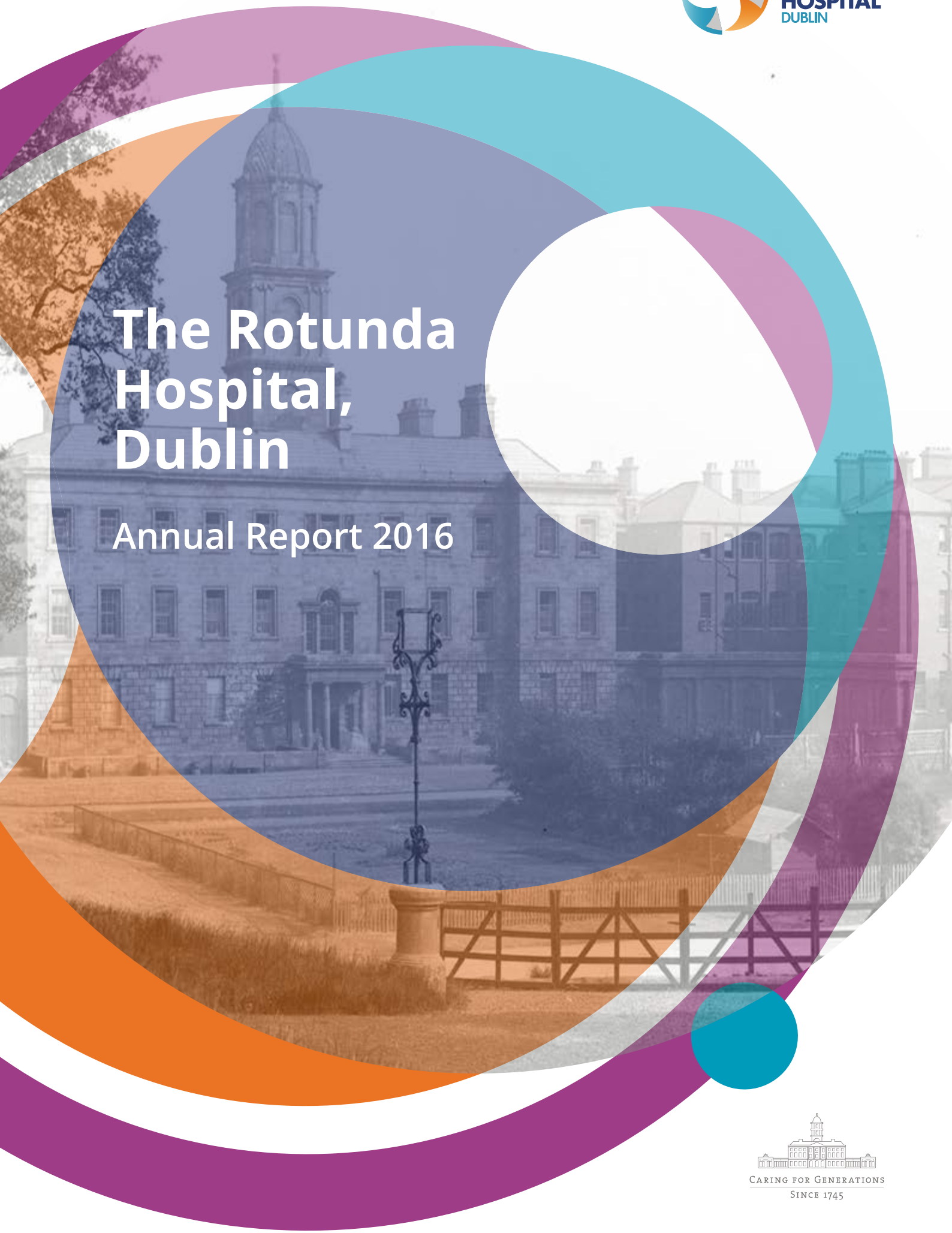
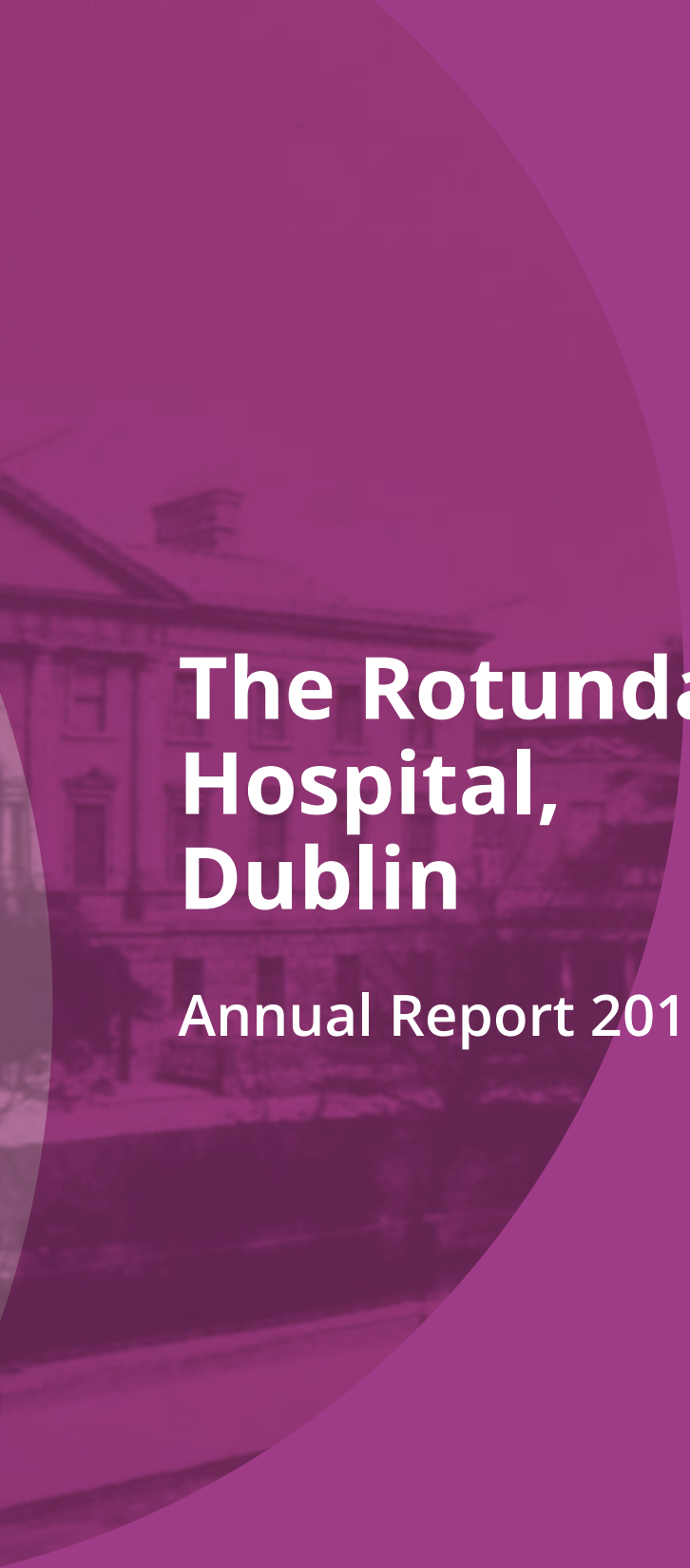
THE ROTUNDA HOSPITAL DUBLIN



The Rotunda Hospital, Dublin

Annual Report 2016

Caring for Generations
Since 1745



The Rotunda Hospital, Dublin

Annual Report 2016

Contents

INTRODUCTION

Introduction by the Master

It is a great honour and privilege to present this, my first annual report as the 39th Master of the Rotunda. The Rotunda Hospital has been at the forefront of transparent dissemination of its clinical results for hundreds of years and I am delighted to continue that tradition, albeit in a somewhat more contemporary and user-friendly format this year.

I assumed the position of Master of the Rotunda in January 2016 after seven years of accomplished leadership by Dr. Sam Coulter-Smith. Sam has been a source of huge support for me during this first year, emphasising the true value of the mastership model of hospital management in which past chief executives, with all of their accumulated experience and wisdom, remain as a vital management resource for the new hospital leadership team. Few corporate entities can boast of the immediate availability of three past CEOs as a support for the Executive Management Team.

As evidence of the clinical excellence that is delivered on a day-to-day basis by the Rotunda, I am proud to present these, our clinical performance and management results for 2016. A total of 10,024 mothers were cared for, with 8,405 mothers delivering 8,589 babies. Additionally, with 7,776 gynaecologic visits, the Rotunda remains the largest provider of gynaecologic services for both the north side of the city of Dublin and the northern half of the country. The Rotunda Hospital is the largest provider of prenatal diagnosis and treatment services in the country, which results in a disproportionately higher number of deliveries of pregnancies complicated by serious fetal abnormalities. Additionally, the Rotunda services some of the most socially disadvantaged population sectors in the country. These two factors are underscored by our overall perinatal mortality rate of 6.9 per 1,000, but which drops significantly to a corrected perinatal mortality rate of 4.1 per 1,000 when congenital malformations and external transfers are excluded. In other words, mothers pregnant with a healthy fetus who obtain their care at the Rotunda can be reassured of a superb standard of healthcare, better than the vast majority of maternity hospitals worldwide. While major maternal morbidity remains a challenge to our hospital resources, I am delighted to report another year without a direct maternal mortality.

This superb standard of care and attention to the patient experience was recognised in 2016, with the Rotunda being awarded the title of Maternity Hospital of the Year at the Irish Healthcare Centre Awards. The citation for this award paid tribute to the Rotunda's constant attention to new initiatives and innovation, with multiple patient care improvement projects demonstrating how the Rotunda adheres to its "Maternity Hospital of Choice" reputation.

Historical Context

The importance of the Rotunda in the history of Dublin and Ireland was underscored during the 1916 centenary celebrations. In March 2016, the Hospital launched "Rotunda: Birth of a Nation" as an interactive exhibit, open to the public, and based in the historic surroundings of our Pillar Room. Spear-headed by our librarian, Anne O'Byrne, and consultant anaesthetist, Dr. Patch Thornton, this highly informative exhibition was visited by almost 4,000 members of the public. Demonstrating the pivotal role played by women during the Easter Rising and illustrating how the Rotunda continued to deliver vital maternity services uninterrupted throughout the week of combat in 1916, this exhibition was widely lauded for its historical accuracy and sensitivity to all backgrounds. The exhibition was launched by Sabina Higgins, wife of the President of

Professor Fergal Malone, Master of the Rotunda Hospital.

Ireland, and was made such a success by countless hospital staff who volunteered as exhibition guides.

A permanent on-line exhibition was developed later in 2016 and I am delighted to report that www.rotundabirthofanation.net has been chosen nationally as one of the top five websites that commemorated the 1916 centenary.

Governance

The landscape of hospital governance in Ireland is changing and with this brings a major challenge to the concept of voluntarism in the Irish healthcare sector. While involvement of religious orders in the day-to-day running of our hospitals is appropriately being challenged and curtailed, this should not be used as a clandestine method of bringing management of our hospitals under the centralised control of the Health Service Executive (HSE) or other devolved government agencies. The voluntary healthcare sector in Ireland has a long tradition of innovation and clinical service excellence that is not matched by HSE-managed hospitals.

The Rotunda, as an example of a voluntary hospital with its independent Board of Governors underpinned by a legal Charter, has long championed new healthcare programmes and management efficiencies yielding world-class clinical outcomes. While we accept that a government agency that provides 75% of our funding has a role in oversight in the public interest, this cannot be mistaken for ownership or for an erosion of clinical and management independence. To do so will remove a vital layer of innovation, efficiency and clinical excellence which is so clearly needed at this time to restore public confidence in the Irish healthcare system.

Management

The successful operation of the Rotunda as one of the largest maternity hospitals in the world, for this our 272nd year, would not have been possible without the professionalism and teamwork of a dedicated group of Rotunda staff. I have been ably assisted by Pauline Treanor, Hospital Secretary General Manager, and Margaret Philbin, Director of Nursing and Midwifery. Their attention to

detail, consummate professionalism and total commitment to the Rotunda, its staff and patients are an example of all that is good in the Irish healthcare sector.

As already mentioned, one of the most important features of a voluntary hospital is its independent Board of Governors. I have been fortunate to have worked alongside two Board Chairs in 2016, Hilary Prentice and Patricia Noonan Walsh. Supported by a dedicated team of volunteer governors with skills and experience spanning many walks of life, the Board represents a vital asset in supporting the Executive Management Team, as well as exercising regular, proactive oversight that continually challenges hospital management to further excel.

Despite continuous upwards pressure on patient volume and complexity, the Rotunda again has performed in an effectively financial breakeven position for 2016. We had a small deficit of €170,000, representing only 0.3% of our HSE allocation of €49.7 million. This is in large part due to the efficiency of our financial management team, ably led by our Financial Controller, Mr. Jim Hussey.

Hospital Infrastructure

A major challenge to us in preserving these high clinical standards remains our limited physical infrastructure. While we all have great affection for our 1757 Richard Cassels-designed building masterpiece, it is not appropriate to continue to deliver 21st century healthcare in our current building. For the last two years we have been working extensively on a Rotunda Hospital funded plan to move the Rotunda as a co-located hospital to the Connolly Hospital campus in Blanchardstown. Current Government policy and the Rotunda Hospital Board both support this move in the interests of optimising patient safety and clinical excellence. The design brief for this new hospital is now complete and will deliver a state-of-the-art 50,000m^2 women and infant's hospital at a likely build cost in excess of €300 million.

However, the successful co-location of the Rotunda with Connolly requires more than just capital investment into a new maternity hospital building. Currently the Rotunda exists as a virtual co-located hospital with the Mater Misericordiae University Hospital, only 600m to our northeast. Most of our anaesthesia and medical specialist consultants are jointly appointed between both hospitals, which provides a superb level of clinical support whenever we are faced with a critically ill mother. In contrast, Connolly Hospital does not currently have sufficiently advanced clinical programmes in anaesthesia, critical care, complex gynaecologic surgery, vascular surgery, interventional radiology and laboratory medicine to provide the similar levels of support being provided by the Mater. Before the Rotunda can safely move to Connolly, a major upgrade of such clinical services together with general hospital infrastructure development will be required. Otherwise, we would face the unacceptable scenario of critically ill mothers being transported from a new Rotunda building on the Connolly campus back to the Mater Hospital for life-saving care. To date, we have been given no indication of either our place in the Government capital development plan nor any indication of funding for required clinical programme development at Connolly.

Until such commitment of capital funding and clinical programme development for our relocation project is confirmed, together with a firm timeline for completion, it is incumbent upon us to continue to improve the physical infrastructure at the Rotunda campus on Parnell Square. It is vital to emphasise that further development of the Rotunda is required immediately and that such development should not be considered redundant even with a longer term move to Connolly. It should be noted that most other major hospital relocations in the State have been accompanied by vital interim infrastructural developments and expenditure on their original sites while awaiting new hospital construction.

The critical necessity to immediately improve the existing Rotunda campus on Parnell Square was clearly demonstrated in August 2016 following an unannounced hygiene inspection by the Health Information and Quality Authority (HIQA) . While the inspectors praised our overall excellent hygiene and strong compliance with international standards, they were critical of the physical infrastructure of the emergency operating theatre in the Delivery Suite. To address this immediate infrastructure deficiency, we have put together a development programme for short and medium-term development on our current site which should significantly improve service provision for current patients.

Core Staff

I would like to acknowledge the support and dedication to service of all of our consultant obstetrician-gynaecologists, neonatologists, anaesthetists, pathologists and medical subspecialists, together with a superb cohort of doctors in training, without whom the clinical excellence illustrated in this report could not have been achieved. I would like to particularly single out the contribution of Dr. John Loughrey, our Clinical Director, and our Assistant Masters for their support and efforts.

During every single week in 2016, we received written or verbal patient feedback on the superb level of compassion and care provided by our midwives and nurses. This dedicated cohort of staff is the true backbone of the Rotunda and I wish to acknowledge their work ethic, commitment to patient welfare, and professionalism, often in the setting of limited resources and staffing numbers. Our patients have correctly identified our midwives and nurses as the most valuable asset that the Hospital enjoys. Space constraints prevent me from individually acknowledging all of the other 850 members of our staff who have made 2016 another safe and successful year in the history of the Rotunda. However, I want all our staff to be aware of how much I, and the other members of the Executive Management Team, appreciate your efforts, sacrifices and commitment to our patients.

RCSI Hospitals Group

The RCSI Hospitals Group is one of seven groupings of acute hospitals in Ireland, and the Rotunda is the lead maternity and gynaecologic care provider for this group. The Master of the Rotunda also assumes the role of Group Clinical Director for Women and Infants' Services for the Group, thereby providing a leadership role for these services across the northeast region, including Our Lady of Lourdes Hospital Drogheda and Cavan General Hospital. Monthly performance meetings are held with the RCSI Hospitals Group management team, led by Group CEO, Mr. Ian Carter. A key quality assurance development in 2016 was the establishment of the Senior Incident Management Forum, under the leadership of a former Rotunda Master, Dr. Peter McKenna, which provides a formal structure for maternity data analytics and assessment of adverse outcomes in a timely manner. The Rotunda provides assistance for group maternity services in terms of educational support and implementation of standardised clinical protocols and care pathways.

Another important development in 2016 was the appointment of three new consultant gynaecologists and a consultant anaesthetist jointly between the Rotunda and Connolly hospitals. Dr. Catriona Murphy's appointment as a consultant anaesthetist has improved the clinical coordination for patients between the Rotunda and Connolly hospitals. Drs. Naomi Burke, Kushal Chummun and Eve Gaughan have greatly strengthened the gynaecologic surgical capabilities within the RCSI Hospitals Group, with particular emphasis on minimal access surgical procedures. These appointments have also supported the launch of the Rotunda Hospital-funded outpatient hysteroscopy service between the Rotunda and Connolly Hospitals in February 2016. This innovative "see-and-treat" service provides patients with common benign gynaecologic

Front entrance of the Rotunda Hospital.

complaints the opportunity to have a consultant evaluation, ultrasound assessment and hysteroscopic diagnostic and therapeutic intervention, all at a single visit. Over 800 patients have since benefited from this new service.

Additionally, a funding proposal for developing RCSI Hospitals Group maternal-fetal medicine services, including the provision of fetal anomaly ultrasound and high-risk pregnancy support for Our Lady of Lourdes Hospital Drogheda and Cavan General Hospital, has been successfully developed, with the employment of four new consultants in maternal-fetal medicine approved for recruitment in 2017.

Academic Role & Research

The Rotunda Hospital, together with its academic partner, the Royal College of Surgeons in Ireland, has seen an extremely productive year in terms of academic and research excellence. The Rotunda is the lead provider of medical student education in obstetrics, gynaecology and neonatology for the RCSI School of Medicine, with almost 200 medical students attending the Rotunda for core clinical teaching in 2016. An RCSI-Rotunda Liaison Committee was established in 2016 to streamline the educational and assessment needs of medical students at the hospital.

The Rotunda is the management site for the HRB-funded Perinatal Ireland and Mother & Baby Clinical Trial Networks. Highlights in 2016 from these networks included nine presentations at the world's premier international obstetric research meeting, the Society for Maternal Fetal Medicine annual clinical research meeting in Atlanta.

The Centers for Disease Control and Prevention in the United States singled out the Rotunda for its innovative "Thrombocalc" programme, an automated system for reducing thromboembolism, one of the biggest causes of maternal mortality worldwide.

The extent of research activities performed at the Rotunda was illustrated in June 2016, during our annual Rotunda Research Day. Organised by our Director of Research, Dr. Joanna Griffin, a large attendance heard about innovative projects in thromboembolism prevention, prediction of difficult labour,

screening for group B streptococcus infection, and non-invasive prenatal testing for fetal chromosomal abnormalities. The crucial role played by the Rotunda Foundation in funding start-up research programmes, many of which have gone on to secure larger-scale national funding, was clearly evident from the highly regarded presentations.

Finally, it would be remiss of me if I did not point out that this report would not have been possible without the meticulous attention to detail that is the hallmark of Mary O'Grady, Administrative Manager in the Master's office, supported by Margaret Griffin. Mary has supported five Masters and knows more about the workings of the Rotunda Hospital than any other member of staff. Her efficiency and professionalism are a vital asset to the role of the Master and this report would simply not have been possible without her tireless efforts and commitment.

I am simultaneously proud of these world-class patient care results delivered by the Rotunda in 2016 while also excited about the opportunity for further excellence to be achieved in 2017. We will continue to develop our core asset, our enormously committed and talented workforce, while striving to optimise our physical infrastructure, even though we acknowledge the funding realities that exist. I am confident that the Rotunda will remain the Maternity Hospital of Choice as we balance excellence in individualised patient care, cutting-edge innovation, and strategic hospital development into 2017.

Professor Fergal Malone
Master of the Rotunda Hospital

Introduction by the Chairperson

The Rotunda's long history of providing superb care to mothers and babies is continued by its excellent staff, and as Chairman of the Board of Governors I want to express my gratitude and that of my fellow Governors for their dedication, commitment and compassion. We recognise the challenging environment in which they work and are committed to continuing to seek support to improve the facilities on this site while we wait for the relocation of the Rotunda to the Connolly Hospital Campus.

I wish to acknowledge our new Master, Professor Fergal Malone and his team in the Hospital for the work they do and his own support and advice to the Board of Governors. We are delighted to have someone with his clinical expertise and commitment as the Clinical and Operational Head of the Hospital and we wish him well for his seven-year tenure as Master.

The Board of Governors relies on receiving timely reports and other relevant information to function effectively. I want to thank Ms. Claire Murphy, Personal Assistant to the Secretary General Manager, Ms. Pauline Treanor, for her continued and consistent efforts in ensuring our meetings are coordinated and relevant papers are provided.

We have a long history of delivering excellence in health care to mothers and babies here at the Rotunda and I know many improvement initiatives take place each year in various departments throughout the Hospital. We all recognise the confidence that women put in our staff when they choose to attend the Rotunda. The Board of Governors closely monitors activity, service developments, and quality and safety initiatives through reports from the Executive, as well as having opportunities to speak directly to staff, through walk-rounds and scheduled meetings with them.

The Hospital continues to experience a high demand for care and while we are cognisant of the infrastructural constraints on the site, we commend the innovation and organisation of management in continually adapting and improving facilities to ensure that the most appropriate, evidence-based care is provided.

The Governors of the Rotunda hold the ethos espoused by our founder Bartholomew Mosse very dear and we believe that his desire to improve the health and well-being of women and babies is as relevant today as it was back in 1745. Of course, medicine and technology has and will continue to improve and to challenge us in many ways to ensure we can do the best for all of our patients. However, technology will never replace basic communication and human kindness, which is what patients want first and foremost. If we fail there, we fail completely to help them to have a good experience. I am aware that one of the most common reasons that patients express dissatisfaction in health care in general relates to the communication between them and staff at all levels and I encourage all staff to focus on communicating in an open and transparent way with patients and each other.

One of the concerns of the Board of Governors is the Hospital's capacity to provide sufficient gynaecological services to meet the demand from referrals. It was with this in mind that the Board of Governors agreed to fund, from

The Rotunda Hospital
August 1912.

its ancillary income, the set-up costs of an ambulatory "one stop-shop" hysteroscopy clinic on the grounds of Connolly Hospital. This service provides a facility for our consultants to see and treat select women at a single appointment thereby reducing the wait time from their first visit at an out-patient clinic to actual treatment.

I also commend the collaboration between the Hospital and the Irish College of General Practitioners in the development of a GP-staffed evening clinic for the management of intrauterine contraceptive devices.

The Rotunda is fully committed to the concept of co-location with an acute general hospital, with services that support and enhance those at the Rotunda and that improve patient safety. The Board of Governors agreed to support and commission a team of consultants to prepare a Design Brief for a new, relocated Rotunda Hospital on the Connolly site. I want to thank my fellow Governors, the Executive and our many external partners including the RCSI Hospital Group, HSE Acute Hospitals Division, HSE Estates and the Department of Health, for their collaboration on this important work. We believe that this Design Brief will be a blueprint for the future services of the Rotunda and will reflect the services and service delivery models appropriate for 21st century maternity, neonatal and gynaecologic care.

Future new developments are attractive but we must not get distracted from our duty to current and future patients attending the Rotunda Campus on Parnell Square, and we urge support for infrastructural development and appropriate staffing and financial resources to protect the safety of our mothers and babies while we remain on site.

Professor Patricia Noonan Walsh
Chairperson

About The Rotunda Hospital

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 260 years, with the main inpatient building remaining in continuous use since the doors first opened on 8th December 1757, making the Rotunda Hospital the longest serving maternity hospital in the world.

The Rotunda remains an independent, voluntary organisation operating under Charter with a Board of Governors and the Mastership System responsible for clinical and operational management. Since the introduction of Hospital Groups in 2013, the Rotunda is the lead maternity centre for the RCSI Hospitals Group.

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

The Board of Governors and the Executive Management Team will continue to work with the Government, the Minister for Health and the RCSI Hospitals Group to define and establish clear and strong governance structures, within the changing context of the Irish healthcare system.

The specialist services provided by the Rotunda include:

- Maternity Services
- Maternal Fetal Medicine
- Gynaecology Care
- Neonatal Care

These are fully supported by a range of sub-specialist services such as Anaesthetics, Haematology, Radiology, Psychiatry, and Allied Health Services within the Hospital, and joint services such as Cardiology, Endocrinology, Gastroentrology, and Infectious Diseases with acute adult hospitals.

BOARD OF GOVERNORS

General Purposes Committee | Property Committee | Governance/Audit Committee | Risk Committee

Executive Management Team

Master

Director of Midwifery and Nursing

Secretary/General Manager

Clinical Midwifery & Nursing
- Maternity
- Gynaecology
- Neonatal

Midwifery & Nursing Education
- Undergraduate Training
- Postgraduate Training

Practice Development
- Ongoing Education & Training
- Clinical Practice Development

Bereavement Support
- Inpatient Support
- Outpatient Follow Up

Obstetric & Gynaecologic Care
- Outpatient Services
- Emergency Services
- Operating Theatres
- Inpatient Services

Laboratory Medicine
- Haematology & Transfusion
- Biochemistry
- Microbiology
- Histopatholgy
- Virology/Serology

Anaesthesia
- Pre-Anaesthetic Assessment
- Anaesthetics/Recovery
- Critical Care

Neonatal Services
- Inpatient Neonatal Care
- Outpatient Care
- Neonatal Transport

Diagnostic Imaging
- Radiology
- Ultrasound
- Fetal Assessment

Sexual Assault Treatment
- Forensic Examination & Follow-Up

Coloscopy
- National Cervical Screening Service

Academics
- Undergraduate & Postgraduate Training
- Research Projects, Initiatives & Ethics
- Innovation Hub

Finance
- Financial Control & Management
- External Audit
- Procurement
- Insurance
- Asset Register

Support Services
- Household
- Portering
- Technical
- Sterile Services
- Clinical Engineering
- Catering

Human Resources
- Employee Selection & Recruitment
- Training & Development
- Occupational Health

Information Technology
- System Support & Administration
- Systems Development

Patient Services
- Administration & Support
- Healthcare Records

Library & Information Service
- Information Provision, Promotion & Dissemination

Clinical Activity Reporting
- Clinical Management Information
- Internal & External Reports

Quality, Safety & Risk
- Clinical Risk
- Infection Prevention & Control
- Health & Safety
- Quality Improvement
- Clinical Audit
- Health Promotion
- Information Governance
- Patient Experience

Allied Health & Social Care Professionals
- Medical Social Work
- Clinical Nutrition
- Physiotherapy
- Pharmacy
- Perinatal Mental Health
- Chaplaincy

Clinical Director's Office

Clinical Director
Dr. John Loughrey, Consultant Anaesthetist

Staff
Ms. Olga Pearson, Administration

Overview
The office of Clinical Director at the Rotunda was set up in 2009 to support the Master with respect to the Consultant and Non-Consultant Hospital Doctors (NCHD) staff organisation and delivery of care. Dr. John Loughrey took over the role from Dr. Peter McKenna in January 2016.

