhan Enright (Clinical Risk Manager)  
 Mr. Peter Foran (Finance)  
 Mr. Henry Gelera (Clinical Engineering Manager)  
 Mr. Cathal Keegan (IT Manager)  
 Mr. Mark Kelly (Health and Safety Manager)  
 Ms. Catherine L'Estrange (Household Manager)  
 Mr. Brendan Memery (Technical Services Manager)  
 Ms. Niamh Moore (Patient Services Manager)  
 Ms. Anne O'Byrne (Head Librarian)  
 Mr. Ray Philpott (Support Services Manager)  
 Mr. Paul Shields (Head Porter)

# Appendix 9

## ORGANISATIONAL STRUCTURE







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