Activity
The Clinical Director's role is supported by administration staff shared with the Hospital Secretary General Manager. Active liaison with the lead NCHD and the NCHD Committee has been key to drive clinical innovation at ground level. Administrative support from Ms. Anne Hession continued until midyear when she departed to take up a position with the RCSI Hospitals Group. We wish her well in her new role.

Dr. Carmel Moore and Dr. Ronan Sugrue were the lead NCHD's in 2016.

Continuous Professional Development
Attendance at continuing medical education events is a medical professional registration requirement and the office continues to facilitate this by certification of doctors' attendance at internal events.

HR Liaison
Medical manpower is a valuable resource provided by the Hospital. The Clinical Director's Office provides a direct link with HR for the purposes of assistance and clarification with all elements and provisions of the Consultants Contract. Service planning, manpower requirements and recruitment are also facilitated by the office 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 training recognition. Regular internal assessment of the ability of the Hospital to provide a quality training environment is conducted annually by the Clinical Director's Office. This is performed in conjunction with the specialty training leads and via annual feedback from NCHD's on an anonymous basis.

Clinical Guideline Access
The Clinical Director's Office ensures that up to date clinical guidelines are accessible on the Hospital's document management system Qpulse. An app-based version of existing guidelines for bedside availability in a rapidly usable format was developed and is to launch for all specialties in 2017, having been established for anaesthesia and microbiology prior to 2016.

Clinical Risk
A number of clinical risk reviews are facilitated by the Clinical Director's office. The office noted correspondence from the Ombudsman for Children regarding recommendations for clarity around hip dysplasia screening and facilitated multidisciplinary meetings to align screening and referral services consistent with these recommendations.

Successes & Achievements 2016
The reorganisation of NCHD rotas and ongoing recruitment were completed to comply with provisions of the European Working Time Directive. 100% compliance with the essential provisions, including no shift in excess of 24 hours for NCHDs was achieved by year end.

Plans for 2017
The setting up of a Medical Executive chaired by the Clinical Director, with Heads of Clinical Departments as well as senior management in attendance is planned and will be proposed to the Hospital Medical Board.

The improvement in communication and handover facilitated by introduction of new consultant rotas and Clinical Handover and Communication policies are being developed.

The introduction of the new national patient electronic record Maternal and Newborn Clinical Management System (MN-CMS) will be a challenge for the Hospital but should improve ease of access to patient data.


23

Rotunda 1916 Birth of a Nation Exhibition

2016 was an exciting year for the nation commemorating the centenary of the 1916 Easter rising. The Rotunda Hospital played an important part in 1916 and staged an exhibition as part of the centenary celebrations to pay tribute to the roles of prominent medical women and the Hospital itself during the Easter rising.

The Birth of a Nation was first conceived by one of our consultant anaesthetists, Dr. Patch Thornton, and after a fruitful meeting with Sinead McCoole, a historian with a special interest in the women of 1916, the concept was developed. With the backing and the enthusiastic support of the Master and the Board, the Birth of a Nation Rotunda organising committee was formed. Ably led by our librarian Anne O'Byrne, a diverse group of Rotunda staff and amateur historians committed a lot of hard work, great expertise and above all fun and enthusiasm to create an exhibition. It was showcased to nearly 4,000 people and ran for 4 weeks in the historic Pillar Room on the Rotunda campus.

The exhibition was launched to great fanfare in March 2016 with our opening night attended by special guest of the evening, the first lady of Ireland, Sabina Higgins. Ms. Higgins, who has always had a keen interest in the history of women, was delighted to be invited to open the exhibition. The evening began with fascinating lectures regarding the Rotunda's role as the temporary General Post Office in the immediate aftermath of the Easter rising, as well as Dr. Kathleen Lynn and other female heroes of 1916. The highlight of the evening was a live rendition of the memoirs of Mary O'Shea, a Rotunda midwife who worked during Easter week 1916.

Sabina Higgins and Anne M O'Byrne, head librarian at the hospital, with the organising committee.

Left to Right: Brian Cleary, Sinead McCoole, Sheelagh Gibson, Anne O'Byrne, Peter Browne, Sabina Higgins, Patrick Thornton, James Hussey, Chris Fitzpatrick, John O'Loughlin

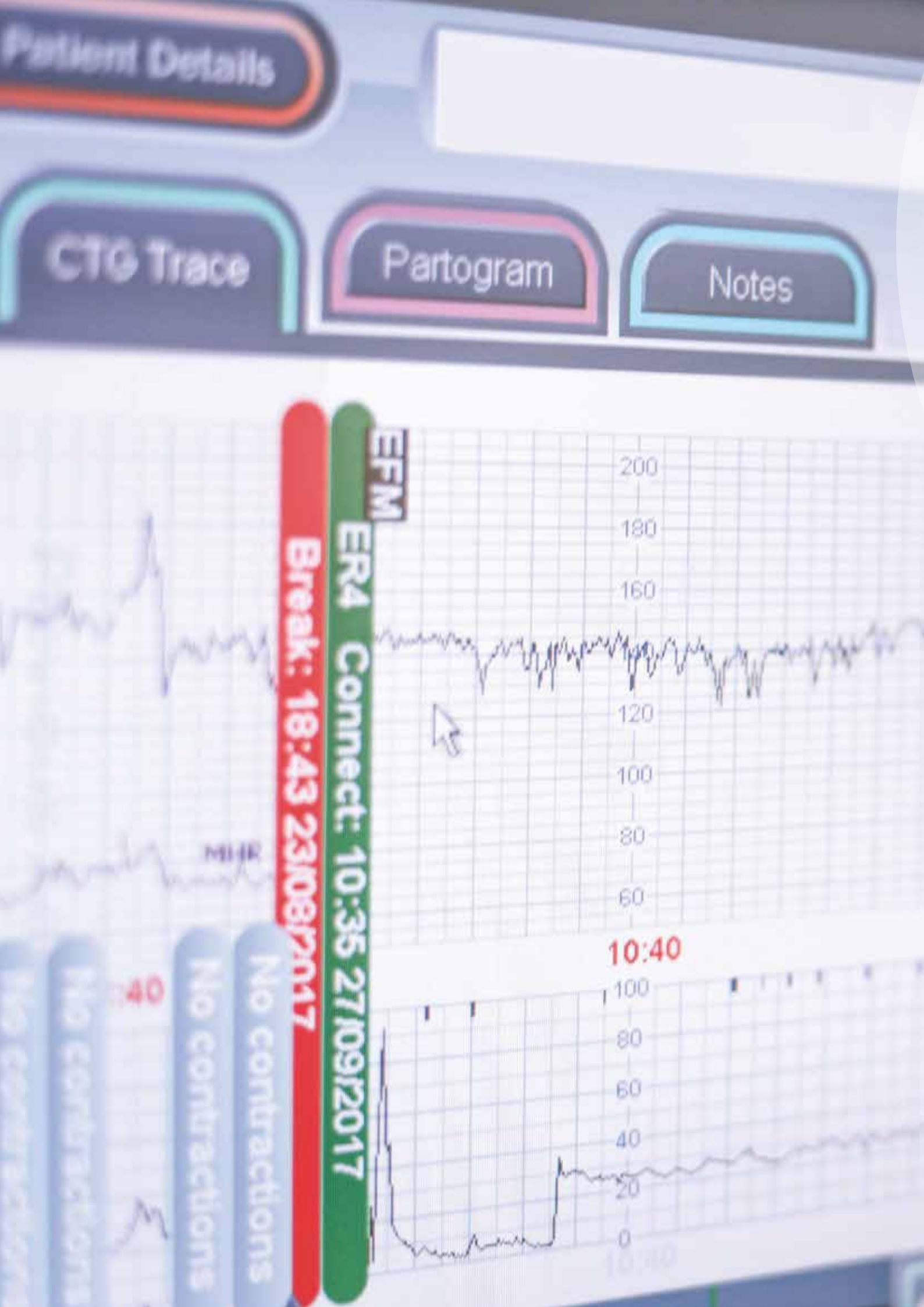
The exhibition ran for over 3 weeks and attracted many visitors of all ages. From schools to retired groups, the enthusiastic group of volunteers who manned the exhibition was kept busy. All the volunteers were Rotunda employees past and present, who gave up huge amounts of their free time. Many visitors commented on the enthusiasm and warmth with which they were welcomed and educated on the various aspects of the exhibition. This is a huge compliment to our wonderful volunteers. The Hospital will be eternally grateful for the hard work and dedication that the team showed during the exhibition.

Professor Fergal Malone, Master of the Rotunda Hospital, Sabina Higgins and Anne M O'Byrne, head librarian at the hospital, at the opening of the 'Birth of a Nation' exhibition. Photo: Photocall

There were expert lectures through the course of the exhibition on various subjects which included the state of medicine in 1916 and the Easter Rising experiences of our neighbouring hospital, the Mater. We were also represented in a special Irish Times edition of "The Women's podcast" by our very own Anne O'Byrne, broadcast live from the Pillar Room.

It could not have happened without the dedication and hard work of the organising committee: **Anne O'Byrne, Brian Cleary, James Hussey, John O'Loughlin, Chris Fitzpatrick, Sheila Thompson, Sheelagh Gibson, Peter Browne and Patrick Thornton.**

The exhibition lives on and is partly on permanent display in the lobby and the website, www.birthofanation.net which was honoured by the National Library of Ireland and archived as one of the best five sites that represented the 1916 centenary programme.


Patient Details
CTG Trace
Partogram
Notes
EFM
ER4 Connect: 10:35 27/09/2017
Break: 18:43 23/08/2017
200
180
160
120
100
80
60
10:40
100
80
60
40
20
0
No contractions
No contractions

CLINICAL SERVICES


No Exam History available
Change
Light
Volore
OmniView
Volume Analysis

CLINICAL SERVICES

MATERNITY

Department of Midwifery and Nursing

Head of Department

Ms. Margaret Philbin, Director of Midwifery/Nursing

Senior Staff*

Ms. Patricia Williamson, Assistant Director of Midwifery/Nursing
Ms. Fiona Hanrahan, Assistant Director of Midwifery/Nursing
Ms. Marie Keane, Assistant Director of Midwifery/Nursing
Ms. Catherine Halloran, Assistant Director of Midwifery/Nursing
Ms. Mary O'Reilly, Practice Development Co-ordinator
Ms. Anne O'Byrne, Practice Development Co-ordinator
Ms. Marion Brennan, Assistant Director of Midwifery/Nursing-Infection Control
Ms. Janice MacFarlane, Night Superintendent
Ms. Aideen Keenan, Night Superintendent
Ms. Mary Whelan, Clinical Audit Facilitator

*Supported by 399 committed Midwives and Nurses.

Service Overview

Midwives and nurses work with skill and dedication both within the Hospital and in the community to provide high quality care for women, babies and families. These services are deployed across all facets of the hospital as well as in the community.

Community Midwifery Services

Community Midwifery Services continued to expand in 2016 with the provision of care for normal-risk women at home, in our seven community-based clinics in Blanchardstown, Darndale, Coolock, Finglas, Swords, Ballymun and Cabra and alongside two hospital based clinics - Next Birth after Caesarean Section (NBAC) and evening Antenatal Clinic.

Parent Education continues to be an important focus for the Community Midwifery Team. Due to increased demand the number of antenatal education classes has been increased to eight per month.

In 2016, a total of 1,839 women booked for antenatal care with the Community Midwifery Team which again represents an increase on the previous year. 164 women were booked directly at home and 1,675 referrals were booked through the main Rotunda Adult Outpatients Department. The team cared for approximately 200 women per week at the various clinic sessions and provided 430 subsequent visits at the patients' homes. Additional support visits were provided for women attending the NBAC clinic with 244 women in receipt of care throughout the year. Of those attending the NBAC clinic in 2016, 34% had a spontaneous vaginal delivery.

A total of 181 women left the Community Midwifery service at varying stages of their pregnancies due to change in their clinical risk profile. This is a significant decrease on the figure for 2015, reflecting better initial selection of patients for this normal-risk care group. These women were deemed unsuitable to continue under the care of the Community Midwifery Team for varying medical reasons and were referred back to the Obstetric Team.

Outcomes for women attending the Community Midwifery Services are reflected in Table 1 below. Of note, from a total of 1,658 deliveries, 58% (N=963) of women had a spontaneous vaginal delivery. The emergency caesarean delivery rate within this cohort was 16% (N=263) and the elective caesarean delivery rate was 6% (N=95), with both rates being higher than in 2015. This may be reflective of the addition of the NBAC (Next birth after Caesarean Section) clinic to the remit of the Community Midwifery Team.

Table 1: Outcome of Care

	2012	2013	2014	2015	2016
Total Deliveries	511	631	1257	1306	1639
Spontaneous Vaginal	332 (65%)	406 (63%)	818 (65%)	901 (69%)	963 (59%)
Vacuum	95 (19%)	92 (15%)	181 (14%)	129 (10%)	177 (11%)
Forceps	12 (2%)	30 (5%)	46 (4%)	42 (3%)	104 (6%)
Vacuum & Forceps	6 (1%)	8 (2%)	23 (2%)	10 (1%)	37 (2%)
Emergency Caesarean	48 (9%)	76 (12%)	154 (12%)	166 (13%)	263 (16%)
Elective Caesarean	18 (4%)	19 (3%)	35 (3%)	58 (4%)	95 (6%)

The team also offer postnatal visits to women who are living in the Greater Dublin Area. A total of 3,058 women availed of the service in 2016 representing a slight increase from the previous year. The Community Midwives carried out 8,940

postnatal visits over the year providing on average of three postnatal visits per patient at home.

Day Care Services

A total of 4,174 attendances were recorded to the expanded Day Assessment Unit (DAU) in 2016 with a significant number of women attending on more than one occasion. The DAU continues to facilitate the ongoing assessment and management of women with a variety of conditions in a professional and convenient outpatient setting, thereby greatly reducing the requirement for inpatient hospitalisation. The most common indications for attendance are represented in Table 2.

Table 2: Attendance at Day Assessment Unit 2016

Attendance Reason	Number
Cardiotocograph Monitoring	1,382
Hypertension	1,351
Weekly Intramuscular Progesterone	499
Obstetric Cholestasis	365
Diabetes testing	324
Patients needing Admission from DAU	278
Dexamethasone Administration	186
Fetal Growth Restriction Surveillance	172
Preterm Premature Rupture of Membranes (PPROM)	111
Insulin Education	105
IV Antibiotic Administration	27
Hyperemesis Management	21
Iron Infusion	17
Immunoglobulin (IVIG) Administration	1

Delivery Suite

Midwifery staff provided care to a total of 8,405 women who delivered 8,589 babies weighing 500g or greater in 2016. Our patients continue to present with more complex care requirements which are consistently provided for in a competent professional manner. A total of 22,988 attendances to the Emergency and Assessment Unit (which falls under the management remit of the Delivery Suite) were recorded, the majority with pregnancy-related problems. The introduction of an Advanced Midwife Practitioner (Emergency) post to this unit in 2016 proved to be hugely beneficial, facilitating quicker assessment and treatment for a cohort of women attending for care.

Lactation Services

The Rotunda Hospital remains the only Dublin Maternity Hospital to have achieved the National Baby Friendly Accreditation Award. The hospital also continues to hold the Baby Friendly Health Initiative 'Breastfeeding Supportive Workplace' Silver Award.

Our Lactation Specialists continue to work with staff of all disciplines to protect, promote and support breastfeeding as the optimal way for a mother to feed her baby. Acknowledging that breastmilk offers important health benefits for both mother and child, the Department strives to assist as many women as possible to initiate breastfeeding. The initiation rate increased by 1% to 73% in 2016. Table 3 highlights the breast-feeding initiation rate over the last 5 years.

Table 3: Breast Feeding Initiation Rate

2012	70%
2013	70%
2014	67%
2015	72%
2016	73%

Bereavement Support and Chaplaincy Services

The Rotunda Hospital acknowledges that the loss of a baby during pregnancy or following delivery is one of the most painful experiences imaginable in any parent's life. We offer a range of services provided through the Bereavement, Recurrent Pregnancy Loss, and Fetal Medicine services to afford bereaved parents the necessary support to meet their individual needs. The Bereavement Team continued to provide sensitive, compassionate and individualised care to these families in 2016.

The work of the hospital is greatly assisted by the Chaplains and Ministers who are available to offer support to patients and staff alike. Their dedication and attention to women, their babies, families and staff is very much appreciated.

Annual Service of Remembrance

The Annual Service of Remembrance was again held in the Pro-Cathedral in November 2016 with the continued support of The Very Reverend, Canon Damian O'Reilly who facilitated this extremely important event where staff gather to remember and honour the precious short lives of babies who died during 2016 and in previous years. The number of

families attending this remarkable service continues to increase.

Parent Education

Parent Education Midwives, working in close liaison with the Physiotherapy Department, continued to provide an extensive range of education sessions to both obstetric inpatients and outpatients during 2016. Demand for this service remains high and an additional refresher class was established to meet this need. Parent education sessions aim to convey positive messages to parents regarding their role in the development of healthy children and their lifestyles. This is achieved by woman-focused sessions with the role of the father emphasised throughout. Education is provided to expectant women and their birth partners on issues relating to pregnancy, labour and the immediate postnatal period with feeding choices, baby care and the future demands of parenthood discussed. Information is also provided to inform parents where to source support and resources when they go home with their new baby. The sessions give expectant parents a chance to share experiences with others and assist them gain the skills and confidence to make birth and parenthood a positive experience.

Education & Training

Throughout 2016, the Practice Development Team continued to provide a suite of services including support to the Undergraduate Midwifery Programme and continuing professional development for midwives and nurses in addition to supporting clinical practice innovation and developments. Supporting undergraduate midwifery and nursing students in the clinical areas remains a primary focus for the team enabling the students to meet the clinical requirements of the Nursing and Midwifery Board of Ireland (NMBI).

Innovation

Many innovation projects were facilitated with the support of funding received from the Nursing and Midwifery Practice Development Unit located in Dublin North East, for example:

- The development and implementation of an epidural education package for midwives and nurses working in the Delivery Suite and Operating Theatres
- An enhanced programme of midwifery lactation support was provided in the Neonatal Intensive Care Unit to support women breastfeeding their premature infants by assisting with early skin-to-skin contact, supporting the collection of breast milk for buccal administration within the first two hours of birth and teaching mothers the correct attachment of the preterm baby at the breast
- The implementation of a staff education programme on Mental Health Support for Women

Health Promoting Hospitals

'Healthy Ireland' is a Government Framework for action to improve health and wellbeing for future generations. This initiative has been developed in response to rising levels of chronic illness, lifestyle trends that threaten health and persistent health inequalities. The Rotunda is a committed member of Healthy Ireland with a focus on supporting a reduction in obesity and diabetes, improving mental health and increasing breastfeeding rates.

Smoking Cessation

The Rotunda Hospital remains a 'Tobacco Free Campus'. The Smoking Cessation Service jointly facilitated by the Smoking Cessation Officer and the Occupational Health Department continues to offer support to patients and staff who wish to reduce or quit smoking. Patient referrals to the Smoking Cessation Service come primarily from the Midwives and Doctors in the outpatient's department with the highest number of referrals following the first booking visit. Self-referrals are invited from members of staff either through the Smoking Cessation Service or the Occupational Health Department. Of the 10,024 women who booked in 2016, 9% (n=924) were recorded as smokers. 742 declined the support offered and 105 were referred to the Smoking Cessation Service. Of these women, 16 successfully quit smoking during pregnancy. A total of 7 staff used the service and all quit smoking initially, although only 3 continue to be smoke free at 12 months following intervention.

Occupational Health Department

The Department of Occupational Health endeavours to promote and maintain the highest degree of physical and mental health of all employees by preventing departures from good health, controlling risks and adapting work to people and people to their jobs as much as possible. The Department provides an independent and confidential service for all employees, hosting a clinic for staff once a week. Throughout 2016 the occupational health team, led by Dr. Dominic Natin continued a rigorous campaign to promote and administer the influenza vaccine to all staff. There has been a significant rise in the uptake of this vaccination by the many disciplines working in the Rotunda which is very positive for the health and wellbeing, not only of our staff, but also of the women and babies cared for.

Challenges 2016

Attracting and retaining midwifery, theatre and neonatal staff remained a challenge during 2016. Increased patient acuity placed significant demands on staff.

Plans for 2017

The main focus for the midwifery and nursing team in 2017 will be the implementation of the National Maternity Strategy and the introduction of the Maternal and New-born Clinical Management System (MN-CMS) Project. This project will effectively make the Rotunda Hospital a paper-free work environment and offers considerable efficiencies for care programmes. Work will continue to recruit high calibre staff to support service provision.

Early Pregnancy Assessment Service

Head of Service

Dr. Karen Flood, Consultant Obstetrician Gynaecologist

Service Overview

The Early Pregnancy Assessment service continues to be an essential component of the Rotunda with the provision of specialised care to women in early pregnancy. Clearly defined referral pathways, efficient appointment scheduling and ongoing staff training allow continued delivery of a dedicated service that manages patients in a safe, timely and supportive manner.

Clinical Activity

Activity	No. Patients
Total number of patients seen	3,995
Repeat EPAU reviews	1,859
Miscarriage	1,386
Surgical management of miscarriage	573 (41%)
Expectant or medical management of miscarriage	813 (59%)
Ectopic pregnancy or pregnancy of unknown location	204

Successes & Achievements 2016

Enhancing Patient Care

The new separate reassurance scan list dedicated to patients with a history of previous miscarriages, ectopic pregnancy or gestational trophoblastic disease continues to be very beneficial. This new clinical session has increased the availability of emergency appointments for symptomatic patients. It also serves as a focused ultrasound list for training of non consultant hospital doctors under direct supervision.

Service Developments

- The development of a new system to allow timely review of bloodwork in the Emergency Assessment Unit for cases of suspected ectopic pregnancy.
- The introduction of an EPAU database to record weekly outcomes which will allow more efficient and accurate audit of the service. This will also allow more thorough assessment of cases that are expectantly managed.

Challenges 2016

The lack of a dedicated sonographer continues to be the main challenge in service delivery leading to increased return visits for bloodwork and scans in addition to numerous second-opinion referrals to the Fetal Medicine Service.

Plans for 2017

The service plans for 2017 include:

- Preparation of a monthly outcome report
- Assignment of a dedicated midwife sonographer to each list which is recommended best practice

Recurrent Pregnancy Loss Service

Head of Service
Dr. Karen Flood, Consultant Obstetrician Gynaecologist

Staff
Ms. Patricia Fletcher, Midwife

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

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

Clinical Activity

	2012	2013	2014	2015	2016
Total number of visits	376	499	667	681	744
New visits	84	109	157	82	111
Return visits	292	390	510	599	633
Livebirth rate	43	39	44	61	70
Gestational Trophoblastic Disease pregnancies followed	N/A	N/A	N/A	21	27

Successes & Achievements 2016
Enhancing Patient Care
This clinic continues to deliver an expanded service with the provision of dedicated early pregnancy support with frequent ultrasound monitoring and counselling. To ensure continuity of care, patients are then followed from their booking appointment until delivery.

Challenges 2016
Ongoing challenges include management of patients who have also attended assisted reproductive facilities and have undergone investigations and are prescribed medical protocols recommended only in the research setting.

The service is also seeing an increasing number of new referrals leading to longer waiting times. Thus, the service ensures referrals are appropriate and employ numerous methods to keep the non-attendance rate to a minimum.

Plans for 2017
With the development of the National Gestational Trophoblastic Disease Registry, Monitoring and Advisory Centre in Cork, the clinic will be linking our patients with this service accordingly.

Following the completion of a pilot feasibility study, the clinic will be actively recruiting patients to be part of a collaborative study with the Department of Immunology, Trinity College Dublin to definitively explore the role of Uterine Natural Killer cells in the setting of recurrent pregnancy loss.

Fetal Medicine Service

Head of Service

Dr. Carole Barry, Consultant Obstetrician Gynaecologist

Staff

Professor Fergal Malone, Consultant Obstetrician Gynaecologist
Professor Fionnuala Breathnach, Consultant Obstetrician Gynaecologist
Dr. Sharon Cooley, Consultant Obstetrician Gynaecologist
Dr. Jennifer Donnelly, Consultant Obstetrician Gynaecologist
Dr. Karen Flood, Consultant Obstetrician Gynaecologist
Dr. Ronan Gleeson, Consultant Obstetrician Gynaecologist
Dr. Etaoin Kent, Consultant Obstetrician Gynaecologist
Dr. Hala Abu Subeih, Maternal Fetal Medicine Fellow
Ms. Mary Deering, Midwife Manager
Ms. Suzanne Gillen, Midwife Sonographer
Ms. Allyson Lawless, Midwife Sonographer
Ms. Laura McBride, Midwife Sonographer
Ms. Deirdre Nolan, Midwife Sonographer
Ms. Hilda O'Keeffe, Midwife Sonographer
Ms. Gemma Owens, Midwife Sonographer
Ms. Irene Twomey, Midwife Sonographer
Ms. Mabel Bogerabatyo, Radiographer
Ms. Fiona Cody, Radiographer
Ms. Jane Dalrymple, Fetal Medicine Midwife
Ms. Nollaig Kelliher, Fetal Medicine Midwife
Ms. Joan O'Beirnes, Fetal Medicine Midwife
Ms. Louise O'Dwyer, Medical Social Worker
Ms. Suzanne Larkin, Administration
Ms. Mary Maguire, Administration
Ms. Anita O'Reilly, Administration

Service Overview

The Fetal Medicine Service at the Rotunda Hospital includes the provision of all obstetric ultrasound services, as well as prenatal diagnosis and fetal treatment programmes. From July 2016, the Fetal Medicine Service provided a formal early pregnancy dating scan to every patient at the time of their initial hospital booking visit. All patients also received a formal fetal anatomic ultrasound survey at 20-22 weeks' gestation, making the Rotunda one of the few hospitals in Ireland capable of providing this service. Serial obstetric ultrasound examinations were provided for patients receiving ongoing care at various high risk obstetric and medical clinical services. Additionally, the Fetal Medicine Service provided a significant emergency ultrasound service for a variety of obstetric complications. One of the main sources of demand for emergency services has been providing ultrasound assessment of patients complaining of reduced fetal movements. During 2016, the Rotunda participated in the AFFIRM Trial, which required a commitment to providing formal scanning services within 24 hours for patients presenting for emergency assessment of reduced fetal movements.

Clinical Activity

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

Clinical Activity	2012	2013	2014	2015	2016
Initial booking ultrasounds	N/A	N/A	N/A	N/A	1,998
Fetal Anatomic Survey (20-22 weeks)	8,821	8,958	8,838	8,499	8,581
Fetal Growth Assessment	7,435	7,735	8,711	8,472	9,734
Fetal Echocardiogram	139	179	215	322	304
Others	1,238	1,296	1,433	1,388	798
Subtotal	**17,633**	**18,168**	**19,197**	**18,681**	**21,415**
Gynaecology ultrasounds	1,306	1,514	1,588	1,663	1,822
Total Ultrasounds	**18,939**	**19,682**	**20,785**	**20,344**	**23,237**

Prenatal Screening and Diagnosis Services

Prenatal screening and diagnosis of fetal abnormalities is an essential part of the Fetal Medicine Service, with the Rotunda Hospital being the busiest provider of these services nationally. In 2016, patients from all 18 other maternity hospitals in Ireland attended for these services, as the Rotunda does not restrict these services solely to those within the Rotunda catchment area. In 2016 1,345 new patients attended for 3,087 assessments for Prenatal Screening and Diagnosis services, as follows:

Non-Invasive Prenatal Testing (Cell Free Fetal DNA)	1,384
Combined First Trimester Screening	302
Amniocentesis	97
Chorionic Villus Sampling	63

The table below shows a 5-year comparison of invasive diagnostic procedures performed:

Invasive Procedures	2012	2013	2014	2015	2016
Amniocentesis	163	163	144	114	97
Chronic Villus Sampling	120	105	80	80	63
Total	**283**	**268**	**224**	**194**	**160**

Of the 160 diagnostic procedures performed, there were 73 abnormal results representing 46% of invasive tests. This high proportion of abnormal results reflects the shift towards more efficient non-invasive screening tests, and the fact that almost all invasive diagnostic procedures are performed in response to an initial positive screening test.

Abnormality	CVS	Amnio	Total
Trisomy 21	17	9	26
Trisomy 18	14	10	24
Trisomy 13	0	3	3
45X	8	0	8
Triploidy	1	5	6
Other	3	3	6
Total	**43**	**30**	**73**

Note: Three patients with positive NIPT results for Trisomy 21 declined invasive testing but these results were confirmed postnatally.

There was 1 false positive NIPT for Trisomy 13 which had a normal karyotype result on amniocentesis.

Twenty-one invasive procedures other than amniocentesis or CVS were performed. These included 11 intrauterine fetal transfusions and 10 fetoscopic laser ablations.

Dublin Fetal Surgery Group Services

During 2016, a total of 15 cases of severe Twin-to-Twin Syndrome were managed by the Dublin Fetal Surgery Group by means of fetoscopic laser ablation of placental vessels. This has resulted in a single team approach to all such cases, with Dr. Stephen Carroll, Dr. Jennifer Donnelly, Professor Fergal Malone and Professor Fionnuala McAuliffe jointly performing all such procedures. By the end of 2016, the group had completed 151 cases of laser surgery for severe TTTS, with at least one survivor occurring in 83% of cases (125/151). These results are in line with international published experience for this complex condition and the results have recently been published.

Major Fetal Structural Abnormality

Excluding soft markers and chromosomal abnormalities, 164 cases of major structural abnormalities were detected. The table below represents a 5-year comparison of these major structural abnormalities:

	2012	2013	2014	2015	2016
CNS	28	42	30	32	26
Head & Neck	10	12	22	27	25
Cardiovascular	20	44	36	43	36
Renal	37	43	49	48	48
Abdominal	7	8	7	17	12
Skeletal	15	22	15	24	12
Thoracic	17	11	8	16	4
Others	20	28	21	2	1
Total	**154**	**210**	**188**	**209**	**164**

Fetal Cardiac Services

In 2016, the Fetal Medicine Service provided 304 targeted fetal echocardiograms. The Fetal Cardiac service at the Rotunda is a national referral service overseen by Dr. Orla Franklin, Consultant Paediatric Cardiologist and Professor Fionnuala Breathnach, Consultant Obstetrician and subspecialist in Maternal Fetal Medicine. This clinic provided diagnostic cardiac imaging in women who have been previously scanned by a consultant in fetal medicine and in whom fetal congenital heart disease is suspected. In 2016, 83 fetal cardiac scans were performed in 66 pregnancies with confirmation of fetal congenital heart disease that required surgical or catheter intervention in the first 6 months of life. Women who attend this clinic are supported by the Rotunda Fetal Medicine Midwife team and the Paediatric Cardiac Liaison service at Our Lady's Children's Hospital Crumlin.

Multiple Pregnancy Service

Seventy-three multiple pregnancies were referred for assistance with management of select high-risk circumstances. This included 51 sets of monochorionic diamniotic twins (10 of which had twin to twin transfusion syndrome, and 12 of which had severe fetal growth discordance). Two sets of monoamniotic twin were also managed, (with good outcome in both pregnancies), as well as seven triplet pregnancies, all with good outcome. One

quadruplet pregnancy was managed at 32 weeks, resulting in 3 liveborn and 1 stillborn infant.

Successes & Achievements 2016

Research

Dr. Ann McHugh commenced a PhD thesis entitled: 'Can sonographic assessment of pulmonary vascular reactivity following maternal hyperoxygenation therapy predict fetal outcome in fetuses at risk of pulmonary hypoplasia?'.

A dedicated weekly session is now protected in the Fetal Medicine Department for fetal cardiology. The success of this department in prenatal detection of congenital heart disease was published by Dr. Siobhan Corcoran in the European Journal of Obstetric Gynaecology and Reproductive Biology.

Challenges 2016

The principle issue that continues to challenge the Fetal Medicine Service is the lack of trained obstetric ultrasonographers, both midwife sonographers and radiographers. There remains no incentive for midwives with interest in upskilling in obstetric ultrasound to embark upon the required two-year training programme. Until more creative training opportunities, with appropriate remuneration, are created, it is unlikely that the required national roll-out of a routine viability scan and a routine 20-week anomaly scan will be achieved.

Additionally, the lack of sufficient consultants in genetics and genetic counsellors limits the options to expand new genetic testing, such as microarray testing. Proposals for developing further genetic support capacity need to be urgently progressed.

Plans for 2017

The Fetal Medicine Service has multiple priorities for 2017, which include:

- Establishing a new Preterm Birth Prevention Service
- Replacement of obsolete ultrasound machines with the latest models
- Ensuring that the Early Pregnancy Assessment Unit is staffed exclusively by trained sonographers
- Complete renovation of the Fetal Medicine Service physical infrastructure to ensure more ultrasound rooms and more contemporary space
- Introduction of microarray testing for all CVS and Amniocentesis procedures performed for structural fetal malformations
- Provision of funding for paediatric cardiology support for fetal cardiac services
- Provision of funding for dedicated consultant genetic support

Maternal Medicine Service

Head of Service

Dr. Peter McKenna (to May 2016), Consultant Obstetrician Gynaecologist,
Dr. Jennifer Donnelly (from May 2016), Consultant Obstetrician Gynaecologist

Staff

The Rotunda Hospital

Dr. Mary Bowen, Consultant Anaesthetist
Dr. Fionnuala Ní Áinle, Consultant Haematologist
Dr. Patch Thornton, Consultant Anaesthetist
Ms. Patricia Fletcher, Midwife
Ms. Catherine Finn, Anaesthetia administration

Mater Misericordiae University Hospital

Professor Kevin Walsh, Consultant Cardiologist
Dr. John Keaney, Consultant Cardiologist
Dr. Damien Kenny, Consultant Cardiologist
Ms. Esther Doran, Clinical Nurse Specialist in Adult Congenital Heart Disease
Ms. Rhona Savage, Clinical Nurse Specialist in Adult Congenital Heart Disease

Service Overview

The Maternal Medicine Service is provided jointly by the Rotunda and Mater Misericoardiae University Hospital. The service was established in 2004, initially as the high risk cardiac obstetric service, and is the only service of its kind nationally. Referrals are received from around the country as well as from within the Rotunda.

Pregnancy management involves input across a large multidisciplinary team comprised of Obstetricians with subspecialisation in Maternal Fetal Medicine (Dr. Peter McKenna and Dr. Jennifer Donnelly), Cardiology (Prof Kevin Walsh, Dr. Damien Kenny and Dr. John Keaney), congenital cardiac advanced nurse practitioners (Rhona Savage and Esther Doran), Anaesthetists specialised in both cardiac and obstetric anaesthesia (Dr. Patch Thornton and Dr. Mary Bowen), Haematology (Dr. Fionnuala Ní Áinle), and midwife Patricia Fletcher. Input from cardiothoracic surgeons, as well as the ICU, CCU and operating theatre teams in the MMUH is crucial for the management of complex cases.

Obstetric Cardiac Service

Women with cardiac disease have a baseline risk of death that is 100 times greater than the background population. Cardiovascular disease is currently the number one cause of maternal death in Ireland and the UK. Thankfully no deaths occurred within the service. In 2016, the obstetric cardiac service provided 653 outpatient consultations for 243 women with a variety of maternal cardiac disorders:

Classification	Number
Congenital heart disease	31
Arrhythmia	20
Unclassified	10
Aortic disease (acquired)	8
Valvular heart disease	8
Cardiomyopathy	7
Coronary artery disease	2
Endocarditis	2
Family history	2
Total	**90**

Successes & Achievements 2016

Enhancing Patient Care

Dr. Jennifer Donnelly was appointed Obstetric Lead to the service in May 2016. She is a subspecialist in Maternal Fetal Medicine who has trained in Ireland and the US.

Education & Training

The service provided speakers at the All Ireland Adult Congenital Heart Disease Meeting in October 2016.

Research

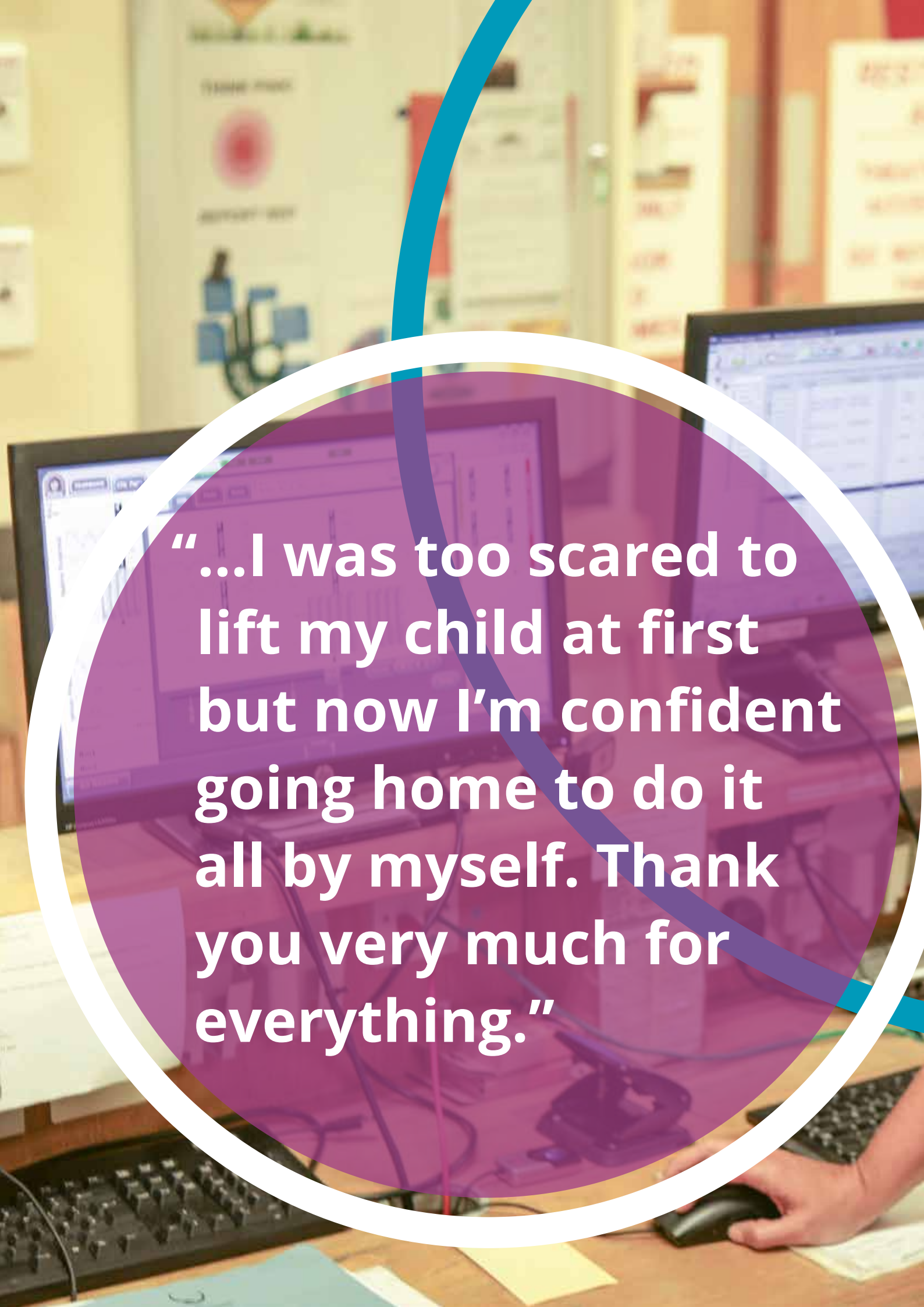
The team are active contributors to the European Registry of Pregnancy and Cardiac Disease.

Challenges 2016

Some challenges that the service faces include difficulties in data collection and ensuring optimal communication between disciplines.

Plans for 2017

Additional resources for dedicated administrative support will be sought in the coming year. As the service is unique in Ireland and numbers of children with congenital heart disease are increasing, the training of non consultant hospital doctors in this area is important. Application for approval of a Maternal Medicine Fellowship with a cardiac component has been submitted to the RCPI.



“...I was too scared to lift my child at first but now I’m confident going home to do it all by myself. Thank you very much for everything.”

Teenage Pregnancy Service

Head of Service

Dr. Geraldine Connolly, Consultant Obstetrician Gynaecologist

Staff

Ms. Deborah Brown, Midwife

Service Overview

Antenatal care is provided to all teenage pregnant mothers up to age 18 in the Rotunda Hospital's Teenage Pregnancy Clinic. This is a change from previous years as not all 18-year olds were automatically referred due to caseload constraints. Girls who are older and deemed vulnerable, such as those with special needs, may also attend the clinic as they may benefit from continuity of care and the specialised approach provided by this service.

Clinical Activity

The table below shows the number of patients managed at this clinic over the last five years:

Year	No. of Patients
2012	110
2013	112
2014	119
2015	104
2016	129

In 2016, 66% of attendees at the clinic were Irish. Roma patients accounted for 15% of the total attending the clinic and 9% were Irish travellers. Five patients attending were already in the care of the HSE/homeless/foster care and prison services during their pregnancy.

Mode of Delivery of Teenage Patients

Spontaneous vaginal delivery	70	61%
Caesarean delivery (emergency)	22	19%
Instrumental vaginal delivery	16	14%
Caesarean delivery (elective)	7	6%
Total Delivered	**115**	**100%**

The overall caesarean delivery rate in the teenage population was 25%. In 2016, the induction rate for teenage patients was 33% and 36% of these had an emergency caesarean section.

Successes & Achievements 2016

The service improved the efficiencies of its systems, including expanding its potential to cater for patients that turn 18 years of age as well as select patients with additional vulnerabilities that would benefit from continuity of care. Extremely low adverse outcome rates were noted, validating the efficacy of the service.

Enhancing Patient Care

The clinic introduced a new low dose levonorgestrel-releasing intrauterine contraceptive device which has been designed to offer long-lasting contraception.

Research

The service is conducting an on-going research study into teenager's attitudes to the use of Long Acting Reversible Contraception (LARC).

Challenges 2016

An on-going challenge for the clinic is the lack of suitable accommodation for some of our teenage patients.

Plans for 2017

Research into the use of long-acting contraception will continue into 2017.

Combined Obstetric Endocrine Service

Head of Service

Professor Fionnuala Breathnach, Consultant Obstetrician Gynaecologist

Staff

Dr. Maria Byrne, Consultant Endocrinologist
Dr. Julia Iloina, Research Registrar, Endocrinology
Ms. Jackie Edwards, Clinical Midwife Manager 2
Ms. Aileen Fleming, Clinical Midwife Manager 2
Ms. Claire Kearney, Specialist Diabetes Midwife
Ms. Laura Kelly, Senior Dietitian
Ms. Marian McBride, Senior Dietitian

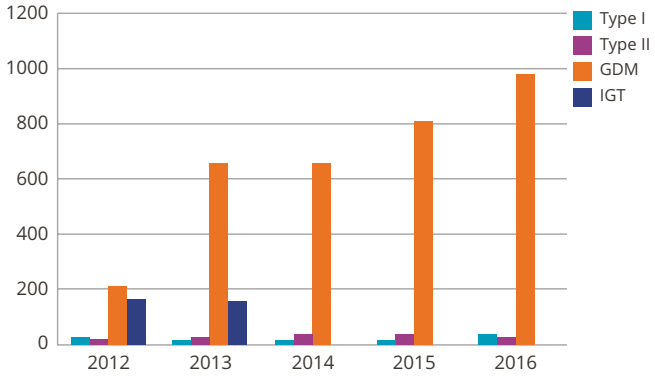
Service Overview

The Combined Obstetric Endocrine Service at the Rotunda provides care for pregnant women principally with diabetes mellitus, but also with a range of other endocrine problems, such as thyroid disease. Both gestational diabetic and pre-gestational diabetic patients are managed by this multi-disciplinary service. This service continues to represent one of the highest-risk areas of clinical care at the Rotunda. In 2012, in order to cope with the increasing patient volume, a new model of care for patients with gestational diabetes (GDM) was developed. This model involves monitoring and surveillance for diet-controlled GDM in a midwifery-provided diabetes service (known as the Breakfast Club), with obstetric care for these women being provided through routine antenatal clinics. Attendance at the Combined Obstetric Endocrine Service is only required for women with pregestational diabetes or with GDM who require therapy beyond diet. Women with a history of GDM in a prior pregnancy attend the midwifery-provided diabetes service for regular surveillance from the first trimester of pregnancy, and are only transferred to the Combined Obstetric Endocrine Service if GDM recurs and cannot be controlled by diet.

Clinical Activity

The population with pregestational type II diabetes now exceeds that with type I disease, and the extent to which each subgroup with diabetes (type I, type II and gestational diabetes) contributes to the population whose prenatal care is conducted through this clinic is illustrated below.

Incidence of Diabetes in Pregnancy, 2012 - 2016



The significant rise in gestational diabetes incidence noted since 2014 reflects, in part, the use of new diagnostic criteria, but is also associated with a continued increase in obesity rates affecting our population. We no longer use the term Impaired Glucose Tolerance (IGT) as it has been dropped by the International Association of Diabetes in Pregnancy Study Group (IADPSG).

Pregestational Diabetes: Maternal Characteristics

	TYPE 1	**TYPE II**
N	**n=32**	**n=22**
Mean Age (years)	31.5	32.7
Mean Duration of DM (years)	8.3	5.7
Pregnancies reaching 24 weeks	27	18
Chronic hypertension	2/27 (7%)	4/18 (22%)
Retinopathy	11/27 (41%)	6/18 (33%)
Nephropathy	0/27 (0%)	3/18 (17%)
Neuropathy	1/27 (4%)	0/18 (0%)
Mean Gestational age at booking (weeks)	6.2	9.7
Mean HbA1c at booking (mmols/l)	52.7	50.7
Mean HbA1c at delivery (mmols/L)	44.8	40.0
Mean Fructosamine at booking (umol/l)	309.9	249.7
Mean Fructosamine at delivery (umol/l)	248.1	22.6

Pregestational Diabetes: Perinatal Outcome

	TYPE 1	TYPE II
N	**32**	**22**
Spontaneous Loss (<24 weeks)	5/32 (16%)	4/22 (18%)
Preterm delivery 24+0 – 36+6 weeks	3/32 (9%)	2/22 (9%)
Preeclampsia	1/27 (4%)	2/18 (11%)
Liveborn	27/32 (84%)	18/22 (82%)
Stillbirth	0 (0%)	0 (0%)
Neonatal death	1/27	0/18
Caesarean Delivery	16/27 (59%)	11/18 (61%)
Mean Gestational age at delivery (weeks)	35.4	37.6
Mean Birthweight (g)	3,485	3,229
Macrosomia ≥99th centile for gestational age	5/27 (19%)	0 (0%)
Shoulder dystocia	1/27 (4%)	0 (0%)
Major congenital anomaly	0 (0%)	0 (0%)

Gestational Diabetes (GDM): Perinatal Outcome

	Diet-controlled GDM	GDM requiring Insulin
N	**753**	**222**
Mean Age (years)	33.0	33.5
Mean Gestational age at delivery	38.5	37.9
Mean Birthweight (g)	3,441	3,396
Caesarean delivery	317/753 (42%)	103/222 (47%)
Stillbirth	1/753 (0.1%)	1/222 (0.5%)
Preeclampsia	17/753 (7.6%)	5/222 (2.3%)
Macrosomia ≥99th centile for gestation	5 (0.7%)	2 (0.9%)

Successes & Achievements 2016

Enhancing Patient Care

The 'Breakfast Club' service for women with diet-controlled gestational diabetes continued to develop and expand, with midwife and dietician-provided lifestyle classes being integral to the success of dietary treatment.

Education & Training

The annual Midwifery Study Day for Diabetes in Pregnancy, hosted by the Rotunda Hospital in October, was hugely successful and well attended. Speakers represented all disciplines involved in the provision of obstetric care to women with diabetes.

Dr. Siobhan Corcoran completed her MD thesis investigating the role of biomarker analysis for the prediction of gestational diabetes in the first trimester.

Innovation

The team continues to explore the feasibility of providing glucometers to women with diet-controlled gestational diabetes, in order to improve compliance with dietary interventions. To this end, a Horizon 2020 research grant submission was made at the end of 2016.

Challenges 2016

The very significant rise in the incidence of patients diagnosed with gestational diabetes since introduction of IADPSG-endorsed thresholds for diagnosis continues, and is causing major resource challenges for the service.

GDM control should be achieved with dietary and exercise intervention alone for the majority of patients. The success of this intervention is wholly dependent on our ability to offer support in this area. A substantial expansion in Dietician staff numbers is required, but it is difficult to source staff with the necessary skills and experience.

Overall responsibility for the obstetric care provided to women who require insulin, all of whom are high-risk, is delegated to a single obstetric consultant. Recruitment of additional consultant obstetric staff in the future will be essential given the numbers and complexity of patients in this service.

Plans for 2017

We hope to be in a position to provide tailored specialist dietetic consultation and self-glucose monitoring in pregnancy for select patients with minor degrees of carbohydrate intolerance. We will continue to advocate with the HSE for the restoration of long-term illness medical card coverage for patients with gestational diabetes, so that such patients can afford the costs of self-glucose monitoring. We hope to be able to appoint an additional consultant obstetrician to the service.

Infectious Disease Service

Head of Service

Dr. Maeve Eogan, Consultant Obstetrician Gynaecologist

Staff

Dr. Richard Drew, Consultant Microbiologist
Dr. Barry Kelleher, Consultant in GI/Hepatology
Dr. Jack Lambert, Consultant in Infectious Diseases
Dr. Wendy Ferguson, Infectious Diseases Associate Specialist Paediatrician
Ms. Mairead Lawless, Infectious Diseases Liaison Midwife
Mr. Justin Gleeson, Drug Liaison Midwife
Ms. Ruth Power, Medical Social Worker
Dr. Valerie Jackson, Clinical Audit & Surveillance Scientist

Service Overview

The Infectious Diseases service, also known as the DOVE (Danger of Viral Exposure) service, looks after the specific needs of pregnant women who have or are at risk of blood and sexually transmitted bacterial and viral infections in pregnancy. This exposure may occur through illicit drug use, unprotected sex, or any contact with infected blood or body fluid.

Clinical Activity

During 2016, 201 women booked for antenatal care with this service. The specific infectious disease background of these patients included:

- 58 (29%) were positive for Hepatitis B (HBV) surface antigen, representing a decrease of 11% compared to 2015
- 40 (20%) were positive for Hepatitis C (HCV) antibody, a decrease of 27% compared to 2015
- 27 (13%) were positive for HIV, an increase of 13% compared to 2015
- 21 (11%) had positive Treponemal serology (syphilis), an increase of 17% compared to 2015
- 59 (29%) women attended for addiction support services, 38 of whom were participating in a prescription methadone maintenance programme, an increase of 14% compared to 2015. Of note, these numbers refer to patients who booked for care during 2016, while the tables below summarise the outcome of patients who actually delivered during 2016

Deliveries to HIV Positive Mothers 2016 (N = 27)

Mean age (years)	31
New HIV diagnosis by antenatal screening	8/27 (30%)
Total Mothers Delivered <500g (incl. miscarriage)	0/27 (0%)
Total Mothers Delivered >500g	27/27 (100%)
Live Infants	27/27 (100%)
Miscarriage	0/27 (0%)
Stillbirths	0/27 (0%)
Deliveries <37 weeks' gestation	3/27 (11%)
Deliveries ≥37 weeks' gestation	24/27 (89%)
Caesarean delivery	12/27 (44%)
HIV Positive Infants	1/27 (4%)

Deliveries to HBV Positive Mothers 2016 (N = 66)

Mean age (years)	30
New HBV diagnosis by antenatal screening	16/66 (24%)
Total Mothers Delivered <500g (incl. miscarriage)	0/66 (0%)
Total Mothers Delivered >500g	66/66 (100%)
Live Infants	66/66 (100%)
Miscarriage	0/66 (0%)
Stillbirths	0/66 (0%)
Deliveries <37 weeks' gestation	4/66 (6%)
Deliveries ≥37 weeks' gestation	62/66 (94%)
Caesarean delivery	14/66 (21%)
HBV Positive Infants	0/66 (0%)

Deliveries to HCV Positive Mothers 2016 (N = 40)

Mean age (years)	33
New HCV diagnosis by antenatal screening	3/40 (8%)
Total Mothers Delivered <500g (incl. miscarriage)	2/40 (5%)
Total Mothers Delivered >500g	38/40 (95%)
Live Infants (includes 3 sets twins)	40/41 (98%)
Miscarriage (includes 1 set twins)	2/40 (5%)
Stillbirths	1/40 (3%)
Deliveries <37 weeks' gestation	6/40 (15%)
Deliveries ≥37 weeks' gestation	34/40 (85%)
Caesarean delivery	14/40 (35%)
HCV Positive Infants	1

Deliveries to Syphilis Positive Mothers 2016 (N = 16)

Mean age (years)	33.5
New syphilis diagnosis by antenatal screening	3/16 (19%)
Total Mothers Delivered <500g (incl. miscarriage)	1/16 (6%)
Total Mothers Delivered >500g	15/16 (94%)
Live Infants (includes one set twins)	16/18 (89%)
Miscarriage	0/18 (0%)
Stillbirths	1/18 (6%)
Deliveries <37 weeks' gestation	3/16 (19%)
Deliveries ≥37 weeks' gestation	13/16 (81%)
Caesarean delivery	6/16 (38%)
Syphilis Positive Infants	0/16 (0%)

Deliveries to Mothers under Addiction Support Service 2016 (N = 60)

Total Mothers Delivered <500g (incl. miscarriage)	1/60 (2%)
Total Mothers Delivered >500g	59/60 (98%)
Live Infants (includes one set twins)	59/60 (98%)
Miscarriage	0/60 (0%)
Stillbirths	1/60 (2%)
Deliveries <37 weeks' gestation	10/60 (17%)
Deliveries ≥37 weeks gestation	50/60 (83%)
Caesarean delivery	21/60 (35%)
NICU admissions for Neonatal Abstinence Syndrome	11

In 2016, 233 infants attended the Rotunda Paediatric Infectious disease clinic for follow up.

Successes & Achievements 2016

Enhancing Patient Care

As well as continuing to provide responsive patient-focused care to pregnant women and their babies, there are several research projects ongoing in the Infectious Diseases Service. Many of these are collaborations with other disciplines in the Rotunda Hospital and also with the Infectious Disease and Hepatology teams at the Mater Misericordiae University Hospital. Areas of interest include the emergence of drug resistance and the pharmacokinetics of Highly Active Anti Retroviral Therapy (HAART) during pregnancy.

Education & Training

Members of the Infectious Disease team continue to be actively involved in undergraduate, postgraduate and hospital education programmes.

The Infectious Disease Liaison Midwife provides monthly in-service education sessions for all clinical staff. She also lectures on Infectious Diseases in Pregnancy to the TCD postgraduate midwifery students annually.

The British Association for Sexual Health and HIV (BASHH) accredited Sexually Transmitted Infection Foundation (STIF) Course continues to be held in Dublin, with Dr. Lambert acting as course director, and Dr. Eogan providing teaching on management of rape and sexual assault. The course took place in February and September 2016 and provided multidisciplinary training in the attitudes, skills, and knowledge required for the prevention and management of STIs.

Dr. Wendy Ferguson was awarded a doctorate in medicine by the RCSI in November 2016 for her thesis 'Newborn Screening for Congenital Toxoplasmosis in Ireland'.

Dr. Ferguson is the paediatric representative on the following national and European committees:

- The National Perinatal Hepatitis B Prevention Programme Working Group
- The Irish Congenital CMV* Working Group
- The European Congenital CMV Initiative (ECCI)

*Cytomegalovirus (CMV)

Research

Some of the team's presentations during 2016 are listed below:

1. Clinical Impact of Influenza in Pregnancy: presentation by Dr. Maeve Eogan at Influenza in Pregnancy Mini Symposium, The Rotunda Hospital November 2016

2. Cytomegalovirus: presentation delivered by Dr. Wendy Ferguson to microbiology SPR trainees at The Royal College of Physicians Dublin, February 2016

3. Substance Misuse in Pregnancy: a presentation by Justin Gleeson for MA in Addiction Studies, Dublin Business Institute March 2016

Innovation

The Irish Congenital CMV Working Group proposes early identification of infants with congenital CMV in order to facilitate early initiation of treatment for those who meet treatment criteria. A pilot screening programme using a salivary swab for CMV PCR is proposed for infants who fail the new-born hearing screen. Dr. Ferguson is the chair of this group and devised most of the work packages involved for initiating this study.

The European Congenital CMV Initiative (ECCI) consists of 14 European member states each with one representative, and its purpose is to develop and implement consensus guidelines for the management of infants with congenital CMV. Currently such guidelines do not exist and thus practice varies amongst countries and even within countries. The group has also established a congenital CMV registry for collation and sharing of data amongst members. It is hoped that crucial epidemiological information on congenital CMV and outcome will be acquired which can subsequently guide clinicians regarding best practice for maximising infant outcome.

Challenges 2016

Notably, the number of women attending the Infectious Disease Service with certain conditions increased in 2016:

- 13% increase in number of pregnant women with HIV
- 17% increase in women who tested positive for syphilis
- 14% increase in number of women attending for addiction support services

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

Plans for 2017

The team looks forward to publication of the National Drugs Strategy, "Reducing Harm, Supporting Recovery" which sets out the Government's response to addressing the harm caused by substance misuse in our society over the next eight years.

“I had a fantastic experience. The staff on the Lillie Suite and in delivery were wonderful. Thank you.”

Epilepsy Service

Head of Service
Dr. Mary Holohan, Consultant Obstetrician Gynaecologist

Staff
Ms. Sinead Murphy, Clinical Nurse Specialist (Epilepsy)

Service Overview
The clinic provides essential epilepsy care and prepares plans to reduce the possibility of seizures during pregnancy and labour.

Clinical Activity
A total of 151 pregnant women with epilepsy were seen in 2016, with 101 delivering during 2016. Forty-two women who delivered had not required anti-convulsant treatment for some years and 36 needed anti-epilepsy drug treatment for the duration of the pregnancy. Eighteen women had discontinued treatment shortly before this index pregnancy but 14 of these had a recurrence of seizure, aura or myoclonic jerks and recommenced treatment. Two women with definitive diagnosis of epilepsy refused treatment prior to pregnancy. Seizure activity in three women was associated with use of benzodiazepines in the context of substance abuse.

There were 5 complications in the group of 42 women not on treatment. There were 2 preterm deliveries at 27 and 34 weeks' gestation. There was 1 case of significant fetal growth restriction requiring preterm delivery. One woman had a cord prolapse at term and another had a major postpartum hemorrhage.

There were 3 pregnancy complications in women using anti-epilepsy medications:

- Preterm delivery at 27 weeks on lamotrigine
- Placental abruption at 30 weeks on lamotrigine and anti-psychotic medications
- Preterm delivery at 34 weeks on levetiracetam

One patient who required 4 medications for epilepsy had not achieved complete seizure control before pregnancy, had seizures in pregnancy, a caesarean section for poor epilepsy control and had seizures in the post-natal period.

Successes & Achievements 2016
The team published a review of epilepsy service at the Rotunda over a 10-year period, which drew attention to significantly increased mortality in this cohort of patients.

Buccal midazolam has become the treatment of first choice for inpatient seizure management. This initiative was supported by the Rotunda Hospital Pharmacy Department who also assisted with in-service training for midwives.

Enhancing Patient Care
The Irish Epilepsy Association Nurse Specialist, Sinéad Murphy, attends the Epilepsy Clinic on alternate weeks and has an individual consultation with each of the patients on anti-epilepsy medications.

Innovation
The support, advice and care plans offered in the clinic have been enhanced by the appropriate access by the Specialist Nurse to the electronic patient record of patients attending Beaumont Hospital.

Challenges 2016
The main challenge in 2016 was continuing to provide coordinated multi-disciplinary care to large numbers of patients with complex care needs.

Plans for 2017
Ongoing evaluation of children born to mothers taking Sodium Valproate in pregnancy now shows a 40% incidence of developmental disorders. In 2017, in conjunction with neurology colleagues, we plan to further reduce the number of women of childbearing age using this treatment to control epilepsy. All babies exposed to Sodium Valproate in pregnancy will have consultant paediatric review at 6 weeks of age.

Mental Health Service

Head of Service
Professor John Sheehan, Consultant Psychiatrist

Staff
Ms. Jeanne Masterson, Support Midwife
Ms. Ursula Nagle, Support Midwife
Ms. Kathleen O'Donohoe, Support Midwife

Service Overview
The mental health service is a multidisciplinary service provided by a part-time consultant psychiatrist and 1.5 whole-time equivalent support midwives. The service uses a "public health model" of care with a focus on prevention. There are clinical, educational and research components to the service. Pre-pregnancy counselling is offered as well as an assessment and treatment service for perinatal mental health problems. A telephone information and advice service is provided to other mental health services, GPs and public health nurses. Screening for perinatal depression is conducted.

Clinical Activity
2016 was another busy year in the Rotunda for the Perinatal Mental Health Service which is provided by Prof. Sheehan (1.5 days/wk) and the Mental Health Support Midwives. During 2016, 141 new patients attended with Prof. Sheehan and 236 follow-up patients attended. Additionally, the Mental Health Support Midwives saw 375 new patients, and 219 follow-up patients.

Successes & Achievements 2016
Enhancing Patient Care
The recognition and management of common psychological problems and mental disorders in pregnancy enhances the experience of pregnancy for the mother, reduces the risk of obstetrical complications, enhances the birth experience, promotes healthy bonding between mother and baby and contributes to giving the baby the best possible start in life.

Education & Training
Prof. Sheehan and Ms. Nagle gave presentations at the Annual Midwives Perinatal Mental Health study day, held in the National Maternity Hospital in March, which was followed by a second Study Day which was held in October in the Rotunda. During the year, lectures were provided to doctors, medical students and midwifery students. Training and education was provided to midwifery interns and midwives.

Research
Dr. Yvette Giblin, a Senior Registrar, presented a poster at the Spring meeting of the College of Psychiatrists of Ireland on the prevalence of antidepressant use in pregnant women attending the Rotunda.

Ms. Aifric O'Kane, Clinical Psychologist, continued her study of "Exploring the effects of metacognitive processes on the development and maintenance of postnatal depression".

Ms. Janet Malone, Counselling Psychologist in Training, continued her study on "the impact of maternal postnatal depression on men's experiences of fathering and fatherhood".

Innovation
In September, as part of the Midwifery Innovation Initiative, a successful application was made for funding to introduce Screening for Postnatal Depression, as recommended in the National Maternity Strategy, in the RCSI Hospitals Group. Recruitment of a part-time Support Midwife will take place in early 2017 to facilitate the project.

Challenges 2016
Given the increasing clinical and educational/training demands on the service coupled with the planned standardisation of screening across the maternity units in the RCSI Hospitals Group, additional mental health support midwifery staff are required.

Plans for 2017
The major development of 2017 will be the introduction of screening for postnatal depression in Our Lady of Lourdes Hospital, Drogheda and Cavan General Hospital, the two other maternity units in the RCSI Hospitals group. Additionally, the department hopes to recruit a part-time social worker to join the multidisciplinary team.

Next Birth After Caesarean Service

Head of Service
Professor Sam Coulter-Smith, Consultant Obstetrician Gynaecologist

Staff
Ms. Audrey Gorman, Midwife
Ms. Ciara Begg Roche, Midwife

Service Overview
The Next Birth After Caesarean (NBAC) service started in 2016 in an effort to support women who had previously had a caesarean delivery. The motivation behind the clinic was to encourage women, where appropriate, to consider a trial of Vaginal Birth After Caesarean (VBAC). The clinic is midwifery-provided and supported by a senior consultant obstetrician.

Women are referred to the clinic if they have had one previous lower uterine segment caesarean section (LSCS) and are otherwise considered normal-risk patients. Exclusion criteria for the clinic include:

- More than one previous caesarean
- History of macrosomia
- History of dystocia
- Prior premature delivery
- Co-existing medical complications
- Maternal age over 40 years
- BMI greater than 30kg/m^2
- Otherwise poor obstetric history

The midwives managing the clinic provide a support visit between 18 and 24 weeks, at which time the patient's prior medical records are reviewed and appropriate birth options are explained. Risks and benefits of VBAC compared with elective repeat caesarean are explained in detail.

The patient's current and prior medical records are then reviewed by the supervising consultant obstetrician to ensure that the patient's chosen mode of delivery is appropriate and that there are no contraindications for a trial of VBAC. All such patients can then continue to attend midwifery-provided care from 24 to 39 weeks' gestation at which point they are reviewed again with the consultant obstetrician to plan the management of the remainder of their pregnancy. Patients who have chosen to deliver by planned repeat caesarean are given a scheduled date for surgery, which is generally at or after 39 weeks' gestation. Patients who have chosen a trial of VBAC are also reviewed to confirm specific plans for care if the pregnancy extends beyond 40 weeks' gestation.

Clinical Activity
Over the course of the first year of the clinic, 244 women were reviewed and managed at the NBAC Clinic. Their outcomes will be audited and presented each year in the annual clinical report, beginning in 2017.

Successes & Achievements 2016
The establishment of this new clinical service, jointly provided by a committed team of midwives and obstetricians, has further enhanced the Rotunda's reputation as the Maternity Hospital of Choice, as it has empowered more women to confidently attempt VBAC in appropriately selected cases.

Challenges 2016
The main challenge for the NBAC service is to obtain sufficient time and resources to be able to provide individualised counselling for a large cohort of patients who are pregnant again after one prior caesarean delivery.

Plans for 2017
A new patient information sheet to optimise the consent process for patients who have previously undergone caesarean delivery is currently being developed for use throughout the Rotunda, and will standardise the information provided to patients in this setting.

Labour and Delivery

Induction of Labour

The rates of labour induction have remained stable for the last five years, with very few significant changes during that time period. Expressed as a percentage of all deliveries, 29% of patients at the Rotunda underwent induction of labour in 2016, compared with 28% in 2012.

However, there have been some marked changes in the indications for induction at the Rotunda in the last five years. While prolonged spontaneous rupture of membranes (SROM) has remained the second most common reason for induction, the Rotunda has noted a significant drop in the numbers of patients being induced for post-dates pregnancy, but mirrored by a significant increase in the numbers of patients being induced for a perception of reduced fetal movements. In 2012, 905 patients were induced for post-dates pregnancy, compared with 564 patients in 2016, representing a 38% fall. In contrast, in 2012, only 55 patients were induced for reduced fetal movements, compared with 257 patients in 2016, which is more than a four-fold increase.

One of the reasons for this change may be as a result of improved educational efforts for patients which encourages them to present earlier to the hospital if they perceive a significant reduction in fetal movements near term. The Rotunda Hospital is a participant in the AFFIRM Study, a multi-centre stepped wedge cluster trial organised from the University of Glasgow, which is evaluating whether promotion of patient awareness of fetal movements might reduce stillbirth. Results of this trial are anticipated in the near future, but our participation resulted in a new targeted educational programme for patients on the importance of monitoring fetal movements. This may be responsible for the marked increase in inductions being performed for reduced fetal movements.

The other major change in the indications for induction of labour in the last five years has been an increase in inductions for maternal diabetes, with 57 such inductions being performed in 2012, compared with 140 in 2016, representing a two to three-fold increase. This likely reflects the marked increase in incidence of diabetes in our population, due to increasing levels of maternal obesity and changes to the diagnostic criteria for gestational diabetes.

Indication for Induction of Labour 2016

Reasons	Total	%
Post Dates Pregnancy	564	22.9%
Prolonged Rupture of Membranes	454	18.4%
Reduced Fetal Movements	257	10.4%
Hypertension	212	8.6%
Other	202	7.5%
Medical	165	6.7%
Diabetes	140	5.7%
Fetal Growth Restriction	125	5.0%
Oligohydramnios	77	3.1%
Large Fetal Size	66	2.7%
Social/Personal Reasons	51	2.1%
Poor Obstetric History	49	2.0%
Multiple Gestation	37	1.5%
Antepartum Haemorrhage	23	0.9%
Fetal Abnormality	19	0.8%
Intrauterine Demise	19	0.8%
Maternal Cardiac Disease	4	0.2%
Total	**2,464**	**100%**

Method of Induction

Year	2012	2013	2014	2015	2016
Prostaglandin alone	207	182	215	225	249
Prostaglandin plus amniotomy	510	471	559	669	544
Prostaglandin plus oxytocin	595	678	682	563	596
Prostaglandin plus amniotomy plus oxytocin	387	410	375	332	311
Amniotomy alone	268	305	299	248	375
Amniotomy plus oxytocin	13	22	23	19	14
Oxytocin alone	208	176	204	154	166
Misoprostol alone	290	279	274	220	209
Total	**2,478**	**2,523**	**2,631**	**2,430**	**2,464**

Induction of Labour - Outcomes

Year	2012	2013	2014	2015	2016
Total Number of inductions	2,478	2,523	2,631	2,430	2,464
Incidence expressed from total deliveries	28%	29%	30%	29%	29%
Number of caesarean deliveries following Inductions	549	537	614	547	568
Incidence of caesarean amongst inductions	22%	21%	23%	23%	23%

Caesarean Delivery

During the last five years, the overall caesarean delivery rate at the Rotunda Hospital has increased from 28.7% to 34.6%. An overall caesarean delivery rate is of limited value in analysing obstetric trends or comparing different healthcare institutions as there can be very significant differences between hospitals and populations. The Hospital utilises the Robson Ten Group Classification System in an attempt to maximise transparency, supporting accurate inter-hospital comparisons, and enabling us to focus on areas of obstetric practice that may need further analysis.

As described below, it is clear that the two major trends in the last number of years have been the increase in the Robson Group 1 and Robson Group 5 caesarean delivery rates. Specifically, nulliparous patients with a singleton pregnancy in a cephalic presentation who present to the Rotunda in spontaneous labour at term (Group 1), have demonstrated an increase in their caesarean delivery rate from 10.3% in 2012 to 17.3% in 2016. Additionally, patients who have had a previous caesarean section, and have a singleton pregnancy in a cephalic presentation at term (Group 5), have demonstrated an increase in their caesarean delivery rate from 76.0% in 2012 to 82.3% in 2016. The other Robson Groups are relatively stable over time and are broadly similar to other Irish maternity hospitals.

It is difficult to be certain of the reason for the significant increase in the Group 1 caesarean delivery rate. One of the limitations of the Robson classification system is that it does not record the indication for caesarean delivery nor can it assist in explaining trends or differences. Possible reasons for this increase include recent changes in oxytocin administration protocols, changes in staff tolerance of fetal heart rate changes (which is possibly linked to an increasingly litigious medico-legal environment), and changes in hospital staffing. Additionally, there have been recent significant changes in population demographics with a marked increase in maternal age and a clear increase in maternal obesity, both of which are proven associated factors for higher caesarean delivery rates. This significant increase in the Group 1 caesarean delivery rate has been recognised and will be a major focus for attention at the Rotunda in the future.

A somewhat more modest increase in the Group 5 caesarean delivery rate has also been noted, and this may represent declining enthusiasm, either on the part of patients or their healthcare providers, for a trial of labour after a prior caesarean section. In 2016, 82% of patients who have had at least one prior caesarean section either requested a repeat caesarean or needed a repeat caesarean in their subsequent pregnancy. The reasons for such a decline are similarly unclear, but may also be impacted by population demographics, such as increasing maternal age, as well as contemporary medical attitudes, such as the medico-legal environment. It should also be noted that as the number of patients who deliver by caesarean section rises, it is inevitable that the Group 5 caesarean delivery rate will also increase as more and more patients will not be eligible for a trial of labour (such as those with multiple prior caesarean deliveries).

Of note is that a total of 386 patients had a caesarean delivery at term prior to the onset of labour, which represents 13% of all caesarean sections performed at the Rotunda. This compares with 277 such caesarean deliveries performed in 2012. Again, it is unclear if this represents an increasing trend for patients requesting caesarean delivery solely for their own personal reasons, or whether there are significant changes occurring in the medical risk profile of our patient population. Additionally, the Hospital has also noted significant numbers of patients deliberately choosing a particular maternity hospital, either because of an unsatisfactory previous birth experience elsewhere, or because they may have specific birth preferences that they wish to follow. This makes comparisons of caesarean delivery rates between hospitals difficult as there may be significant differences in the populations of patients being served.

Caesarean delivery – overall number

Years	2015	2016
Total number of caesarean deliveries	2,696	2,904
Incidence expressed from total deliveries	32%	35%
Primary caesarean deliveries	58%	58%
Repeat caesarean deliveries.	42%	42%
Classical caesarean deliveries	5	0
Tubal Ligation at the time of caesarean	134	152
Caesarean Hysterectomy	1	9

Indication for Primary and Repeat Caesarean in 2016

Indication	Primary	Repeat
Previous Caesarean	N/A	952
Non-reassuring fetal testing	496	55
Breech	247	31
Other	223	65
Failure to progress 1st stage	220	29
Failed Induction	83	4
Failure to progress 2nd stage	58	0
Previous 3rd/4th degree tear	54	1
Multiple Gestation	45	8
Pre-eclampsia / Hypertension	40	8
Failed Trial of Forceps / Vacuum	38	0
Placenta Praevia	34	7
Transverse / Oblique Lie	32	9
Medical Disorders	29	6
Maternal Request	20	4
Prematurity	18	0
Placental Abruption	14	6
Pyrexia	14	2
Fetal growth restriction	13	8
Poor Obstetric History	12	8
Cord Prolapse	6	1
Face/Brow Presentation	4	0
Total	**1,700**	**1,204**

Trends in Caesarean Rates (2012-2016)

Caesarean Delivery – Robson Ten Group Analysis

Year	2012	2013	2014	2015	2016
All Deliveries	8,846	8,549	8,787	8,361	8,405
All Caesarean Deliveries	2,538	2,650	2,753	2,696	2,904
Overall Caesarean Rate	29%	31%	31%	32%	35%
Group 1 - Nulliparous Singleton Cephalic Term Spontaneous Labour	199/1,941	204/1,707	220/1,686	190/1,597	269/1,554
Caesarean Rate	10%	12%	13%	12%	17%
Group 2 - Nulliparous Singleton Cephalic Term Induced Labour	436/1,360	414/1,315	497/1,389	414/1,234	447/1,222
Caesarean Rate	32%	32%	36%	34%	37%
Group 2a - Nulliparous Singleton Cephalic Term Caesarean Before Labour	161	195	207	231	242
Group 3 - Multiparous Singleton Cephalic Term Spontaneous Labour	45/2,192	54/2,095	57/2,136	36/1,963	49/1,963
Caesarean Rate	2%	3%	3%	2%	3%
Group 4 - Multiparous Singleton Cephalic Term Induced Labour	51/950	64/1,041	65/1,065	88/1,046	80/1,098
Caesarean Rate	5%	6%	6%	8%	7%
Group 4a - Multiparous Singleton Cephalic Term Caesarean before Labour	116	158	156	169	144
Group 5 - Previous Caesarean Singleton Cephalic Term	905/1,191	920/1,180	873/1,139	965/1,220	1026/1,247
Caesarean Rate	76%	78%	77%	79%	82%
Group 6 - All Nulliparous Breech	152/161	147/154	190/197	174/182	161/169
Caesarean Rate	94%	96%	96%	96%	95%
Group 7 - All Multiparous Breech	139/153	145/156	167/181	132/141	158/169
Caesarean Rate	91%	93%	92%	94%	93%
Group 8 - All Multiple Pregnancies	133/194	139/190	141/189	113/169	128/179
Caesarean Rate	69%	73%	75%	67%	72%
Group 9 - All Abnormal Lies	17/18	20/20	13/13	18/18	19/19
Caesarean Rate	94%	100%	100%	100%	100%
Group 10 - All Preterm Singleton Cephalic	184/409	190/438	167/429	167/392	181/399
Caesarean Rate	45%	43%	39%	43%	45%
Elective Caesarean Total	1,245	1,343	1,319	1,364	1,430
Emergency Caesarean Total	1,293	1,307	1,434	1,332	1,474
Total Multiparous Patients	3,907	3,668	3,748	3,514	3,441
Total Nulliparous Patients	4,939	4,982	5,009	4,847	4,964

Anaesthesia Service

Head of Service
Professor Conan McCaul, Director of Anaesthesia

Staff
Dr. Mary Bowen, Consultant Anaesthetist
Dr. Anne Doherty, Consultant Anaesthetist
Dr. Niamh Hayes, Consultant Anaesthetist
Dr. John Loughrey, Clinical Director & Consultant Anaesthetist
Dr. Caitriona Murphy, Consultant Anaesthetist
Dr. Róisin Ní Mhuircheartaigh, Consultant Anaesthetist
Dr. Patrick Thornton, Consultant Anaesthetist

Service Overview
The Department of Anaesthesia provides clinical care to approximately 12,000 patients in operating theatre, labour ward, critical care service and in three separate outpatient clinics.

Clinical Activity
The anaesthesia department provides an integrated pain management service for labouring patients at the Rotunda, with the most popular form of analgesia being epidural or combined spinal-epidural. This service is provided on a 24 hour a day basis. Additionally, the department provides anaesthesia support for a large number of Caesarean deliveries, the vast majority of which are completed under regional anaesthesia.

Obstetrics
Neuraxial Analgesia in Labour*

Nulliparous	2,107
Multiparous	1,613
Total	3,720

*Includes combined spinal epidural analgesia which was used in 409 patients.

Anaesthesia for Caesarean Delivery*

	Elective	**Emergency**
Spinal	1,395	695
General	15	123
Epidural	9	701
Combined spinal epidural	35	97
Total	**1,454**	**1,616**

*Some patients had more than one type of anaesthetic.

Operating Theatre Obstetric Workload

Major	2,969
Minor	1,139
Total	**4,108**

Successes & Achievements 2016
Education & Training
The Department continues to be an active teaching programme and is a teaching site for trainees at all levels from the College of Anaesthetists of Ireland and from Oman.

Research
There continues to be a considerable amount of research activity within the department, reflected in national and international presentations and publications in peer-reviewed journals. Collaborative research is ongoing with University College Dublin, Royal College of Surgeons in Ireland and Dublin City University.

Challenges 2016
The provision of safe peri-partum care to women with co-morbidities with limited immediate access to relevant diagnostic services and critical care on site remains challenging. Care for such women has been greatly improved by co-ordinated multidisciplinary assessment and effective clinical linkages with the Mater Misericordiae University Hospital.

Plans for 2017
The focus of the Department of Anaesthesia for 2017 is the introduction of state of the art pain relief techniques for labouring women which enhance labour outcomes. The Department also aims to enhance safety and quality of care by increased access to pre-assessment services and introduction of up to date technology on the labour ward.

“Everybody was extremely kind and helpful. Hygiene and care was excellent. No complaints. Nursing staff were amazing and so caring and discreet.”

Critical Care Service

Head of Service

Dr. Mary Bowen, Consultant Anaesthetist

Service Overview

The Critical Care Service manages the Rotunda High Dependency Unit (HDU) in order to optimise the care of our highest risk patients. The unit continues to face increased challenges with a more complex cohort of obstetrical patients. The HDU allows for complex congenital cardiac patients, amongst others, to be delivered in the Rotunda Hospital. Patients where ventilatory support is necessary require transfer to a tertiary hospital with intensive care facilities. The HDU facilitates their early discharge.

Clinical Activity

	2012	2013	2014	2015	2016
Total HDU Admissions	193	197	245	217	224
Obstetric	174	179	232	198	214
Gynaecologic	19	18	13	19	10

The table below summarises the obstetric cases which required HDU admission:

	Number	% Overall
Haemorrhage	86	38%
Preeclampsia/ HELLP	47	21%
Sepsis	35	16%
Cardiac	12	5%
Congenital Cardiac	5	2%
Miscellaneous	20	9%
Caesarean Hysterectomy	9	4%

The table below summarises the gynaecology cases that required HDU admission:

Gynaecology	Number	% Overall
Pain Control	1	0.4%
Sepsis	1	0.4%
Haemorrhage	1	0.4%
Miscellaneous	7	3%

Invasive Lines	Number
Central Venous Line	8
Arterial Line	34

Transfers	2016
To: Mater Misericordiae University Hospital	12
From: Mater Misericordiae University Hospital	3
To: Beaumont Hospital	2
From: Beaumont Hospital	1

Critical Care Transfer rates to and from the Rotunda HDU for the last 5 years

Year	Total
2012	15
2013	10
2014	30
2015	8
2016	18

Plans for 2017

The High Dependency Unit hopes that in 2017 the introduction of the electronic chart will lead to improved collation of data for the purpose of audit and research.

Maternal Morbidity

Head of Service

Dr. Sharon Cooley, Consultant Obstetrician Gynaecologist

Staff

Ms. Catherine Finn, Anaesthesia Administration
Ms. Siobhan Enright, Haemovigilance Officer
Ms. Kathy Conway, Hospital In-Patient Enquiry (HIPE) Office
Ms. Ruth Ritchie, Information Technology Midwife

Service Overview

The Rotunda Hospital is committed to the safe delivery of obstetric care to all mothers who entrust their care to our doctors and midwives. While there can be no more important measure of maternal safety than maternal mortality, it is crucial to provide careful attention to measures of maternal morbidity. For this reason, for a number of years now, the Rotunda has provided detailed data on a range of major obstetric events, such as severe haemorrhage, that can be associated with adverse maternal outcomes. The Rotunda has continued to prospectively monitor severe maternal morbidity during 2016.

Clinical Activity

In total there were 102 major morbidity events in 87 patients. The incidence of these accepted measures of major maternal morbidity in pregnancy for 2016 was 1.03%. This is an increase on previous years mostly due to an increase in major obstetric haemorrhage, peripartum hysterectomy, as well as renal and liver diseases complicating pregnancy. Details on these events, together with a five-year comparison, are outlined below:

	2012	2013	2014	2015	2016
Number of Mothers Delivered	8,846	8,648	8,787	8,361	8,405
Number of patients with major morbidity	29	40	64	59	87
Number of Major Morbidity events	55	53	81	73	102
Incidence of major Morbidity (%)	0.3%	0.7%	0.9%	0.9%	1.0%

The mean maternal age was 33 years, with a range of 18 to 49 years. The majority of patients had booked initially for antenatal care in the Rotunda Hospital (78 patients; 90%), however four of our major morbidity cases occurred in patients transferred to the Rotunda from other hospitals and five women were unbooked for care in any obstetric hospital. A total of nine women booked late for pregnancy care (after twenty weeks gestation) either in the Rotunda Hospital or at an external referring hospital.

The mean body mass index (BMI) was 27Kg/m^2 with a range of 17-59, and seven women were morbidly obese (BMI ≥ 40Kg/m^2) at booking. Twenty-nine women were recorded as non-Irish, and 29 women had one or more prior caesarean deliveries at booking.

Haemorrhage and Operative Events

	2012	2013	2014	2015	2016
Massive Haemorrhage*	18 0.20%	26 0.30%	30 0.34%	25 0.30%	34 0.40%
Uterine rupture	1 0.01%	1 0.01%	0	4 0.05%	3 0.03%
Peripartum hysterectomy	7 0.08%	3 0.03%	0	1 0.01%	9 0.10%
Interventional Radiology required for haemorrhage	0	0	0	2 0.02%	1 0.01%

*Massive haemorrhage is defined as >2.5 litre blood loss, or >5 units transfused, or need for treatment of coagulopathy

There were nine caesarean hysterectomies undertaken in 2016 and three uterine ruptures. None of the three cases of uterine rupture led to a caesarean hysterectomy. Two cases of rupture occurred in the second trimester, one of which was in the context of induction of labour in a patient with intrauterine fetal demise and a history of two prior caesarean deliveries, while the second case was a spontaneous uterine rupture following a failed termination of pregnancy in another jurisdiction. The third case of uterine rupture was secondary to spontaneous labour in a woman with one prior caesarean delivery.

In the nine cases of caesarean hysterectomy only three were unanticipated: Two cases were due to atony not responding to a range of conservative measures (excluding interventional radiology) and one was an undiagnosed accreta at the time of caesarean delivery.

Five women had a planned caesarean hysterectomy due to placenta percreta or accreta being diagnosed prenatally, and one additional caesarean hysterectomy was undertaken with the Rotunda Team in the Mater Misercordiae University Hospital due to an antenatal diagnosis of cervical cancer.

End Organ Disease

	2012	2013	2014	2015	2016
Renal or liver dysfunction	3 0.03%	3 0.03%	14 0.16%	7 0.08%	25 0.30%
Pulmonary oedema or acute respiratory dysfunction	3 0.03%	3 0.03%	5 0.06%	2 0.02%	6 0.07%
Pulmonary embolism	2 0.02%	4 0.05%	1 0.01%	0	0
Cardiac arrest	2 0.02%	1 0.01%	2 0.02%	1 0.01%	0
Severe sepsis	3 0.03%	0	10 0.11%	11 0.13%	7 0.08%
Other				13 0.16%	6 0.07%

End-organ disease was defined in accordance with the National Perinatal Epidemiology Centre criteria or in cases where sufficient organ impairment developed that required High Dependency Care.

The hospital continued to use the innovative "Thrombocalc" risk assessment programme for all of our pregnant women at delivery. This quantifies all known pro-thrombotic factors and suggests optimal management for each patient. While it is too early to claim a causative association between the use of this programme and our low incidence of pulmonary embolism, we are optimistic that we will continue to see very low rates of severe thromboembolism.

Of note, 5 cases needed to return to the operating theatre for repeat laparotomy due to maternal haemodynamic instability. One additional case was brought back to the operating theatre with complete abdominal wall dehiscence one week after caesarean delivery.

Central Nervous System Morbidity

	2012	2013	2014	2015	2016
Eclampsia	0	0	0	1 0.01%	0
Status epilepticus	0	1 0.01%	1 0.01%	1 0.01%	2 0.02%
Cerebrovascular accident	0	0	1 0.01%	0	0
Coma	0	1 0.01%	1 0.01%	0	0

There were no cases of eclampsia in 2016 and only one patient with an eclamptic seizure in the last five years. There were two patients with severe status epilepticus during pregnancy, both of whom went on to have planned caesarean deliveries at term with healthy infants.

Intensive Care Management

	2012	2013	2014	2015	2016
Anaesthetic issue	1 0.01%	1 0.01%	2 0.02%	0	0
ICU/CCU Transfer	15 0.33%	11 0.13%	17 0.19%	5 0.06%	11 0.12%
Maternal death	2 0.02%	3 0.34	1 0.01%	0	0

Nine of our patients were transferred to the Mater Misercordiae University Hospital Intensive Care Unit or Coronary Care Unit due to postoperative haemodynamic instability, infection (including one case of malaria) or cardiac issues.

Two patients were transferred to Beaumont Hospital Intensive Care, one due to respiratory dysfunction secondary to Cystic Fibrosis in the setting of multiple pregnancy and the other was a known case of epilepsy with an anterio-venous malformation.

Pre-Eclampsia Rates

	2015	2016
Total number of pre-eclampsia cases	129	147
Booked	126	146
Unbooked	3	1
Incidence against delivery	1.5%	1.8%
Eclampsia	0	0
Stillbirths	2	1
Neonatal Deaths	0	1
Multiple pregnancy	10	18

Parity of Pre-eclampsia Patients

	2015	2016
0	85	96
1	26	31
2	7	13
3	6	3
4 plus	5	4
Total	129	147

Gestational age of Pre-eclampsia Patients at Delivery

	2015	2016
< 28 weeks	2	5
28 - 29 weeks	1	4
30 - 31 weeks	7	9
32 - 33 weeks	10	10
34 - 35 weeks	16	15
≥ 36 weeks	93	104
Total	129	147

Successes & Achievements 2016

Enhancing Patient Care

All peripartum hysterectomy surgeries were planned and undertaken in the most appropriate setting, with consideration for surgical requirements and availability of staff.

Education & Training

We continue to prospectively plan care for our high risk maternal medicine patients through the monthly Maternal Medicine Multidisciplinary Meeting that takes place with consultant subspecialty input in the Mater Misercordiae University Hospital. There is also a quarterly Maternal Medicine Review in the Rotunda Hospital to discuss care of complex cases and a Grand Rounds to review multidisciplinary developments in individual topics.

Research

Validation of our innovative "Thrombocalc" risk assessment programme is now part of a PhD project for Fergal O'Shaughnessy, a member of our Pharmacy Team.

Challenges 2016

The number of cases complicated by massive obstetric haemorrhage increased by one third in 2016. This is reflected in a major increase in the incidence of caesarean hysterectomy.

The hospital saw a threefold increase in the number of women attending with severe renal or liver dysfunction. Many of these cases were secondary to severe pre-eclampsia or HELLP syndrome.

The number of women requiring Intensive Care Unit or Coronary Care Unit admission doubled in 2016. This reflects the complexity of the cases coming through the hospital. A considerable number of these admissions were planned admissions to Intensive Care with a background history of maternal disease as the service delivered six women with significant congenital or acquired heart disease where intensive monitoring was essential.

Plans for 2017

The commencement of the Maternal Medicine Clinic under the leadership of Dr. Jennifer Donnelly in 2017 will allow for improved patient care, multidisciplinary input and planning of delivery in women with antenatally identified complex diseases or risk factors.

Complicated Post Natal Service

Head of Service

Dr. Maeve Eogan, Consultant Obstetrician Gynaecologist

Service Overview

This service was originally developed to offer postnatal review to women who sustain obstetric anal sphincter injury (OASI) at vaginal delivery. In addition, women who are pregnant again after a previous anal sphincter injury attend the clinic to discuss options and risks in terms of mode of delivery.

The clinic also provides care for women who have had other postnatal concerns, including wound infection, perineal pain, dyspareunia and faecal incontinence.

Clinical Activity

391 new patients attended the clinic in 2016:

Indication for Attendance	No. of Patients Seen
Antenatal Assessment (previous OASI)	146
Postnatal Assessment after Third-Degree Tear	139
Postnatal Assessment after Fourth-Degree Tear	12
Postnatal Assessment of Perineal Infection / Pain / Dyspareunia	55
Postnatal Assessment of Faecal Incontinence	12
Female Genital Mutilation (FGM) Assessment	5
Other	22
Total	**391**

The modes of delivery of those who sustained anal sphincter injury are tabulated below:

Mode of Delivery	3rd degree	4th degree
Spontaneous vaginal	84	5
Vacuum only	23	1
Vacuum and Forceps	16	0
Forceps only	33	2
Born Outside Hospital	1	0
Total	**157**	**8**

48 patients who attended the clinic required additional treatment or ongoing referral, in addition to physiotherapy, which is offered to all patients. The specific additional treatments that were required are listed below:

Procedure/Referral	No. of Patients
Referral to colorectal service	16
Treatment of granulation tissue (outpatient)	15
Removal of persistent suture material (outpatient)	7
Perineal revision (day case)	5
Perineal injection (day case)	4
Reversal of Female Genital Mutilation	1
Total	**48**

Successes & Achievements 2016

Enhancing Patient Care

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

The clinic also supports and advises women who are pregnant again after a previous anal sphincter injury in order to discuss options and risks in terms of mode of delivery & intrapartum care.

Education & Training

An obstetric non-consultant hospital doctor (NCHD) attends this clinic and receives in-service training in OASI, as well as gaining the opportunity to undertake audit and research. The remit of the clinic in terms of care of women after OASI is also included in the NCHD hospital induction. Dr. Yulia Shahabuddin undertook a Quality Improvement Project to identify risk factors associated with OASI and to assess intraoperative and postpartum care of women who had sustained OASI.

In February 2016 Dr. Dharmesh Kapoor from the Royal Bournemouth Hospital made a presentation to the team on a review of modifiable factors in the prevention of OASI.

Innovation

The Irish Family Planning Association (IFPA) with support from the HSE National Social Inclusion Unit and AkiDwA have established Ireland's first Specialist Clinical Service for the Treatment of Female Genital Mutilation (FGM). This clinic refers any women who require surgical treatment to the complicated postnatal clinic at the Rotunda for evaluation and management.

Challenges 2016

Maximising clinic efficiency by reducing numbers of patients who fail to keep their appointment.

Providing appropriate postnatal care to women who have sustained other antenatal, intrapartum and postnatal issues who require hospital based follow up.

Plans for 2017

Ongoing audit of OASI rates following introduction of Episcissors.

Development of a patient information leaflet to support decision-making regarding the mode of delivery in subsequent pregnancy will be of significant benefit for future patient care.

We will establish an additional postnatal clinic to provide care for women who require follow up for issues other than OASI/ episiotomy and other pelvic floor concerns. Dr. Etaoin Kent commenced this clinic in December 2016 and data on this will be included in 2017 report.

Radiology Department

Head of Department
Dr. Ailbhe Tarrant, Consultant Paediatric Radiologist

Staff
Dr. Neil Hickey, Consultant Adult Radiologist
Dr. Stephanie Ryan, Consultant Paediatric Radiologist
Ms. Sheelagh Gibson, Radiology Services Manager
Ms. Louise Duffy, Senior Grade Radiographer
Ms. Meave Hayes, Clinical Specialist Radiographer
Ms. Shenaz Subjee, Senior Grade Radiographer

Service Overview
The Radiology Department provides diagnostic imaging for the adults and infants of the Rotunda Hospital, both as inpatients and outpatients. The Department provides 24-hour support to the Maternity service and the neonatal intensive care unit (NICU) through our Rotunda Radiography staff and the Radiologists from The Rotunda Hospital and The Children's University Hospital, Temple Street.

Clinical Activity
The radiology department performed 6,429 exams in 2016 representing a similar level of activity to 2015. We performed 1,822 gynaecologic ultrasound examinations. These patients were referred from the gynaecologic clinics and also from direct GP referrals.

Adult Radiology
In 2016 a total of 462 adult radiological examinations were performed of which 234 (51%) were hysterosalpingograms, performed as part of a subfertility work-up. Other examinations included other fluoroscopic procedures such as cystograms, non-obstetric ultrasound (general abdominal, renal, pelvic, head and neck, vascular and soft tissue) and plain radiographs.

Paediatric Radiology
In 2016, a total of 5,823 paediatric studies were performed. Of these, just under half (2,814) were paediatric ultrasound examinations. 1,667 hip ultrasounds were performed as part of the National Screening Programme for developmental dysplasia of the hip (DDH).

Rotunda adult and paediatric patients are also occasionally referred to Children's University Hospital Temple Street for CT and MRI scanning. In 2016, Children's University Hospital Temple Street performed 12 neonatal CTs, 25 antenatal MRIs and 93 neonatal MRIs on patients referred from the Rotunda. Ultrasound, CT and MRI scans of Rotunda babies are discussed, when appropriate, at multidisciplinary meetings in Children's University Hospital Temple Street attended by Rotunda neonatologists and radiologists.

Successes & Achievements 2016
Enhancing Patient Care
The Rotunda Hospital completed its first full year within the National Integrated Medical Imaging System (NIMIS), which is a radiology image archiving and reporting system. Within this national system, Rotunda patients have benefited from the secure transfer of their images to all other participating hospitals, including Our Lady's Hospital for Children, Crumlin and The Mater Misericordiae University Hospital. The Rotunda radiology department committed this year to participating in the National Radiology Quality Improvement Programme.

Education & Training
2016 was the fifth year in which the hospital provided a cranial ultrasound training programme, which is a practical course for paediatric trainees designed to give participants an introduction to cranial ultrasound and provide practical hands-on experience for neonatal/paediatric trainees.

Research
Both Dr. Ryan and Dr. Tarrant are actively involved in paediatric radiology research.

Several audits have been performed:

- Patient identification audit
- Audit of gonadal shielding for hip radiographs
- Audit of indications for referral for hip ultrasound

There were several publications from the department as well as presentations and lectures at national meetings.

Representatives of the radiology department attended the Radiological Society of North America (RSNA) meeting in 2016 for continued professional development in radiography, fluoroscopy, ultrasound and MRI.

Challenges 2016
28% of the studies performed in the radiology department are performed as part of the National Screening Programme for developmental dysplasia of the hip (DDH). 2016 saw a reconfiguration of this screening service with its integration

into the orthopaedic department located in The Children's University Hospital, Temple Street.

Retention of radiography staff became an issue in the second half of 2016, leaving the 24-hour emergency support aspect of the service vulnerable.

Plans for 2017

The department has several plans for 2017, which include:

- Avoiding the radiography staffing anomalies that developed over the latter half of 2016
- Examining possibilities for integration of the MN-CMS and NIMIS systems
- Further exploring the case for access to an MRI scanning machine in The Rotunda hospital to facilitate fetal and paediatric scans for Rotunda patients
- Consideration of a business case for appointment of an adult radiologist for increasing gynaecologic imaging workload

CLINICAL SERVICES

GYNAECOLOGY

Gynaecology Service

Head of Service

Dr. Rishi Roopnarinesingh, Director of Gynaecology

Service Overview

The Rotunda Hospital has been the leading provider of gynaecological services for North County Dublin for many years. The daily gynaecology clinics cater for general gynaecology problems and more specialised areas such as Reproductive Medicine, Urogynaecology and Colposcopy. Gynaecology is provided as both a public and private service on the Hospital Campus.

Clinical Activity

General Gynaecology 5-Year Activity Data

Surgical Categories

	2012	2013	2014	2015	2016
Vaginal Surgery	610	609	592	573	511
Abdominal: Uterus	125	93	88	115	92
Abdominal: Tubes & Ovaries	317	311	295	379	405
Other procedures	2,365	2,245	2,369	2,329	2,136

Vaginal Surgery

	2012	2013	2014	2015	2016
Vaginal Hysterectomy & AP Repair	86	48	41	62	57
Pelvic Floor Repair	27	48	41	42	28
Sacro Spinous Colpopexy	13	8	5	10	8
Removal / Insertion of IUCD	473	491	490	440	398
Other	11	14	15	19	20
Total	**610**	**609**	**592**	**573**	**511**

IUCD - Intrauterine Contraceptive Device

Open Abdominal Surgery

	2012	2013	2014	2015	2016
Total Abdominal Hysterectomy	49	33	14	30	9
TAH & Bilateral Salpingo-oophorectomy	28	23	31	34	37
Sub Total Hysterectomy	19	20	27	22	15
Myomectomy	29	17	16	29	31
Total	**125**	**93**	**88**	**115**	**92**

Laparoscopic Abdominal Surgery

	2012	2013	2014	2015	2016
Tubal Surgery	127	90	94	98	123
Laparoscopic Sterilisation	25	33	28	34	22
Tubal Ligation at Caesarean	64	91	92	134	133
Ovarian Cystectomy	82	73	69	90	104
Oophorectomy	14	17	9	16	22
Other	5	7	3	7	2
Total	**317**	**311**	**295**	**379**	**406**

Other Procedures

	2012	2013	2014	2015	2016
Diagnostic Laparoscopy	511	513	477	473	426
Operative Laparoscopy	169	171	167	146	143
Diagnostic Hysteroscopy	1,009	1,052	999	974	903
Operative Hysteroscopy	96	64	107	147	126
Polypectomy	61	71	72	68	96
EUA	47	46	65	53	55
Laparotomy	58	48	59	44	43
Cystoscopy	20	18	15	6	3
TVT	16	10	1	0	7
Bartholins Cyst	47	36	24	47	41
LLETZ	78	21	23	7	21
Other Gynae Surgery	206	153	324	309	204
Other Surgery - fetal or anaesthesia	47	42	36	55	68
Total	**2,365**	**2,245**	**2,369**	**2,329**	**2,136**
Grand Total Minors	**3,417**	**3,258**	**3,344**	**3,396**	**3,145**

EUA - Examination Under Anaesthesia
TVT - Tension Free Vaginal Tape Procedure
LLETZ - Large Loop Excision of Transformation Zone

Reproductive Medicine

There are two public clinics dedicated to the area of sub-fertility. Thorough assessments of both female and male patients are performed and the facilities available allow for a complete appraisal of the various conditions associated with sub-fertility. Both clinics are staffed by two consultants which ensures that expert advice is easily available and that the most appropriate management options are provided for the patients.

Urogynaecology Services

The Promotion of Continence Clinic has been enormously beneficial for patients for many years. It is a multidisciplinary clinic, including gynaecologists and physiotherapists, that has been highly successful by ensuring the correct diagnosis is made and that an individualised management programme is implemented including patient insight, medication, bio-feedback and physiotherapy. 2016 saw the expansion of the surgical treatment options available for women who require operative interventions by the employment of consultants with a special interest in this area.

Successes & Achievements 2016

Enhancing Patient Care

There were a number of developments in the Gynaecology Department in 2016 which have resulted in a more efficient patient pathway and also an expansion in the spectrum of gynaecological procedures that can be offered in the Rotunda.

Three new consultant gynaecologists were appointed, Naomi Burke, Kushal Chummun and Eve Gaughan, each with special interest areas in gynaecology, ensuring that an optimal and contemporary level of care will continue to be available.

Out-Patient Hysteroscopy clinics were started on the Connolly Hospital campus in Blanchardstown which have been provided and staffed exclusively by Rotunda personnel. These new clinics have been very successful and have contributed to minimising the demands on the Rotunda's main operating theatres.

Innovation

The administrative staff modified the way that GP referrals were handled and were very effective in improving turn-around times and patient scheduling.

Challenges 2016

Challenges faced in 2016 included:

- Gynaecology out-patient waiting times
- Efficient access to operating theatre
- Dedicated gynaecology nurses
- Acquisition of optimal minimal access surgical equipment

Plans for 2017

Plans for 2017 include investigating the potential of improved simulator training and implementation of a dedicated gynaecologic nursing team to continue to improve efficient access to gynaecology clinics and operating theatres.

Outpatient Hysteroscopy Service

Head of Service
Dr. Eve Gaughan, Consultant Obstetrician Gynaecologist

Staff
Dr. Donal Brennan, Consultant Obstetrician Gynaecologist
Dr. Naomi Burke, Consultant Obstetrician Gynaecologist
Dr. Kushal Chummun, Consultant Obstetrician Gynaecologist
Dr. Edgar Mocanu, Consultant Obstetrician Gynaecologist
Ms. Michelle Cullen, Clinical Midwife Specialist in Hysteroscopy

Service Overview
In 2016, the Rotunda Hospital was faced with a growing waiting list for women with common gynaecologic problems, due to the inability of adult general hospitals in the region to provide access to benign gynaecologic services efficiently. Previously, the Rotunda Hospital Board had funded a waiting list initiative to try and reduce this waiting list. Following the completion of that temporary initiative, the Board decided to fund the establishment of a permanent rapid-access gynaecology service for patients with common, benign gynaecologic problems.

An ambulatory hysteroscopy clinic was therefore established in 2016 to facilitate best international practice in terms of assessing abnormal uterine bleeding, to reduce waiting times for women and to reduce the number of cases requiring theatre time. The clinic provides a one-stop "see-and-treat" service, in which patients are evaluated by a consultant gynaecologist, have a gynaecologic ultrasound examination performed, and subsequently a hysteroscopic diagnostic or therapeutic procedure can be performed, all in the one clinical appointment.

Clinical Activity
Over 700 women attended in the first year of the clinic with pre-menopausal women representing 70% of the attendees, while 30% were post-menopausal.

Procedures performed in the outpatient setting included:

- Hysteroscopy / endometrial biopsy 72%
- Polypectomy 16%
- Complicated intrauterine contraceptive device removal/ insertion 8%
- Myomectomy 4%

Underlying causes for patients' complaints were classified as follows:

Cause of Abnormal Uterine Bleeding	Percentage
Unclassified	41%
Polyps	27%
Fibroids	17%
Endometrial Carcinoma/hyperplasia	6%
Iatrogenic / hormonal	6%
Adenomyosis	1%
Ovulatory dysfunction	1%
Coagulopathy	1%

Successes & Achievements 2016
Setting up this new service on the grounds of Connolly Hospital was a major achievement for the gynaecology team in 2016. Practical issues, such as the identification of an appropriate clinical space, provision of sufficient equipment (both disposable and core imaging equipment), triaging of appropriate patients, and managing pathological specimens, all needed to be solved prior to patient scheduling. Once these core processes and protocols have been established, it will now be possible to significantly expand the patient volume seen at the clinic.

Challenges 2016
Establishing an off-site clinic on the campus of Connolly Hospital presented practical challenges for the hysteroscopy clinic team, including transport of medical records, and return of pathological specimens. It was also important that this new service was deemed acceptable to our patient population, which was confirmed by means of patient experience surveys, with 100% of all patients expressing satisfaction with the service.

Plans for 2017
The clinic will be expanded to 4-5 days per week, an increase from the three sessions per week currently provided.
The clinic will also begin to function as a training site for ambulatory hysteroscopy, polypectomy and myomectomy.

Colposcopy Service

Head of Service

Professor Paul Byrne, Consultant Obstetrician Gynaecologist

Staff

Dr. Kushal Chumman, Consultant Obstetrician Gynaecologist
Dr. Yahya Kamal, Consultant Obstetrician Gynaecologist
Dr. Hassan Rajab, Consultant Obstetrician Gynaecologist
Dr. Tom Walsh, Consultant Obstetrician Gynaecologist
Ms. Selena Igoe, Lead Nurse Coordinator
Ms. Virginie Bolger, Nurse
Ms. Bernice Breslin, Nurse
Ms. Nuala McInerney, Nurse
Ms. Jennifer O'Neil, Nurse
Ms. Carol O'Rourke, Nurse
Ms. Rose Thorne, Nurse
Ms. Nicola Boyd, Healthcare Assistant
Ms. Susan Daly, Administrative Team Leader
Ms. Éilis Dalton, Administrative Support
Ms. Jade Ng, Administrative Support
Ms. Niamh O'Carroll, Administrative Support
Ms. Trish O'Donovan, Healthcare Assistant
Ms. Marita Paberza, Administrative Support
Ms. Olga Pearson, Administrative Support

Service Overview

The Colposcopy Service in the Rotunda Hospital is one of 15 clinics in Ireland working under the guidance of CervicalCheck – The National Cervical Screening Programme. The primary objective of cervical screening is to reduce the mortality from cervical cancer by detecting and treating premalignant disease. The colposcopy service plays a key role in the screening programme by ensuring optimal management of women who have abnormal cervical smears. The quality assured service that is provided is carefully monitored by CervicalCheck.

Clinical Activity

Five-year Comparative

Year	2012	2013	2014	2015	2016
New Attendees	1,563	1,569	1,503	1,902	1,805
Return Visits	3,159	3,325	3,424	3,442	3,857
Total	**4,722**	**4,894**	**4,927**	**5,344**	**5,662**

Treatment

Cervical Biopsies	1,476
Large Loop Excision of the Transformation Zone (LLETZ)	372
Cold Coagulation (CC)	421
Total Treatments (CC + LLETZ)	**793**
Total Procedures	**2,269**

The service continues to expand the use of Cold Coagulation, which allows treatment of CIN without the risk of pregnancy complications. More than half of the patients who need treatment are now managed using cold coagulation.

Successes & Achievements 2016

Enhancing Patient Care

The service exceeded all of its targets for Quality Assurance in 2016, which reflects the hard work and dedication of all members of the Colposcopy Team.

Clinical Audit

Audits completed in 2016 and certified by The Rotunda Hospital Clinical Audit Department included an audit of Cold Coagulation, an audit of LLETZ resection margins, and an audit of compliance with National Cancer Screening Service standards for LLETZ procedures.

Nurse-led Clinics

- Two of our Nurse Colposcopists gained accreditation in Therapeutic Colposcopy with the British Society for Colposcopy and Cervical Pathology (BSCCP).
- Three nurses are now trained to work independently as Nurse Colposcopists and run their own weekly clinics. This has had a significant beneficial effect on the throughput to clinics, as it allows more women with high-grade disease to be seen in the consultant clinics.

Upgrading of Clinical and IT Equipment

Colposcopes and IT equipment are reaching the end of their lifespan and will need to be replaced in the coming year.

Challenges 2016

The main challenge has been physical space constraints, which make service expansion difficult.

Plans for 2017

Our aim is to continue to provide a quality-assured service that reaches all targets set by the National Cervical Screening Service. Our most important goal in 2017 is to have our colposcopes and IT equipment upgraded. We plan to host the annual NICCIA (Nurses in Colposcopy Clinics in Ireland Association) meeting in the Rotunda in March. Three of our research projects will be presented at the BSCCP Annual Scientific meeting in the UK in May 2017.

Sexual Assault Treatment Service

Head of Service
Dr. Maeve Eogan, Consultant Obstetrician Gynaecologist

Staff
Ms. Noelle Farrell, Midwife Manager
Ms. Catherine Hallahan, Clinical Midwife Specialist
Ms. Deirdra Richardson, Clinical Midwife Specialist
Ms. Aideen Walsh, Clinical Midwife Specialist
Dr. Killian Bates, Forensic Medical Examiner
Dr. Gouri Columb, Forensic Medical Examiner
Dr. Haroon Khan, Forensic Medical Examiner
Dr. James Moloney, Forensic Medical Examiner

Service Overview
The Rotunda Sexual Assault Treatment Unit (SATU) is one of 6 HSE-supported SATUs around the country. Each unit provides responsive patient-centred care underpinned by national inter-agency guidelines. This ensures that all men and women who seek care after sexual crime receive the same standard of care regardless of which SATU they present to.

Clinical Activity
5-year Comparison of Attendees to the SATU

Year	2012	2013	2014	2015	2016
No.	318	310	286	317	289

In 2016 the SATU at the Rotunda Hospital provided care for 272 women and 17 men after rape or sexual assault, 28 (9%) less than 2015. In total, the national SATU services saw 712 new patients in 2016, which was an increase from 685 patients in 2015. In addition to acute SATU attendances, the SATU also provides comprehensive follow-up care including sexually transmitted infection (STI) screening, support and health promotion (e.g. hepatitis B vaccination programme) for up to 6 months after first attendance.

Most patients (79%) presented within 7 days of an incident of sexual assault; early presentation is optimal in terms of provision of appropriate care as well as collection of forensic evidence. Of the 272 Rotunda cases where the incident was reported to have taken place in the Republic of Ireland, 214 (79%) of these took place in Dublin city or county. Thirteen other counties were also represented in the figures. While 85% of attendees reported that the incident took place between 9pm and 9am, the majority of patients (197 - 68%) actually attended for care within daytime hours (9am-9pm). Nevertheless, approximately one third of our patients were seen between the hours of 9pm and 9am, which emphasises the continued need for a round-the-clock service.

Successes & Achievements 2016
Education & Training
SATU staff undertake outreach education within general hospital emergency departments, general practice clinics, mental health services, Prison Services, schools & universities, An Garda Síochána, and the Dublin Rape Crisis Centre. This aims to raise awareness, understanding and recognition of sexual violence and to equip people to appropriately respond to disclosures of sexual violence.

SATU staff are also involved in training doctors, nurses and midwives to work in the service. Dr. Eogan taught on the STI Foundation course twice in 2016. The SATU service hopes that both the UCD programme for forensic medical examiners and the RCSI Higher Diploma in Sexual Assault Forensic Examination will run in 2017.

Enhancing Patient Care
As well as providing care for people who report an incident of sexual violence to An Garda Síochána, since 2009 the unit has supported men and women who preferred not to report the incident. In July 2016, thanks to funding received from the Department of Justice, the unit introduced secure storage of forensic evidence for those who are uncertain about their reporting intentions. This enables patients to come to an informed decision regarding whether or not they wish to report the incident to An Garda Siochana.

Of the 289 patients that attended the SATU in 2016, 97 (34%) patients attended without reporting the incident to An Garda Síochána. Eighteen of these patients chose to securely store forensic evidence in the SATU. This evidence is stored for up to one year, and can be released to An Garda Síochána if and when the patient reports the incident.

Emergency contraception (EC) was given to 122 of 201 (61%) women seen with 120 hours of an incident (the upper time limit for effective hormonal EC). There was a range of reasons (including previous effective contraception, hysterectomy) why the remaining patients did not require EC. All SATU attendees were offered follow-up screening for sexually transmitted infections. 255 men and women accepted this offer, and 184 (72%) actually attended for screening. Such low return rates are not uncommon, both nationally and internationally, and have encouraged continued provision of routine prophylaxis for Chlamydia at the time of the patient's

initial attendance. The rate of identification of Chlamydia has fallen precipitously since the introduction of routine prophylaxis. All patients are also offered a course of Hepatitis B Vaccination, and can also be offered HIV prophylaxis on-site if required following risk assessment. In 2016, 23 (8%) patients received post-exposure prophylaxis for HIV, and none of these patients acquired HIV as a result of the incident.

Innovation

In 2016, the SATU undertook a major project, in conjunction with the HSE Office of the Chief Information Officer, to develop a secure, web-based database and reporting system for all 6 SATUs. This will also collate key performance indicators (KPIs) which will drive quality care and performance.

Over the past few years the service has been offering a patient experience questionnaire in both written and electronic format to encourage feedback from as many SATU attendees as possible. The SATU service continued to do this in 2016, and has used feedback received to drive further service developments.

Challenges 2016

The SATU continues to experience challenges staffing the assisting nurse/midwife rota, although this was less of an issue in 2016 than in previous years. This meant that there were occasions when we were unable to provide an out-of-hours service and had to refer patients to the SATU at the Midland Regional Hospital, Mullingar.

Although the remit for the adult SATU services is for patients over 14 years, in 2016 the unit provided care for 8 female patients less than 14 years of age. These were instances where acute care in a paediatric service could not be arranged. Developments in paediatric services are anticipated which will mean that such patients should be appropriately accommodated in the paediatric hospital setting in the future.

Towards the end of 2016, Aideen Walsh was offered the post of Assistant Director of Nursing and Paediatric Forensic Medical Unit Coordinator in Our Lady's Children's Hospital, Crumlin. We will continue to work with Aideen in her new role, and look forward to many significant developments in paediatric services over the coming years. Dr. Gouri Columb, who has been a committed forensic examiner in the unit for many years, has had a prolonged absence due to ill health. We miss her contribution to the service greatly, and wish her a speedy return to full health. Also in 2016, our colleague Patricia O'Connor passed away, following illness borne with fortitude and good humour. Patricia's contributions to both staff and patient's experiences of SATU care will be long lasting, and we extend our sincere sympathies to her daughter, husband and extended family.

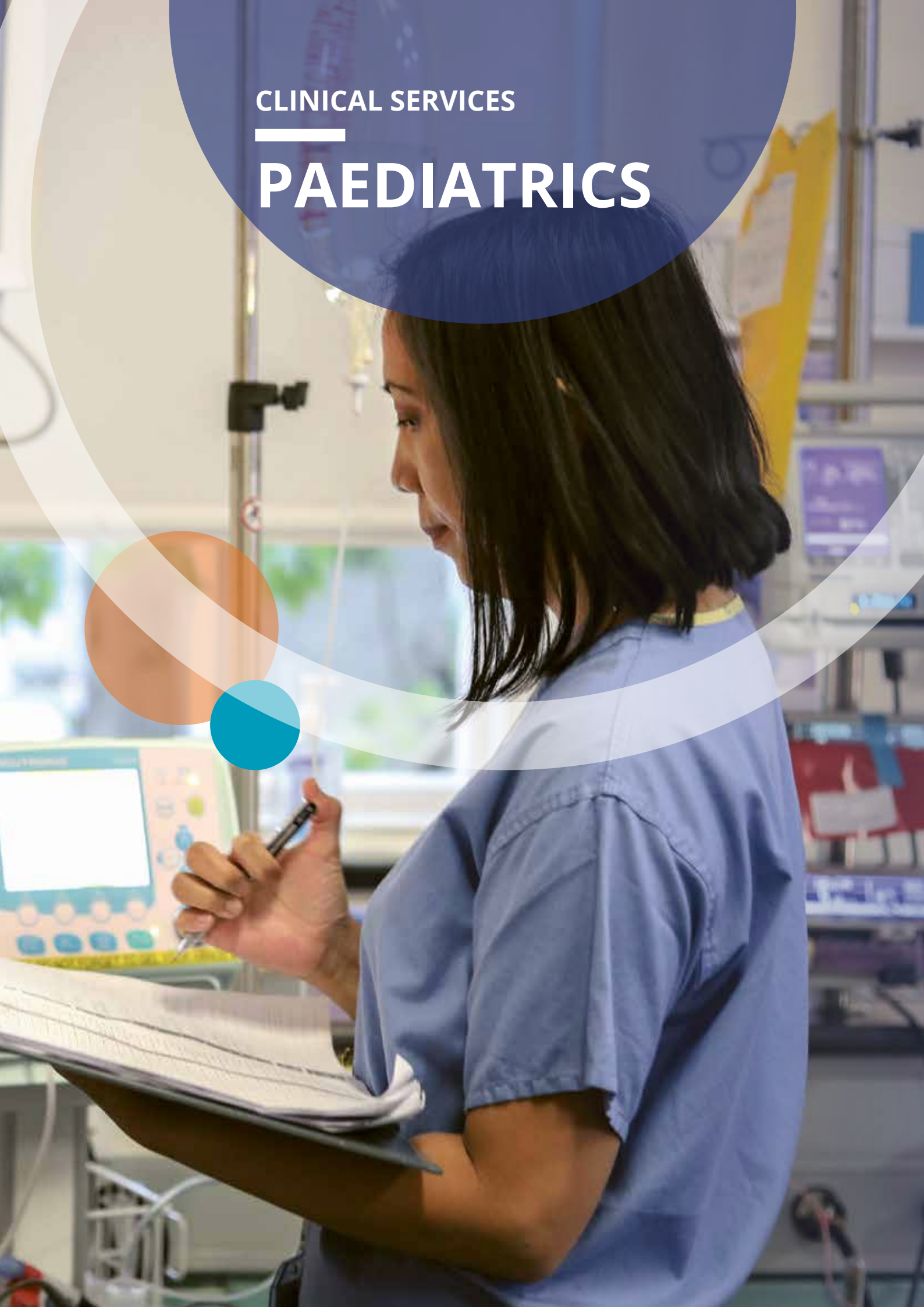
Plans for 2017

A priority is to increase staffing levels, both for forensic examiner and assisting nurse rotas. As the SATU is a 24/7 service, it is imperative that the SATU has adequate staffing levels to cover the service. It is hoped that training courses for both doctors and nurses/midwives who wish to work in the service will run in 2017.


155
37
89

CLINICAL SERVICES

PAEDIATRICS



Department of Neonatology

Head of Department

Professor Afif El-Khuffash, Consultant Neonatologist

Staff*

Dr. Michael Boyle, Consultant Neonatologist
Dr. David Corcoran, Consultant Neonatologist
Dr. Adrienne Foran, Consultant Neonatologist
Dr. Jan Franta, Consultant Neonatal Transport Physician
Dr. Breda Hayes, Consultant Neonatologist
Prof Mary King, Consultant Paediatric Neurologist
Prof Naomi McCallion, Consultant Neonatologist
Dr. Wendy Ferguson, Infectious Disease Associate Specialist Paediatrician
*Supported by a team of Nurses, Midwives and Healthcare Assistants.

Service Overview

The neonatal intensive care unit (NICU) at the Rotunda Hospital is a national referral unit, catering for babies from over 8,500 deliveries per year, together with those delivered at other hospitals throughout the state. The NICU admits approximately 150 very low birth weight infants per annum, and has closely established links with a tertiary children's hospital (Children's University Hospital, Temple Street, Dublin). The Rotunda Hospital NICU has 39 beds ranging from Level III (intensive care) to Level I (special care), is a centre for therapeutic hypothermia, and provides state-of-the-art therapeutic modalities including high frequency oscillation and inhaled nitric oxide.

The Rotunda has an extremely busy paediatric outpatient department providing follow-up care for infants born at the Rotunda Hospital. There are over 1,500 clinics scheduled every year, which cater for 8,000 – 9,000 visits to the department. Services provided include follow-up visits for premature and term infants admitted to the neonatal unit, routine well-baby checks, feeding advice, follow-up of jaundice, in addition to dedicated infectious disease and neurology clinics.

In a rota with our colleagues at the National Maternity Hospital and the Coombe Women and Infants' University Hospital, the Rotunda undertakes responsibility for the national neonatal transport service once every three weeks. The neonatal transport service in Ireland has its headquarters in the Rotunda Hospital and runs on a 24-hour basis. The transport team is comprised of skilled and experienced staff, including a neonatal transport nurse, a neonatal registrar, an ambulance driver (road transports) and air crew /paramedics (air transports) under the guidance and leadership of a dedicated neonatal transport consultant.

Clinical Activity

Neonatal Intensive Care Unit (NICU)

In 2016, the number of admissions to the NICU decreased slightly compared with 2015 (1,262 vs 1,311). This includes 50 infants less than 1,000 grams and 74 infants less than 1,500 grams. The predominant reason for admission remains respiratory morbidity and prematurity or low birthweight. The leading cause of admission in term infants greater than 37 weeks' gestation remains transitory tachypnoea of new-born (TTN) and respiratory distress syndrome (RDS). A total of 911 babies with minor neonatal issues were managed on the postnatal wards at the mothers' bedside, without a requirement for NICU admission.

Table 1: Admissions and Discharges

Admissions*	**1,262**
Discharged alive	1,213
Infants > 1.5Kg	1,089
Infants Treated on Ward	911

*Some infants remained admitted to the NICU into 2017 and were not recorded as discharges in 2016

National Neonatal Transport Programme (NNTP)

In 2016, the Rotunda received 7.5% (47) of the total number of infants transported by the NNTP (620). Of these, 28 were national referrals for neonatal management which represents 25% of the total number (110) of NNTP primary transports for neonatal management to the three Dublin maternity Hospitals in 2016. 19 (40%) were own hospital patients; 4 were forward transports from an adult hospital (Mater), booked in the Rotunda; 14 were return transports from Dublin paediatric hospitals, following surgical, cardiology, or neurological interventions; 1 was a return from UK following extra-corporeal membrane oxygenation (ECMO) therapy. The majority of NNTP transfers are to the tertiary paediatric surgical centres thereby explaining the low proportion of infants transferred to the Rotunda Hospital under this program.

Paediatric Outpatients

Paediatric outpatients' attendances remained high at 8,084 which is a slight decrease from 2015 but significantly lower than previous years when over 12,000 attendances were recorded. The reduction in outpatient attendances is due to earlier discharges from follow-up of infants undergoing

specialist care elsewhere. 349 babies were reviewed in the Emergency Assessment Unit. The overall non-attendance rate remains high at 9%.

Specialist Neurology Clinic

In total 59 babies were seen in 2016 by the Consultant Paediatric Neurologist at a specialist neurology clinic. The majority were seen at 4 months of age (n = 24), primarily new referrals to the clinic following discharge from the NICU. The remainder of the babies were seen for follow up as follows: less than 4 months (n=2), 6-12 months (n= 22), 12-24 months (n=11). All babies that receive therapeutic hypothermic treatment in the new-born period are subsequently seen for follow-up in the specialist neurology clinic. In addition, babies with developmental delay, periventricular leukomalacia (PVL) and abnormal neurological examination are referred to the clinic at varying ages up to the age of 2 years.

Neonatal Developmental Screening Programme

115 new attendances were recorded at the Neurodevelopmental Follow-up Clinic. The Neonatal Developmental Screening Programme formally assesses the development of very low birthweight (VLBW) infants, i.e. those with birthweight less than 1,500g, and those with a history of Hypoxic Ischaemic Encephalopathy (HIE), at a corrected gestational age of 2 years. 2016 was the first year that formal neurodevelopmental screening has been extended to the Rotunda's encephalopathy population.

Paediatric Infectious Disease (ID) Service and Rainbow Clinic

The paediatric infectious disease service is delivered by a paediatric specialist who works in close liaison with the Rotunda maternity infectious disease service (DOVE team) and also in liaison with the national paediatric ID service, known as the Rainbow team. The paediatric ID specialist manages and follows up all infants born to women with infectious diseases, which can be transmitted to the infant in-utero, peripartum or postpartum. This includes: HIV, Hepatitis C, Hepatitis B, syphilis, Chlamydia trachomatis, Neisseria gonorrhoea, herpes simplex, TB, malaria, genital HPV and other sexually transmitted infections. Infants with common neonatal infections, such as conjunctivitis and skin infections are also referred to this specialist paediatric clinic.

In addition, the paediatric ID specialist manages all infants with congenital CMV and toxoplasmosis on a local and national basis via liaison with paediatricians nationwide. In 2016, 139 new attendances and 92 follow up attendances (total 231) were recorded at the Rainbow Clinic for specialist follow-up of those infants exposed to or at high risk for specific infectious diseases.

Successes & Achievements 2016

Enhancing Patient Care

The Department of Neonatology has continued to identify quality improvement plans to enhance the Rotunda's philosophy of providing family-centred care. Following on from 2015, increasing neonatal lactation support in the unit was prioritised. The hospital received funding from the HSE for a significant increase in lactation support hours, from 15 to 100 hours per month. While this six-month pilot only commenced towards the end of the year it has been a very welcome introduction and will hopefully continue into 2017 and beyond.

In June of 2016, a sixth permanent consultant neonatologist was welcomed to the team. Dr. Michael Boyle joined the Department of Neonatology following the completion of fellowship training in Cambridge. This increase in the complement of neonatologists at the Rotunda will greatly improve the range of clinical service provision, as Dr. Boyle has acknowledged expertise in neonatal neurology and brain imaging. His appointment has significantly expanded routine and emergency head ultrasound scanning cover in the NICU.

Education & Training

Staff education and development is key to continued provision of expert nursing care to sick neonates. One member of staff is currently undertaking a Master's Programme in HealthCare Informatics. Other education programmes for nurses include 'Key Principles of Special Care and High Dependency Nursing' and 'Key Principles of Intensive Care Nursing', both facilitated by the Rotunda's Centre of Midwifery Education. Staff were also supported throughout the year to attend national and international neonatal nursing conferences.

In 2016, Professor Naomi McCallion was integral in leading the recognition of Neonatology as an independent subspecialty at the Medical Council of Ireland. This has also led to the development of a recognised training scheme specifically for neonatology. Professor McCallion is now the National Specialty Director for Neonatology training in the RCPI.

Research

The Neonatal Department continues its active role in research. During 2016 there were a total of three higher

degree candidates in the Department: Dr. Adam Reynolds, Colm Breathnach and Patrick McCrossan. In addition, three higher degrees were awarded in November 2016. Drs Nurul Aminudin and Wendy Ferguson were awarded MDs and Dr. Elaine Neary was awarded a PhD.

Challenges 2016

The Department of Neonatology continued to have difficulty with neonatal nurse staffing and maintaining a nurse-to-patient ratio that is consistent with international recommendations. Ideally, given our patient volume, there should be a requirement for a minimum of 15 nurses per shift to maintain optimal care standards, which is a target that we have not been able to meet. Additionally, the department lacks a dedicated resuscitation nurse for emergencies. At times close to 20 babies were being treated in the High Dependency Unit (HDU), which has a maximum capacity of 13 beds. We continue to operate in a unit not fit-for-purpose with significant infrastructural challenges including inadequate spacing between cots, a lack of isolation rooms, a lack of a parent counselling room, and a lack of a dedicated breast milk expression room for mothers. These staffing and physical infrastructure limitations are a major concern for clinical risk and have been escalated through the hospital Executive Management Team to the HSE for resolution.

Plans for 2017

A major focus for 2017 will be the introduction of the Maternal and Newborn Clinical Management System (MN-CMS), and facilitating the transition to a paperless unit. The implementation of such an electronic medical record, not just to an entire hospital but also to an entire country, has never been attempted before, and represents both tremendous benefits as well as challenges for 2017. There are plans for a phased expansion of the intensive care and high dependency space to partly address infrastructural challenges. In an effort to expand the range of multidisciplinary clinical care provision, there are plans to recruit a dedicated neonatal pharmacist and a speech and language therapist for the department.

Neonatology Tables

Table 1.1: Admissions and discharges to the neonatal unit

Admissions	1,262
Discharges	1,213
Infants > 1.5Kg	1,089
Infants treated on ward	911

Including Readmissions

Table 1.2: Admission weight to the neonatal unit

500 – 1,000grms	50	4%
1001 – 1,500grms	74	6%
1501 – 2,000grms	120	10%
2001 – 2,500grms	168	14%
Over 2,500grms	801	66%
Total infants discharged	**1,213**	**100%**

Based on infants discharged in 2016

Table 1.3: Admission indications to the neonatal unit

Respiratory Symptomatology	497
Low Birth Weight < 2.5Kg	412
Jaundice	294
Hypoglycaemia	195
Congenital Abnormalities	191
Prematurity < 37 Weeks	174
Suspected Sepsis	35
Neonatal Abstinence Syndrome	18
Dehydration	14
Seizures	12
Hypoxic Ischaemic Encephalopathy (HIE)	13
Gastro-Intestinal Symptoms	5
Social	7

Some infants are assigned more than one reason for admission

Table 1.4: Respiratory morbidity in term infants > 37 weeks admitted to the neonatal unit

Transient Tachypnoea of the newborn (TTN)	263
Respiratory distress syndrome (RDS)	230
Persistent Pulmonary Hypertension of the newborn (PPHN)	41
Congenital Pneumonia	27
Meconium Aspiration Syndrome (MAS)	9
Stridor	4
Congenital Diaphragmatic Hernia (CDH)	2
Laryngomalacia	2
Tracheo-Oesphageal Fistula	1
Pulmonary Hypoplasia	1

Table 1.5: Congenital heart Disease in infants admitted to the neonatal unit

Patent Ductus Arteriosus (PDA)	68
Dysrhythmia	49
Persistent Pulmonary Hypertension Of The Newborn (PPHN)	41
Ventricular Septal Defect (VSD)	23
Atrial Septal Defect (ASD)	7
Atrioventricular Septal Defect (AVSD)	5
Hypoplastic Left Heart Syndrome (HLHS)	4
Transposition of The Great Arteries (TGA)	3
Tetralogy of Fallot (TOF)	2

Table 1.6: Gastrointestinal abnormalities in infants admitted to neonatal unit

Inguinal Hernia	8
Imperforate Anus	7
Gastro-Oesophageal Reflux	4
Omphalocoele	4
Cleft Lip	3
Cleft Palate Only	2
Gastroschisis	1
Bowel Ateresia	1
Tracheo-Oesphageal Fistula	1

Table 1.7: Central nervous system abnormalities in infants admitted to neonatal unit

Neonatal Abstinence Syndrome	18
Seizures Not Associated With HIE	12
Hydrocephalus	3
Microcephaly	3
Schizencephaly	3

Table 1.8: Metabolic / endocrine / haematological abnormalities in infants admitted to neonatal unit

Hypoglycaemia	195
Anaemia of Prematurity	75
Thrombocytopenia	28
Haemolytic Disease of Newborn	21
Hyperglycaemia	20
Polycythaemia	17
Anaemia (not associated with prematurity)	7
Syndrome of Inappropriate ADH Secretion (SIADH)	5
Disseminated Intravascular Coagulopathy	4
Hypothyroidism	4

Table 1.9: Dysmorphic syndromes in infants admitted to neonatal unit

Trisomy 21 (Down Syndrome)	22
Dysmorphic features (no final diagnosis)	6
Trisomy 18 (Edwards Syndrome)	0
Trisomy 13 (Patau Syndrome)	0

Table 1.10: Jaundice in term infants > 37 weeks admitted to neonatal unit

Non-Haemolytic Jaundice	129
Haemolytic Jaundice - ABO Incompatibility - RH Incompatibility	 11 4

Table 2.1: Very low birth weight (VLBW) infant admissions to the neonatal unit

	All Cases	Excluding Congenital Anomalies
Infants < 401g but ≥22 weeks gestation	0	0
Infants 401-500g	2	1
Infants 501-1500g	120	87
Infants > 1500g but ≤29 weeks gestation	0	0
Total	**122**	**88**

Table 2.2: Survival to discharge based on gestational age (completed weeks) (n=118) including aggregate survival 2014-16

	n	2016 survival to discharge (Inborn)	%		n	2016 survival to discharge (outborn)	%		Total Survival to Discharge	%	n	2014-2016 aggregate survival	%
< 22 Weeks	0	0			0	0			0		3	0	0%
22*	3	0	0%		0	0			0	0%	11	0	0%
23	4	1	25%		0	0			1	25%	17	1	6%
24	13	5	38%		1	1	100%		6	43%	26	13	50%
25	9	7	78%		1	0	0%		7	70%	29	25	86%
26	7	7	100%		0	0			7	100%	27	22	81%
27	9	9	100%		0	0			9	100%	31	30	97%
28	21	20	95%		2	2	100%		22	96%	77	70	91%
29	8	7	88%		1	1	100%		8	89%	43	41	95%
30	14	12	86%		1	1	100%		13	87%	40	37	93%
31	14	14	100%		1	1	100%		15	100%	38	34	89%
32	5	4	80%		0	0			4	80%	19	15	79%
>32 weeks	4	4	100%		0	0			4	100%	22	21	95%
All	111	90	81%		7	6	86%		96	81%	383	309	81%

*22 weeks refers to 22 0/7 to 22 6/7 weeks gestation, and this continues with each subsequent week

Table 2.3: Survival to discharge based on birthweight (n=118) and including aggregate survival 2014-16

Birth Weight grams	Inborn Infants	2016 Survival to Discharge	%		Outborn Infants	2016 Survival to Discharge	%		Total Survival to Discharge	%	2014-2016 Survival N	Survival	%
< 501	2	1	50%		0	0			1	50%	13	1	8%
501-600	9	3	33%		0	0			3	33%	27	10	37%
601-700	10	6	60%		1	1	100%		7	64%	26	15	58%
701-800	10	6	60%		0	0			6	60%	27	18	67%
801-900	10	9	90%		1	0	0%		9	82%	33	28	85%
901-1,000	7	7	100%		0	0			7	100%	27	25	93%
1001-1,100	15	12	80%		2	2	100%		14	82%	38	31	82%
1101-1,200	10	10	100%		2	2	100%		12	100%	40	36	90%
1201-1,300	13	13	100%		0	0			13	100%	56	56	100%
1301-1,400	9	8	89%		0	0			8	89%	37	33	89%
> 1,400	16	15	94%		1	1	100%		16	94%	59	57	97%
All	111	90	81%		7	6	86%		96	81%	383	310	81%

Table 2.4: Morbidity Data including congenital anomalies

		Rotunda 2016		Vermont Oxford Network (2016)	
		(n=118)			
Measure	**N**	**Cases**	**%**	**N**	**%**
Inborn	114	114	100%	56,021	100%
Male	114	60	53%	55,992	50%
Antenatal Steroids: All Infants	110	100	91%	55,853	86%
Caesarean Delivery	114	86	75%	56,007	73%
Antenatal Magnesium Sulphate	109	81	74%	54,564	60%
Multiple Gestation	114	40	35%	56,016	28%
Any Major Birth Defect	114	31	27%	55,966	5%
Small for Gestational Age	114	29	25%	55,912	26%
Conventional Ventilation	54	4	7%	42,574	4%
High Frequency Ventilation	54	2	4%	42,576	1%
High Flow Nasal Cannula	54	7	13%	42,568	15%
BIPAP	54	0	0%	42,563	2%
Nasal Continuous Positive Airway Pressure (CPAP)	54	6	11%	42,564	7%
CPAP Before / Without intubation/ Ventilation	104	49	47%	50,307	62%
Ventilation After Early CPAP	49	13	27%	30,963	38%
Surfactant at Any Time	120	76	63%	63,913	57%
Corticosteroids for CLD	116	7	6%	61,815	10%
Inhaled Nitric Oxide	116	17	15%	61,664	5%
Respiratory Distress Syndrome	90	85	94%	47,213	70%
Pneumothorax	90	4	4%	47,213	3%
Chronic Lung Disease (CLD)	90	11	12%	47,213	21%
CLD in Infants < 33 Weeks	86	11	13%	43,039	23%
Early Bacterial Infection	115	6	5%	61,816	2%
Late Bacterial Infection	90	4	4%	47,213	7%
Coagulase Negative Staphylococcus Infection	90	4	4%	47,213	4%
Nosocomial Bacterial Infection	90	8	9%	47,213	10%
Fungal Infection	90	0	0%	47,213	1%
Any Late Infection	90	8	9%	47,213	10%
Patent Ductus Arteriosus (PDA)	90	28	31%	47,213	25%
Ibuprofen for PDA	116	12	10%	61,851	7%
PDA Ligation	116	5	4%	61,861	4%
Intraventricular haemorrhage (IVH):					
All Grades (1-4)	90	24	27%	47,213	19%
Severe IVH (Grade 3 or 4)	90	6	7%	47,213	4%
Cystic Periventricular leucomalacia	90	1	1%	47,213	2%
Any retinopathy of prematurity (ROP)					
All Stages (1 to 5)	90	12	13%	47,213	24%
Severe ROP (Stage 3 or greater)	90	4	4%	47,213	4%

ROP Surgery	116	4	3%	61,700	2%
Necrotizing Enterocolitis (NEC)	90	7	8%	47,213	3%
Surgery for NEC or Bowel Perforation	116	4	3%	61,885	4%
Probiotics	113	49	43%	61,848	15%
Mortality	118	22	19%	62,914	15%
Mortality Excluding Early Deaths	110	14	13%	60,072	11%
Survival	118	96	81%	62,914	85%
Survival without Specified Morbidities	118	67	57%	62,900	57%

Table 2.5: Shrunken Standardised Mortality and Morbidity Rates (SMr. 2016)

Measure	n	SMR	Lower 95%	Upper 96%
Results for 2016 alone				
Mortality	114	0.9	0.6	1.3
Mortality Excluding Early Deaths	107	0.9	0.5	1.3
Death or Morbidity	114	0.9	0.7	1.1
Chronic Lung Disease(CLD)	87	0.7	0.4	1
CLD: Infants < 33 Weeks	83	0.7	0.4	1.1
Necrotizing enterocolitis	113	1.3	0.7	2.1
Late Bacterial Infection	108	0.5	0.2	1
Coagulase Neg Staphylococcus	108	1.4	0.7	2.4
Nosocomial Infection	108	0.9	0.5	1.4
Fungal Infection	108	0.2	0	1.2
Any Late Infection	108	0.9	0.5	1.4
Any Intraventricular haemorrhage (IVH)	109	1.3	1	1.7
Severe IVH	109	1.4	0.9	2
Pneumothorax: inborn infants	113	1.2	0.7	1.9
Pneumothorax on transfer	113	1.2	0.7	1.9
Cystic Periventricular leucomalacia	110	0.6	0.1	1.5
Any Retinopathy of prematurity	90	0.6	0.4	0.9
Severe ROP	90	0.9	0.4	1.7
Results for 2014 – 2016 combined				
Mortality	363	1.2	0.9	1.5
Mortality Excluding Early Deaths	338	1.1	0.8	1.4
Death or Morbidity	363	1.1	0.9	1.2
Chronic Lung Disease	280	0.8	0.6	1
CLD: Infants < 33 Weeks	259	0.8	0.6	1.1
Necrotizing enterocolitis	345	1.4	1	2
Late Bacterial Infection	330	0.6	0.4	0.9
Coagulose Neg Staphylococcus	330	1.9	1.4	2.6
Nosocomial Infection	330	1.2	0.9	1.5
Fungal Infection	330	0.1	0	0.7
Any Late Infection	330	1.1	0.8	1.5
Any Intraventricular haemorrhage	329	1.6	1.3	1.8
Severe IVH	329	1.6	1.2	2.1
Pneumothorax: inborn infants	346	1.6	1.1	2.1
Pneumothorax on transfer	346	1.5	1.1	2
Cystic Periventricular leucomalacia	335	0.7	0.3	1.2
Retinopathy of prematurity (ROP)	277	0.6	0.4	0.7
Severe ROP	277	1.3	0.8	1.9

A shrunken standardised morbidity or mortality ratio (SMR) and its 95% confidence intervals indicate whether the centre has more or fewer infants with the outcome than would be expected given the characteristics of infants treated. If the upper 95% confidence interval is less than 1, the centre has fewer infants with the outcome than expected, if the lower 95% confidence interval is greater than 1, the centre has more infants with the outcome than expected.

If the lower and upper 95% intervals include 1, then the number of infants with the outcome was not significantly different from the number of infants expected, after adjusting for the characteristics of the infants treated. The model is adjusted for gestation, infant gender, 1 min apgar score, mode of delivery, presence of congenital malformations, and whether inborn or outborn.

Table 3: Neonatal Mortality Data*

Birth Wt (g)	Gestation	Sex	Delivery	Apgars	Age (days)	Principal Cause of Death
No Congenital Anomalies						
860	24	M	EmLSCS	6[1],8[5]	3	Refractory tension pneumothoraces; extreme prematurity.
675	23	M	SVD	5[1],8[5]	38	Acute respiratory failure; extreme prematurity.
825	25	F	EmLSCS	4[1],5[5]	34	Extreme prematurity; bilateral intraventricular haemorrhage, multi-organ failure
1,075	30	M	EmLSCS	6[1],6[5],9[10]	49	Twin-twin transfusion; oligohydramnios; pulmonary hypoplasia.
600	24	F	SVD	1[1],4[5],6[10]	1	Extreme prematurity; refractory respiratory failure.
660	23	M	EmLSCS	7[1],7[5]	14	Extreme prematurity; necrotising enterocolitis; refractory respiratory failure.
1,080	24	M	SVD	6[1], 10[5]	3	Extreme prematurity; bilateral grade 4 intraventricular haemorrhage.
1,775	31	F	EmLSCS	5[1],9[5]	2	Premature rupture of membranes; E coli septicaemia.
734	25	F	SVD	1[1],1[5],1[10],0[15]	1	Premature rupture of membranes; chorioamnionitis; E coli septicaemia.
785	24	M	EmLSCS	5[1],8[5]	10	Necrotising enterocolitis; perforation and peritonitis; renal failure.
1,100	27	M	EmLSCS	4[1], 7[5]	2	Ex Utero transfer; severe PPHN; no corticosteroids
1,400	30	M	EmLSCS Breech	6[1], 9[5]	1	Oligohydramnios, severe pulmonary hypoplasia with PPHN and multiple pneumothoraces.
740	25	M	Assisted Breech	8[1], 9[5]	21	Candida septicaemia; perforated necrotising enterocolitis; bilateral Grade 3 IVH.
690	24	M	EmLSCS	5[1], 7[5]	3	E Coli sepsis; PPROM from 17 weeks with severe pulmonary hypoplasia.
633	24	F	EmLSCS	8[1], 9[5]	6	E Coli sepsis with multiorgan failure.
595	24	F	EmLSCS	3[1], 5[5]	7	Respiratory failure; persistent right pneumothorax; hypotension, PVL.
1,075	30	M	EmLSCS	6[1],6[5],9[10]	49	Prematurity; pulmonary hypoplasia with abnormal pulmonary vasculature.
Congenital Anomalies						
2,660	37	F	SVD	7[1], 9[5]	1	Known anhydramnios secondary to complex renal anomalies, comfort care only.
2,890	37	F	SVD (Twin 2)	9[1], 10[5]		Microcephaly, coarctation, VSD, short limbs, choanal atresia, normal microarray.
2,680	37	F	SVD	3[1], 2[5]	1	Antenatal diagnosis of thanatophoric dysplasia, comfort care only.
790	29	M	EmLSCS	6[1],8[5]	25	Prematurity; coarctation of the aorta; staphylococcal endocarditis; renal failure.
1,760	38	M	Breech VD	1[1],1[5]	1	Potters sequence, comfort care.
2,915	39	M	LSCS	3[1],7[5],7[10]	3	Severe microcephaly, respiratory failure, abnormal movements, abnormal MRI brain.
1,100	28	M	EmLSCS	Not assigned	1	Anencephaly, gastroschisis, comfort care.
1,500	32	M	EmLSCS Breech	3[1], 2[5]	1	Sacrococcygeal teratoma, Tetralogy of Fallot, Dandy Walker malformation, partial Trisomy 5

*Not all babies who die are admitted to the NICU

EmLSCS - emergency lower segment caesarean section
IVH - intraventricular haemorrhage
LSCS - lower segment caesarean section
PPHN - persistent pulmonary hypertension of the newborn
SVD - spontaneous vaginal delivery
PPROM - preterm premature rupture of the membranes
PVL - periventricular leukomalacia
VSD - ventricular septal defect

Table 4.1: Hypoxic-ischaemic Encephalopathy (HIE)

	Inborn	**Outborn**
Total	**7**	**9**
Mild (Grade1)	4	0
Moderate (Grade 2)	2	8
Severe (Grade 3)	1	1*****
Therapeutic Hypothermia	**3**	**8**
***Baby admitted to Rotunda outside time window for therapeutic hypothermia**		

Table 4.2: Clinical Details of Newborns with signs of moderate to severe HIE

Case Number	Grade	Source	Gestation	Delivery	Arterial Cord Gas		Venous Cord Gas		
					pH	BE	pH	BE	
1	2	inborn	39+4	INST	7.3	-6	7.3	-3.3	
2	2	inborn	38+0	SVD	ND	ND	ND	ND	
3	2	outborn	38+4	INST	7.3	-7.2	7.2	-7.9	
4	2	outborn	37+6	EMCS	ND	ND	ND	ND	
5	2	outborn	41+4	INST	7.4	-7.5	7.4	-6.8	
6	2	outborn	39+5	SVD	7.1	-14	7.2	-11	
7	2	outborn	41+4	EMCS	6.8	-18	ND	ND	
8	2	outborn	37+1	EMCS	ND	ND	ND	ND	
9	2	outborn	40+4	INST	7.2		7.2	-6.2	
10	2	outborn	39+1	EMCS	7.1	-11	$_{7}$7.2	-9.1	
11	3	inborn	41+0	INST	6.9	-11	7.3	-4	
12	3	outborn	38+3	EMCS	7.1	-8.5	7.3	-6.6	
	BE= Base Excess ND= Not Done AP1: 1 Minute Apgar Score; AP5: 5 minute Apgar Score; TH: Therapeutic hypothermia EMCS= Emergency Caesarean Section; Inst= Instrumental SVD= Spontaneous Vaginal Delivery; nd= Not Documented; PLIC= Posterior limb of the internal capsule *MRI brain performed at 21 days								

	Case Number	AP1	AP5	TH	Seizures	Brain MRI	Neurodevelopment	
								Age-months
	1	1	7	Yes	No	Restricted Diffusion left posterior occipital region.	Normal	12
	2	0	1	Yes	Yes	Normal	Normal	12
	3	3	3	Yes	No	Posterior Watershed Injury	Normal	5
	4	1	2	Yes	Yes	Abnormal signal cerebellum and left periventricular white matter	Normal	4
	5	6	8	Yes	Yes	Normal	Normal	4
	6	3	4	Yes	Yes	Normal	Normal	12
	7	3	4	Yes	No	Normal	Normal	4
	8	1	1	Yes	No	Normal	Normal	4
	9	4	4	Yes	No		Normal	4
	10	3	6	Yes	No	Normal	Normal	4
	11	1	2	Yes	Yes	Abnormal signal PLIC and Thalami bilaterally	Normal	12
	12	5	5	No	Yes	*Cystic Encephalomalacia involving both cerebral hemispheres	Evolving cerebral palsy	4

ALLIED CLINICAL SERVICES

Laboratory Medicine Department

Head of Department
Dr. Richard Drew, Laboratory Director

Staff
Mr. John O'Loughlin, Laboratory Manager
Ms. Susan Luke, Quality Manager

Service Overview
The laboratory provides a full suite of tests across the divisions of biochemistry/endocrinology, microbiology, haematology/transfusion and histopathology. The laboratory also provides a phlebotomy service, as well as instruments for point-of-care testing. The mortuary and post-mortem services also are part of the laboratory services.

Clinical Activity
Overall there has been an increase in workload, with the breakdown shown in the different divisions on the following pages. There has particularly been an increase in on-call workload, which most likely relates to changes in practice regarding the management of suspected sepsis.

Successes & Achievements 2016
In 2016, the Laboratory had several notable achievements:

- Retention of Irish National Accreditation Body (INAB) accreditation for laboratory and point-of-care testing
- Gaining accreditation for Flexible Scope in the Laboratory
- Compliance with Regulation 12 of Statutory Instrument 360 of 2005, European Communities (Quality and Safety of Human Blood and Blood Components) Regulations 2005, audited by the Health Products Regulatory Authority)

Enhancing Patient Care
Further expansion of testing using mass spectrometry in Microbiology has resulted in faster identification of micro-organisms.

Introduction of the urinary protein creatinine ratio (PCR) test, which test has replaced 24-hour urine collections, has led to considerable cost savings, as well as being more efficient for staff and patients.

Education & Training
- Introduction of course/meeting/training evaluation by means of software programmes and a presentation policy at all departmental meetings to allow feedback to those staff that could not attend. This will also be a state registration requirement in the near future.
- Introduction of a barcode scanning system by means of staff ID to record attendance at internal training events, and a similar quick reference, easy to use intranet based console to allow for submission of user evaluation without the need to log into the Q-Pulse hospital document management system.

Research
Regular multi-disciplinary case studies sessions held including Haematology, Transfusion, Microbiology, and Biochemistry cases.

Innovation
Integration of new interface network by means of single point terminal servers has been achieved for all instruments on the Xyplex network, together with the development of a contingency network in the event of catastrophic network failure (60% completed).

WebPages for each laboratory division within the Department have been created and are available on both the Internet and the Hospital Intranet.

Promotion of a Hospital Intranet-based quick reference portal for laboratory testing has been achieved.

Challenges 2016
The Department of Laboratory Medicine faced several challenges during the year, which included increased workload, aging equipment, physical limitation of space within an older part of the Rotunda Hospital building, with poor design layout in comparison to modern laboratory standards.

Plans for 2017
The Department's plans for 2017 include:

- Introduction of the new computerised electronic patient record (MN-CMS)
- Replacement of the main computer server which is now outdated
- Appointment of a new Point-of-Care Coordinator and an Information Technology Scientist

Division of Biochemistry and Endocrinology

Head of Division

Professor Philip Mayne, Consultant Chemical Pathologist
Dr. Ingrid Borovickova, Consultant Chemical Pathologist
Ms. Grainne Kelleher, Chief Medical Scientist

Staff

Ms. Sharon Campbell, Senior Medical Scientist
Ms. Lorna Pentony, Medical Scientist
Ms. Miriam Blesa, Medical Scientist
Ms. Aiveen O'Malley, Biochemist
Ms. Paul Reilly, Laboratory Aide

Service Overview

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

Clinical Activity

	2015	2016	% Difference
Chemistry and Endocrinology	26,859	28,271	+ 5%
Point-of-Care Glucometer	35,636	32,444	- 9%
Blood Gas Analysis	N/A	17,165	N/A

Highlights for clinical activity in 2016 included:

- Significant increase in numbers of samples analysed for lactate (345% increase) and urinary protein: creatinine ratio (155% increase)
- Significant decrease noted in anti-mullerian hormone (AMH) and oestradiol assays, likely reflecting a change in the provision of Reproductive Medicine services at the Rotunda
- Decrease in thyroid peroxidase antibodies (TPO) and thyroid receptor antibodies (TRAB) analysis, which are now only performed on request from the Combined Obstetric Endocrine Service

Successes & Achievements 2016

In 2016, the Division had several notable achievements. The division retained of INAB accreditation for laboratory testing for Biochemistry, Endocrinology and Point-of-Care testing. Our service was the first in Ireland to be awarded accreditation for Flexible Scope in the Laboratory. This procedure allows laboratories to report, within defined criteria as accredited, results of tests or examinations not currently in their defined scope of accreditation.

Enhancing Patient Care

Fructosamine analysis is now performed on both plasma and serum samples. This has reduced the amount of samples being taken on patients and has had a significant cost benefit.

Re-introduction of Macro-prolactin in-house has improved the turnaround times for results.

Introduction of two new blood gas analysers in Assessment and Emergency Unit and NICU ensures that lactate results in cases of suspected sepsis can be available without delay, in line with new HSE sepsis guidelines.

Education & Training

- Staff were trained for the new HbA1c analyser middleware
- Participation in a Point-of-Care workshop in the RCPI
- A number of Journal Clubs held within the Department, each presented by different staff members
- Participation at the Irish Society of Inherited Metabolic Disorders meeting, at the National Cancer Control Program – National Gestational Trophoblastic Disease meeting, and at the Fertility Study Day

Research

The Division published a study on the role of high-sensitivity C-reactive protein and sex hormone binding globulin to predict the onset of gestational diabetes, in the American Journal of Obstetrics and Gynaecology.

Innovation

New generation of gamma glutamyl transferase (GGT), progesterone and folate assays are now in use.

A new middleware IT system (Cobas IT Manager) was introduced which ensures no patient results are authorised without internal quality controls being within specification and that tests are repeated if necessary before release.

Challenges 2016

The Biochemistry Division had difficulty in maintaining the POC service due to non-replacement of the POC coordinator.

Division of Clinical Microbiology

Head of Division

Dr. Richard Drew, Consultant Microbiologist
Mr. David Le Blanc, Chief Scientist

Staff

Ms. Niamh Cahill, Senior Medical Scientist
Mr. Haydn Hammerton, Senior Medical Scientist
Ms. Patricia Baynes, Medical scientist
Ms. Ita Cahill, Medical Scientist
Ms. Anne Lamont, Medical Scientist
Ms. Bernadette Lennon, Medical Scientist
Ms. Ellen Lennon, Medical Scientist
Ms. Martha McElligot, Medical Scientist
Ms. Gemma Tyrrell, Medical Scientist
Ms. Grainne McDonald, Laboratory Aide
Mr. Tom Murphy, Intern

Service Overview

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

Clinical Activity

	2015	2016	% Difference
Serology	57,656	58,268	+ 1%
Andrology	5,319	4,761	- 11%
PCR	5,530	5,542	+ 0.2%
Microbiology	68,113	72,309	+ 6%
Referral	18,640	9,166	- 50%
Total	**155,258**	**150,046**	**- 4%**

Successes & Achievements 2016

In 2016, the Division had several notable achievements:

- On-site syphilis testing introduced for antenatal patients
- Mass spectrometry introduced to accelerate the identification of organisms from clinical specimens
- Molecular testing for Group B Streptococcus was validated as part of a research project

Enhancing Patient Care

- Further expansion of testing using mass spectrometry in Clinical Microbiology leading to faster identification of micro-organisms.
- With the input of other disciplines, several patient care pathways were introduced which improved care for patients with pyelonephritis, intrapartum fever or recurrent vulvovaginal thrush.

Education & Training

- Staff were trained in the use of mass spectrometry.
- Training continued for staff in andrology analysis.

Research

The Division has been very active in terms of research output. A retrospective audit of a rapid molecular test for positive blood cultures was completed in the neonatal intensive care unit. A quality improvement project was published on the introduction of a new influenza assay. A retrospective audit was also published on screening for early-onset invasive Group B streptococcal infection in neonates.

Innovation

- Validation of a new molecular test for group B Streptococcus has been performed.
- Further development of hospital-wide antimicrobial guidelines in partnership with the Pharmacy Department.

Challenges 2016

The Division of Clinical Microbiology faced several challenges during the year, which included:

- Physical limitation of space within an older part of the hospital with poor design layout in comparison to contemporary laboratory standards
- Increased serology workload

Plans for 2017

The Division's plans for 2017 include:

- Introduction of a new molecular test for trichomonas vaginalis and Mycoplasma genitalium
- Use of Matrix Assisted Laser Desorption/Ionisation (MALDI) Mass Spectrometry research software to better characterise antimicrobial resistance

Division of Haematology and Transfusion

Head of Division

Dr. Fionnuala Ní Áinle, Consultant Adult Haematologist
Dr. Melanie Cotter, Consultant Paediatric Haematologist
Ms. Deirdre Murphy, Chief Medical Scientist

Staff

Ms. Emily Forde, Senior Medical Scientist
Mr. Ciaran Mooney, Senior Medical Scientist
Ms. Deirdre O'Neill, Senior Medical Scientist
Ms. Siobhan Enright, Haemovigilance Officer
Ms. Aileen Carr, Medical Scientist
Ms. Christine Clifford, Medical Scientist
Ms. Deirdre Corcoran, Medical Scientist
Ms. Kavneet Kaur Kainth, Medical Scientist
Ms. Elaine O'Leary, Medical Scientist
Ms. Lilliana Rasidovic, Medical Scientist
Ms. Shagufa Zaman Rakhi, Medical Scientist
Ms. Karen Fennelly, Laboratory Aide

Service Overview

Haematology as a speciality deals with investigations of blood disorders. Samples are investigated for general haematological abnormalities, coagulation disorders, haemoglobinopathies, and some blood borne infections such as malaria.

Blood Transfusion covers the investigations and protocols required to ensure that the correct compatible blood products are transfused to the right patients when clinically required.

Other areas of the Division deal with antibody titrations to allow early diagnosis of haemolytic disease of the fetus and newborn and estimation of postnatal feto-maternal haemorrhage using flow cytometry to prevent the development of rhesus isoimmunisation. This includes issuing RAADP (Routine Antenatal Anti D Prophylaxis) to all rhesus negative women at 28 weeks gestation.

Clinical Activity for Blood Transfusion

Investigation	2015	2016	% Difference
Group and Save	7,691	6,543	-15%
Total Blood Group Testing	21,165	20,789	-2%
Crossmatching of Patient blood samples	512	471	-8%
Blood Antibody Investigations	603	591	-2%

Clinical Activity for Haematology

In 2016, there was a 5% increase in workload in the Haematology Division, in part due to increase in out-of-hours testing. In contrast, in Blood transfusion there was a 2.5% reduction in testing. due to a change in the processing of group and save samples pre-operatively for elective caesarean deliveries. Clarification on samples that require processing out-of-hours has also reduced the numbers of samples tested. These samples are checked to ensure that they are suitable for processing if required and re-coded as such in the Laboratory Information System (LIS). The reduction in testing is not necessarily a reduction in workload but in the cost of processing samples.

There was a 36% increase in the haematology tests performed on call, with an 18% increase seen in work from the emergency services.

Successes & Achievements 2016

Successes and achievements included the introduction of "Thrombocalc", which is a user-friendly electronic venous thromboembolism risk assessment tool for pregnant patients.

Enhancing Patient Care

"Thrombocalc" has been expanded for use across the hospital to reduce the risk of venous thromboembolism.

An initiative to modify transfusion practices, by encouraging single unit instead of multiple units of blood transfusion, has led to a reduction in the exposure of patients to blood products following delivery.

Education & Training

An ongoing education process around haemovigilance has continued in 2016 led by the haemovigilance officer.

An international conference, VTE Dublin 2017, was organised around the area of venous thromboembolism and its prevention.

Research

- The Highlow study was designed. This is the first large randomised controlled trial in pregnancy providing high quality evidence on the optimal dose of anti-coagulation for the prevention of recurrent venous thromboembolism in pregnant women with a history of clots.

Challenges 2016

The Division of Haematology and Transfusion faced several challenges during the year, which included:

- Physical limitation of space within an older part of the Rotunda Hospital building, with poor design layout in comparison to modern laboratory standards
- Need to monitor adverse events relating to transfusion
- Increase in on-call work, especially from the emergency services

Plans for 2017

The Division's plans for 2017 include:

- Introduction of the new computerised electronic patient records (MN-CMS) together with electronic ordering in November 2017
- Investigate the feasibility of implementation of Blood Track Phase 3 along with the electronic patient record.
- Benchmark our current technology with a possible view to upgrading equipment
- Awaiting move to EDTA samples for cord bloods as clotted samples are not optimal for haemoglobinopathy screening or blood group and direct Coombs testing (DCT)

Division of Histopathology

Head of Division

Dr. Eibhlis O'Donovan, Consultant Histopathologist

Staff

Dr. Deirdre Devaney, Consultant Histopathologist
Dr. Emma Doyle, Consultant Histopathologist
Dr. Noel McEntagart, Consultant Histopathologist
Ms. Colma Barnes, Chief Medical Scientist
Ms. Phil Bateson, Senior Medical Scientist
Ms. Miriam Hurley, Medical Scientist
Ms. Tokiko Kumasaka, Medical Scientist
Ms. Aderanti Morenigbade, Medical Scientist
Ms. Sarah Morris, Medical Scientist
Mr. Michael Smith, Medical Scientist
Ms. Lorna Thomas, Medical Scientist
Ms. Elizabeth Farrington, Laboratory Aide

Service Overview

The Division of Histopathology provides diagnostic interpretation and reporting of human tissue specimens. These include routine surgical specimens, placentas and perinatal pathology cases (autopsies). The department also provides a diagnostic cytopathology service for non-gynaecological specimens.

Clinical Activity

Figures	2015	2016	% Difference
Surgical Blocks	11,531	13,029	+ 13%
Placental Blocks	5,232	5,343	+ 2%
Surgical Cases	4,512	4,782	+ 6%
Placental Cases	1,500	1,388	- 7%
Full Autopsy Blocks	640	522	- 18%
Full Autopsy Cases	83	58	- 30%
Limited Autopsy Cases (No Blocks)	7	7	0
Fluid Cases	108	99	- 8%
Fluid Blocks/ Preps	118	108	- 8%
Total Cases	**6,210**	**6,334**	**+ 2%**
Total Blocks	**17,521**	**19,002**	**+ 8%**

Key Performance Indicators (KPIs)

The Division of Histopathology routinely monitors turnaround times on surgical cases and autopsy cases each month. The Division also participates in the National Quality Assurance Intelligence System - Histopathology (NQAIS) scheme which monitors many KPIs in laboratories across Ireland. The Rotunda's Division of Histopathology meets the national designated targets in all areas such as turnaround times, and focused real-time review, and in addition is consistently above the national average in many of these targets.

Quality Objectives 2016

1. Use of composite blocks, where appropriate, for immunocytochemistry, special stains to ensure consistency of interpretation, and establishment of a library of images as a quick reference guide were all achieved in 2016.

2. More use of multi-head microscope sessions was partially achieved due to time constraints.

3. A dedicated slot for trained medical scientists to perform histopathology preparation was partially achieved due to constraints of staffing and workload.

Successes & Achievements 2016:

- "Lean" has continued to be a useful tool as workload increases, following the successful application of Lean principles to the renovation of the laboratory in 2015
- Retention of INAB accreditation.

Enhancing Patient Care

A new Rotunda Gynaecological outpatient hysteroscopy service was opened on the Connolly Hospital campus in February 2016 to reduce waiting lists. The histology laboratory gave advice on both Lean principles and logistics for this clinic to ensure that samples were processed in an efficient manner. In this way turnaround times for these samples were the same as those for samples taken in-house.

Additional Colposcopy clinics were also introduced, and turnaround times were maintained despite additional workload.

Education & Training

Staff were encouraged to participate in the Department Journal Club and Multi-Disciplinary Team (MDT) meetings such as the Colposcopy MDT and Perinatal Mortality meetings.

Continuous Professional Development (CPD) was also encouraged with the histopathology staff attending a variety of both in-house and external meetings. Internal courses included the Leadership Development Programme, the Rotunda Research Day, and the Access Database Course. External CPD included the Lean Sigma Programme and the Thin-prep Non-gynaecology user group meeting.

Innovation

In preparation for implementation of the electronic patient record (MN-CMS) in November 2017, one member of staff was assigned to develop and implement this project at the Rotunda.

Challenges 2016

The Division of Histopathology faced several challenges during the year, which included:

- Aging equipment that have increasing number of failures and do not work as efficiently as contemporary instruments. Although we have maintained our turnaround times, it becomes increasingly more difficult to do so as the number of instrument failures continues to increase
- Increased workload mainly due to additional clinics

Plans for 2017

The Division's plans for 2017 include:

- Evaluation of safer reagents for tissue processing and staining
- Full implementation of the electronic patient record (MN-CMS) in November 2017

Quality Management System in the Department of Laboratory Medicine

Head of Service

Ms. Susan Luke, Quality Manager

Staff

Ms. Emily Forde, Deputy Quality Officer
Ms. Lorna Pentony, Point-of-Care Testing Co-ordinator
Mr. John O'Loughlin, Laboratory Information Management System Co-Ordinator
Mr. Ciaran Mooney, Training Officer
Ms. Aiveen O'Malley, Health and Safety Officer

Activity

The Department of Laboratory Medicine maintained accreditation in 2016 across all disciplines confirming all processes are compliant with the applicable standards (ISO 15189 and ISO 22870). The use of Flexible Scope of Accreditation was maintained by all Divisions within the Department with the exception of Blood Transfusion where it is not permitted.

Successes & Achievements 2016

The Laboratory submits an Annual Report for Blood Transfusion to the Health Protection Regulatory Agency (HPRA), formerly the Irish Medicines Board (IMB). This report documents the activity for the previous year and reports blood usage and wastage, status of accreditation and informs of any planned future changes. The 2016 report was submitted and has been accepted.

No. of Audits Carried Out

The number of audits has increased, which reflects the use of an audit module to manage the key performance indicators (KPI's) adopted by the laboratory. These include monitoring "Wrong Blood in Tube" samples, re-bleeding of neonates due to cord blood sample errors, adherence to an audit calendar and a document review schedule, achieving turnaround times for routine and urgent samples and monitoring the external quality assurance schemes performance in each Division.

The laboratory implemented a Risk Management System in 2015 and continued to expand this across all Divisions in 2016.

Each Division is currently mapping its processes, such that each critical process is identified and a Failure Mode Effect Analysis (FMEA) is carried out to identify risks that may result in a failure in the process. This allows us to prioritise risk and manage accordingly.

We are committed to providing a service of the highest quality and shall be aware of, and take consideration of, the needs and requirements of the users which is reflected in our quality policy.

Clinical Nutrition Department

Head of Service

Ms. Anna-Claire Glynn, Senior Dietitian, Neonatal/Paediatric service

Staff

Ms. Laura Kelly, Senior Dietitian, Adult service
Ms. Marian Mc Bride, Senior Dietitian, Adult Service

Service Overview

Patients are referred to the Adult Dietetic services for:

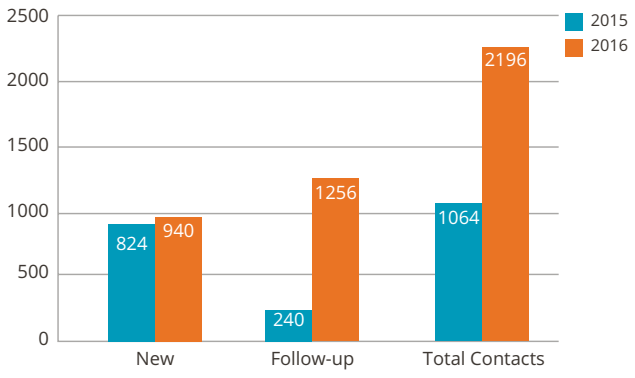
- Pre-gestational diabetes
- Gestational diabetes
- High Body Mass Index (BMI>35Kg/m^2)
- Nutrition support
- Severe Hyperemesis Gravidarium
- Other nutritional concerns

Patients are referred to the Neonatal/Paediatric Dietetic service for:

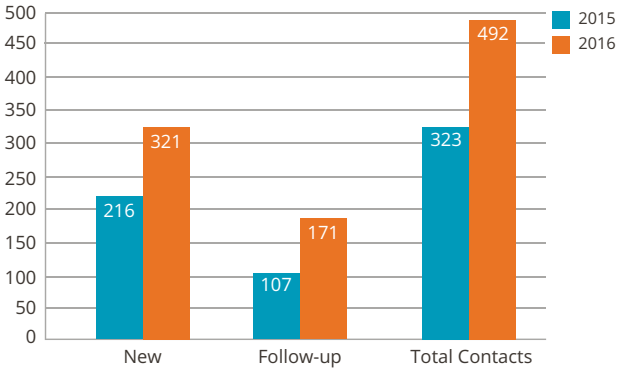
- Parenteral nutrition
- Specialist oral and/or enteral feeding regimens
- Faltering or excessive growth
- Electrolyte/vitamin/mineral abnormalities
- Food allergy/intolerance
- Behaviour related feeding difficulties
- Weaning advice

Clinical Activity

Diabetes service

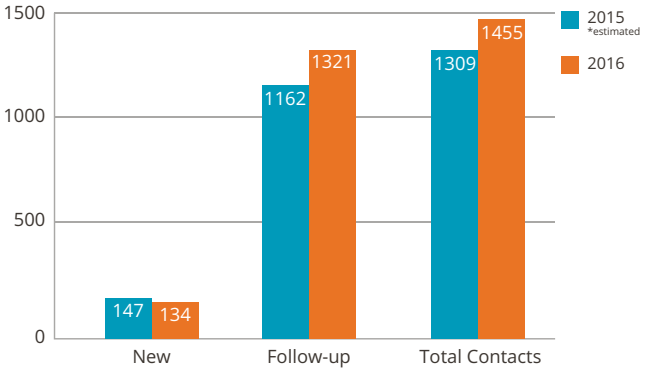


Non-diabetes service



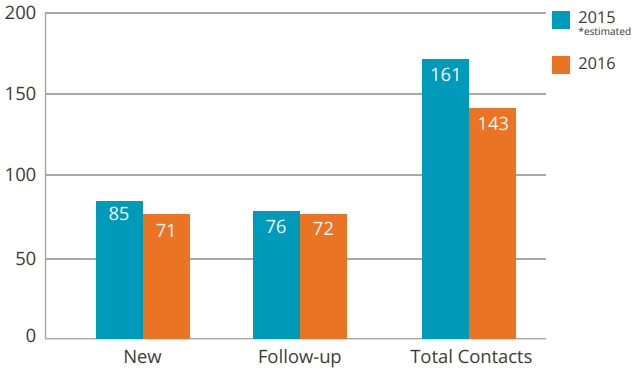
Neonatal/Paediatric Services

Activity for Inpatient Neonatal service



*Clinical activity for 2015 has been extrapolated from 8 months of data to a full year's estimated data as the service only commenced in April 2015

Activity for Outpatient Paediatric service



*Clinical activity for 2015 has been extrapolated from 8 months of data to a full year's estimated data as the service only commenced in April 2015

Successes & Achievements 2016

Enhancing Patient Care

- Adult Service

Increased clinical activity has been noted and is attributed to new dedicated dietetic staffing, service development and quality improvement initiatives.

We have introduced expanded referral criteria for non-diabetes patients. Diabetes referrals have increased with both new (14% increase) and follow-up (423% increase) attendances. Non-diabetes referrals have also increased for both new (49%) and follow-up (60%) attendances. We have noted a significant reduction in non-attendance rates. The GDM pathway provides individualised dietetic follow-up making it compliant with HSE Guidelines for the Management of Pre-gestational and Gestational Diabetes Mellitus (2010).

A new dietetic pathway for women with BMI>35Kg/m^2 has improved compliance with HSE Obesity and pregnancy (2011) guidelines. Two Senior Dietitians now routinely provide intensive education and support to complex diabetes patients, during and between appointments, at the combined obstetric/ endocrinology outpatient clinic.

- Neonatal Service

We now provide routine nutritional monitoring of all infants born <1,500g and/or <32 weeks gestation. We have provided an updated local parenteral nutrition guideline, and have implemented a standardised enteral feeding schedule to establish full oral/enteral feeding. In addition, we provide outpatient follow-up for infants discharged from the Neonatal Unit with nutritional issues. We provide regular training to neonatal medical and nursing staff locally and nationally, as well as undertaking regular audits of practice to evaluate service.

Continuous Training and Development

Service structure has been developed including monthly staff meetings, standard operating procedures, guideline and policy development and clinical activity reporting.

The service actively engages in regular continuous professional development, such as, journal clubs, shared case management, tutoring/training other health professionals and attending short courses.

Innovation

- Introduction of dedicated clinics for diabetes and non-diabetes patients offering flexible appointment scheduling and “walk-in” appointments, resulting in significant reductions in non-attendance rates.
- Introduction of telephone consultations between clinic visits to support complex patients and reduce the burden of hospital visits.
- Implementation of neonatal enteral and parenteral feeding guidelines to improve patient safety and optimise nutritional outcomes.
- Establishing links between the Rotunda, community dietetic services and paediatric centres to help establish more appropriate longer-term follow-up.
- Establishing a new referral recording and clinical activity system to improve accuracy of data collection and audit capability.
- Developing graphics-based educational resources (hyperemesis and gestational diabetes) to improve communication / language barriers.

Challenges 2016

Accommodation for adult service outpatient clinics was limited and hence service expansion was restricted until further accommodation was secured in September 2016. A restricted five-day service from the only national parenteral nutrition compounding company remained in place for the ordering of parenteral nutrition for neonates.

Due to numbers and complexity of infants admitted to the Neonatal Intensive Care Unit, the Neonatal Dietitian prioritised referrals according to their highest nutritional risk.

Plans for 2017

The service has several plans for 2017, which include seeking a formal head of department, complying with clinical practice guidelines on hyperemesis and nausea/vomiting in pregnancy, and implementation of further guidelines on enteral feeding in neonates.


“Staff were brilliant, place was spotless clean couldn’t be happier.”

Medical Social Work Department

Head of Department

Ms. Sinead Devitt, Head Medical Social Worker

Staff

Ms. Pauline Forster, Senior Medical Social Worker
Ms. Susan Finn, Medical Social Worker
Ms. Clare Naughton, Medical Social Worker
Ms. Louise O'Dwyer, Medical Social Worker
Ms. Ruth Power, Medical Social Worker

Service Overview

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

Clinical Activity

Homelessness

Nationally, the homelessness situation deteriorated during 2016 and this had a significant effect on some patients attending the Rotunda Hospital. To identify the unique needs of patients who are homeless and pregnant, the medical social work team carried out a six-month review of women for whom homelessness was an issue. 71 women were identified. For many patients, this involved being discharged to B&Bs or hotel accommodation with a newborn baby. However, many homeless patients did not require medical social work services, just a home.

Child Protection

In 2016, the medical social work team were involved in 167 child protection cases. The main types of concerns where a referral was made or received from Tusla in 2016 were:

Drug Use	56
Underage Pregnancy	38
Domestic Violence	22
Mental Health	15
Previous Children in Care	11
Child Welfare	9
Alcohol Misuse	6
Child Neglect	5
Adoption	2
Learning Difficulty	2
Homelessness	1

Domestic Violence

In 2016, a total of 37 patients disclosed a history of domestic violence at their first antenatal visit. Research shows that women are often asked about experiences of domestic violence 11-12 times before disclosing. Though not all domestic conflicts warrant the involvement of Tusla, in 2016 there were 22 cases where Tusla social workers were involved with families due to domestic violence.

Mental Illness

Of the 10,024 women who booked into the Rotunda Hospital in 2016, 1,638 reported a history of mental illness. A multidisciplinary approach to assessment and support is adopted within the hospital, where the medical social workers, the mental health support midwives and the perinatal psychiatrist work collaboratively to ensure that patients receive appropriate support.

Teenage Pregnancy Clinic

The medical social worker attached to the Teenage Pregnancy Service works closely with the service's specialist midwife in order to provide a holistic and consistent service to all 129 patients booked into the service in 2016. A total of 38 teenagers were referred to Tusla by the medical social worker as they were under the age of consent.

Bereavement Medical Social Worker

A new bereavement medical social worker joined the team in April 2016. She offers a service to parents who experience the loss of a baby through miscarriage, ectopic pregnancy, stillbirth or neonatal death. From April to December 2016, there were 141 pregnancies where the Bereavement Support Team was involved with families.

Fetal Medicine Service

A new Fetal Medicine Service medical social worker joined the team in June 2016. From June 2016 to December 2016, she received over 70 referrals from the Fetal Medicine Service. Working in collaboration with the multidisciplinary team, she provides emotional and practical support, as needed, to patients receiving difficult news.

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.

Substance Misuse

In 2016, the medical social worker attached to the Infectious Disease Service (DOVE) continued to work with the women attending this specialist clinic. There is a known increase in the potential risk for harm and neglect to children whose parents misuse substances. An assessment is made by the medical social worker as to whether there is a need to refer pregnancies to Tusla. While there was a decrease in 2016 of deliveries to substance-using women, there was an increase in the number of complex cases where Tusla was involved (Table 1).

Table 1

Year	2012	2013	2014	2015	2016
Deliveries to Substance using women	81	73	68	62	59
Child Protection Referrals to and from Tusla	64	50	52	52	56
Parent(s) signing baby into voluntary care	6	1	7	3	1
Babies taken into care under a Court Order	4	12	8	7	4
Mothers & babies returned home under supervision of non-drug using relative	17	11	7	8	8

Successes & Achievements 2016

Following the introduction in 2015 of a Child Protection Data Form, the medical social work team commenced gathering information on the number of patients they worked with in conjunction with Tusla. This data will be updated on an annual basis to explore emerging patterns and to plan future service delivery.

The results of an audit on 'The documentation of domestic violence enquiry at antenatal visits and the associated medical social work follow-up' were presented by the Head medical social worker at the Rotunda Biannual Audit and Research Meeting in January 2016.

In 2016, the medical social work service provided to the Fetal Medicine Service was extended from part time cover to full time cover.

Education & Training

The medical social work team attended numerous courses and training days during 2016 to enhance their professional development.

They also provided training within the hospital at the Professional's Bereavement Study Day and to the Specialist Midwifery service sessions for public health nursing students.

Challenges 2016

In 2016, the need to be able to provide comparative data regarding the different services provided by the medical social work department, was identified. The challenge is to put in place systems to capture this data to enhance appropriate service planning. It is envisioned that the introduction of the electronic chart will facilitate this.

A challenge faced by the medical social work team in 2016 was to increase awareness within the hospital of Children First, the legislation and the National Guidelines for the Protection and Welfare of Children.

The large number of patients presenting to the medical social work department with accommodation issues posed an ongoing challenge for the team throughout the year.

Plans for 2017

Medical social workers will deliver an introduction to Children First and the Rotunda's Child Protection Policy at the Rotunda's Corporate Induction programme.

Medical social work will continue to develop plans for the implementation of an awareness programme to roll out the e-learning module for Children First contained on HSELand, in conjunction with the RCSI Hospitals Group Children First Steering Committee. Training needs will be met through e-learning to facilitate the high volume of staff requiring training and will be mandatory following the commencement of the relevant sections of the Children First Act 2015.

Medical social workers attached to the specialist areas will continue to develop systems to capture data relevant to their areas to assist in identifying emerging service needs.

Pharmacy Department

Head of Department
Dr. Brian Cleary, Chief Pharmacist

Staff
Ms. Elena Fernandez, Senior Pharmacist
Ms. Lisa Clooney, Senior Antimicrobial Pharmacist
Ms. Elaine Webb, Pharmacy Technician
Ms. Ann Marie Cassar Flores, NICU Research Pharmacist
Ms. Margaret Donnelly, Pharmacist
Mr. Brian Kehoe, MN-CMS Senior Informatics Pharmacist
Ms. Eavan Higgins, MN-CMS Informatics Pharmacist
Mr. Fergal O'Shaughnessy, PhD Scholar/Research Pharmacist

Service Overview
The Pharmacy Department supports the safe and effective use of medicines for Rotunda patients. The Department has ongoing audit and continuous quality improvement projects, together with collaborative research and medicines information initiatives. Their themes include Medication Safety, Optimal Medication use in Pregnancy/ Lactation, Maternal and Newborn Randomised Controlled Trials, Vaccination in Pregnancy, Antimicrobial Pharmacokinetics, Clinical Informatics and Venous Thromboembolism Prevention.

Along with clinical services, the Department provides specialist medicines supply services, ensuring cost-effective purchasing and supply of medicinal and nutrition products. Pharmacy staff collaborate with multidisciplinary colleagues to optimise medication use processes, utilising advances in health information technology to improve patient safety and remove latent system risks.

Service Activity
The Department provides a full pharmacy service to all clinical areas in the Rotunda Hospital, include adult and neonatal pharmacy requirements.

Successes & Achievements 2016
There were a number of achievements within the field of Medication Safety at the Rotunda Hospital in 2016, across several areas, including:

- The Pharmacy Department led the national design, build and implementation process for medications in the Maternal and New-born Clinical Management System (MN-CMS) which went live in Cork University Maternity Hospital in December 2016
- Approval of the hospital's Medication Safety Strategy which sets out strategic priorities for improvement in the context of medication safety until 2020
- Implementation of a web-based version of "Thrombocalc" (our thromboembolism risk assessment system) to improve accessibility for staff and improve user experience
- Introduction of electronic NICU prescribing and administration monographs
- On-going development and updating of the Rotunda Antimicrobial Guide App, with continued development of antimicrobial consumption surveillance and research on therapeutic drug monitoring in pregnancy, as well as safe neonatal vancomycin administration
- Introduction of electronic access to prescribing information in collaboration with Library and Information Services

Research
The Pharmacy Department won 1st and 2nd prize in the December Research and Audit Day for projects on venous thromboembolism risk assessment and neonatal medication safety.

The Department Hosted a national Influenza in Pregnancy Research Symposium in November in collaboration with the Infection Prevention and Control Department, the Division of Clinical Microbiology and General Practice colleagues to disseminate findings of ongoing research on influenza vaccine uptake and share patient experiences of severe influenza in pregnancy.

The "Thrombocalc" project was accepted for oral presentation at the world's premier obstetric research meeting, the Society for Maternal-Fetal Medicine, and was awarded an Honourable Mention by the US Centres for Disease Control and Prevention, Atlanta, as part of the Global Healthcare-associated VTE Challenge.

A NICU Research Pharmacist was in place from June 2015-July 2016, implementing a daily clinical pharmacy service and an effective multifaceted medication safety bundle targeted at high-risk infusions incorporating:

- Electronic prescribing
- Printed syringe labels
- Standard concentration infusions
- Smart pumps with dose limits

The Pharmacy Department is collaborating with, and providing ongoing support to, a range of maternal and newborn randomised controlled trials on conditions including pre-eclampsia, gestational diabetes, persistent pulmonary hypertension, patent ductus arteriosus and hypotension.

Enhancing Patient Care

A Pharmacy Department-led medication safety project won the First Prize for the Charter Day poster competition, focusing on reducing the risk of wrong route epidural errors in collaboration with Midwifery, Practice Development, Clinical Risk and Anaesthetic staff.

Neonatal and Adult Medication Safety Huddles were implemented providing feedback to frontline staff on medication safety issues identified through the hospital's clinical incident reporting system and dissemination of information on potential risk reduction strategies.

Pharmacy Department participated in a national HSE Quality Improvement Division collaborative on Venous Thromboembolism, sharing experience to date with the "Thrombocalc" project with other Irish Hospitals.

Challenges 2016

The Department faced several challenges this year which included:

- Implementation of the hospital's Medication Safety Strategy and ongoing development of medication safety initiatives
- Expansion of clinical services while minimising costs of medicines
- Maintaining NICU clinical services and quality improvement initiatives after cessation of a NICU Clinical/ Research Pharmacist post
- Establishment of a NICU Clinical Pharmacist role
- Continued development and sharing of Rotunda innovations on thrombosis risk assessment, NICU high risk infusions and medication safety

Plans for 2017

The Department's plans for 2017 include:

- Design, build and go-live of the MN-CMS electronic patient record, due in November 2017
- Preparation for assessment under the HIQA Medication Safety Monitoring Programme

Physiotherapy Department

Head of Department
Ms. Cinny Cusack, Physiotherapy Manager

Staff
Ms. Anne Duignan, Senior Physiotherapist (NICU)
Ms. Brona Fagan, Senior Physiotherapist
Ms. Anna Hamill, Senior Physiotherapist
Ms. Niamh Kenny, Senior Physiotherapist
Ms. Sinead Lennon, Physiotherapist
Ms. Grainne Sheil, Physiotherapist

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

Inpatient postnatal care is focused on mothers who are at risk of pelvic floor dysfunction and all mothers are encouraged to attend postnatal classes in this regard.

The outpatient service provides assessment and treatment of pregnant women with musculoskeletal conditions including pelvic girdle pain. Management of pelvic floor dysfunction includes treating urinary and faecal incontinence, pelvic floor pain, dyspareunia and prolapse management prior to and after gynaecological surgery.

The physiotherapy service in the Neonatal Intensive Care Unit (NICU) provides assessment and analysis of movement patterns and postural dysfunctions to facilitate positioning and handling of the neonate. Discharge planning with parents facilitates transition to outpatient physiotherapy until ongoing care is provided in the community or the baby is discharged from treatment.

Clinical Activity
Antenatal Classes
Health promotion and antenatal education form key components of our women's health service. Preparation for parenthood classes are run in collaboration with the parent education midwifery team. Approximately 20% of first time mothers attend this course of 6 classes. In 2016 a physiotherapy antenatal class was introduced for mothers attending the community midwifery scheme.

Inpatient Physiotherapy

Inpatient Physiotherapy	No. Patients
Prenatal Physiotherapy	88
Postnatal Physiotherapy	7,338
Gynaecology	179
Urinary Retention	42
Babies	45

Outpatient Physiotherapy
Postnatal Classes aim to provide an opportunity for questions, support and advice on pelvic floor muscle recovery and assessment of diastasis of the rectus abdominis muscle (DRAM). Education is given on how to safely return to exercise and fitness, while reducing the risk of back pain and incontinence. Women can self-refer for individualised treatment for pelvic floor dysfunction up to six months post-partum. A total of 307 patients were seen for postnatal classes.

The number of patients treated as outpatients during 2016 with the following conditions were:

Outpatient Conditions	No. Patients
Pelvic Girdle Pain	1,517
Urinary Incontinence	357
Obstetric Anal Sphincter Injuries	165
Prolapse	103
Carpal Tunnel Syndrome	77
Dyspareunia/Pelvic Floor Pain	53
Faecal Incontinence	13

Paediatric Conditions	No. Patients
Plagiocephaly & Torticollis	83
Developmental Delay	64
Talipes and Lower Limb problems	57
Upper Limb	7
Total	246

Successes & Achievements 2016
Enhancing Patient Care
A second promotion of continence clinic commenced in December 2016, led by Dr. Naomi Burke and Ms. Cinny Cusack in addition to the one led by Dr. Mary Holohan. The

aim of these clinics is to provide specialised conservative management to women with urinary incontinence.

Training for pessary management was completed by Ms. Cinny Cusack and is now integrated into the physiotherapy management of prolapse.

Innovation

A multidisciplinary working group, chaired by Ms. Cinny Cusack has been responsible for developing a new evidence-based bariatric care pathway.

Continuous Professional Development (CPD)

The department actively engages 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 courses. These include:

- Myofascial release of the urinary system
- Integrated systems model for women's health
- Neonatal neurodevelopment - positioning and handling
- Assessment and treatment of urinary incontinence
- Advanced women's health course for urinary incontinence and prolapse
- Lacey Assessment of Preterm infants
- Paediatric conference London
- Post graduate MSc in Quality and Safety in Healthcare 2016-18
- Bradford Diploma in Continence 2015-6

Challenges 2016

The department faced several challenges during the year, which included:

- Staffing and inadequate departmental facilities to meet the year-on-year increase in referrals to the outpatient service
- Physiotherapy, in collaboration with the practice development coordinator, have worked hard to address the deficit in service provision in the absence of a bladder care nurse specialist post

Plans for 2017

The department has several plans for 2017.

- Plans are in place to relocate physiotherapy to a new modular build in the grounds of the hospital. This will provide an additional treatment room
- Validation of the Lacey Assessment of Preterm Infant (LAPI) tool by auditing physiotherapy outcomes against NICU neonatal outcomes at the end of first year of data collection
- Implementation of bariatric care pathway
- Joint initiative with practice development coordinator to train clinical staff to use the bladder scanner as part -of the clinical pathway for management of urinary retention
- Pathway for management of urinary retention

Quality and Safety Services

Quality and Patient Safety Department

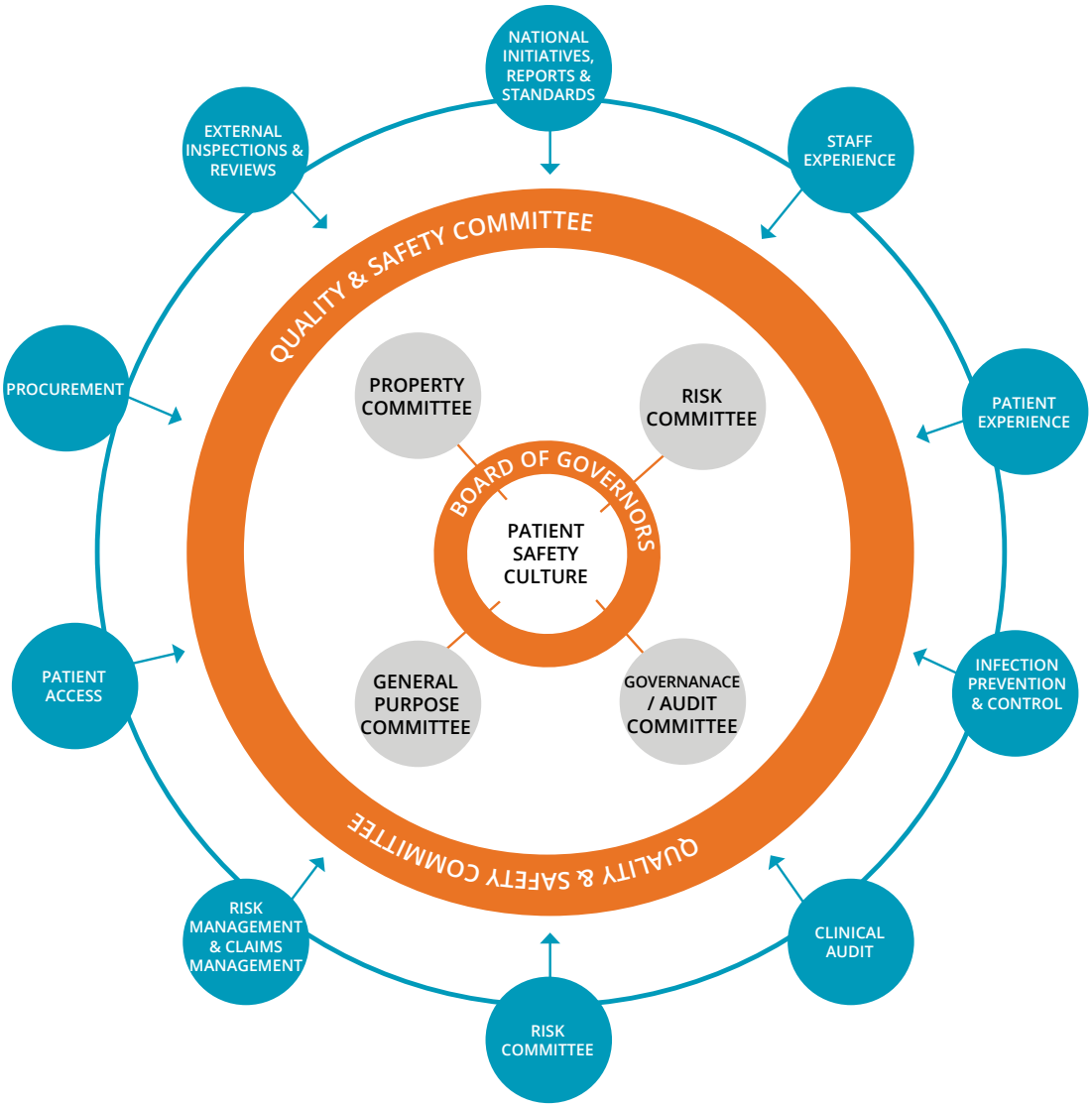
Head of Department

Ms. Sheila Breen, Quality and Patient Safety Manager

Staff

Ms. June Molloy, FOI Internal Appeals Officer
Ms. Leanne Kiernan, Information Administrator
Ms. Emma O'Mahoney, Information Administrator
Ms. Mariam Rachvelishvili, Information Administrator
Ms. Lynn Richardson, Information Administrator
Mr. Sean Cassidy, Clerical Officer

Organisational Structure Quality & Patient Safety Management



The Rotunda promotes a culture of patient safety and quality of service in all areas. There is constant monitoring, review and development of services and customer interactions. Reports from these reviews and monitoring are presented at the monthly Quality and Patient Safety Committee which is chaired by the Master. The Committee expects to be advised of action plans developed to address any issues identified.

The Quality and Patient Safety Manager ensures a coordinated approach to patient improvement initiatives and the implementation of recommendations emanating internally or agreed nationally. The Rotunda Hospital is the data controller for patient and staff information and all requests for release of such information is managed in compliance with statutory and legislative frameworks.

Customer Feedback

Feedback is an important means by which the hospital gains awareness of the needs of patients and allows the hospital to be held accountable to our patients. The Rotunda Hospital encourages and facilitates patients and service users to provide feedback and comments on the service they receive in all areas of care. A summary of the patient experience is reported monthly to the Quality and Patient Safety Committee. Feedback forms for service users are available throughout the organisation. In addition, a record of letters, emails and 'thank you' cards received are collated and reviewed monthly.

Activity

Meetings

The Service User Forum met once during 2016. An additional meeting was held with service users and their representatives to discuss the requirements from patients' perspectives for the proposed new Rotunda Hospital development on the Connolly Hospital campus, as part of the Design Brief development process.

An inpatient Patient Experience Survey was undertaken over a three-week period commencing in June 2016. An 'Improving the Patient Experience' training programme was rolled out during 2016.

Successes & Achievements 2016

Of the 1,084 items of feedback logged in 2016, there were 1,065 positive comments and 19 negative comments, or opportunities for improvement identified, which is an outstanding reflection on the standard of care provided at the hospital.

Challenges 2016

Despite the high number of positive comments and feedback that the Hospital has received over the last year, there has been a 43% increase in the number of complaints received in comparison to 2015, which presents a challenge for the Hospital. Complaints are received verbally, in hard copy and electronically. Details regarding these complaints are summarised in the table below.

	2015	2016
Complaints received	86	123
• Written	67	104
• Verbal	19	19
Complaints closed	87	124
• % closed within 30 days of receipt	(95%)	(94%)

Both the increase in the overall number of complaints received and the frequency of issues relating to communication and information identified in the complaints is a matter of ongoing review and monitoring.

Freedom of Information and Data Protection

In 2016 the hospital responded to Freedom of Information, Routine Access, General and Data Protection Requests as per the following table:

	2016
FOI Requests - Total FOI requests received	288
Number personal requests	250
Number non-personal requests	38
Routine Access Requests -Number of requests received	944
General Requests - Number of requests received	233
Data Protection Requests - Number of requests received	25

Plans for 2017

A project on improving communication and information flow will commence in early 2017 and will focus on the front of house services (Reception, Admissions, Security and the Assessment & Emergency Unit).

The Rotunda Hospital will work with the HSE and Cerner to ensure the introduction of the new MN-CMS will protect patient and staff data in compliance with regulations.

The introduction of the General Data Protection Regulations 2018 will require the Hospital to review its current system

of data protection against the new requirements and implement plans to address and deficiencies. This work will be undertaken in 2017.

Successes & Achievements 2016

Maternity Hospital of the Year 2016

The Rotunda received this award at the Irish Healthcare Centre Awards ceremony held in March 2016. Our submission detailed a number of new initiatives and success stories, such as the new outpatient hysteroscopy service at the Connolly Hospital campus, the 10th anniversary of our community midwifery service, study of the first 100 in-utero laser ablation therapy procedures for twin to twin transfusion, along with the introduction of neonatal palliative care and developmental physiotherapy in the Neonatal Intensive Care Unit.

Improving the Patient Experience

The multimedia training programme on Improving the Patient Experience was launched in August 2016. The principle of this training is that every positive employee interaction will create an overall positive experience when engaging with our patients, their family members and visitors. The programme will be added as a new module to the staff induction programme.

Advanced Midwife Practitioner (AMP)

Ms. Bernadette Gregg registered in March 2016 as the first Advanced Midwife Practitioner in Emergency Medicine in Ireland, following completion of her Master's Degree in Advanced Practice and a successful site visit in February 2016. This role will help provide a timely and safe service for women accessing the hospital through our Assessment and Emergency Unit, thus enhancing the patient experience while developing a clinical career pathway for experienced midwives.

Health & Well-being

Staff Wellness Days took place over three consecutive days in September 2016 to support wellness and fitness across the entire Rotunda workforce. The event included talks relating to nutrition and fitness, building resilience, personal wellbeing and relaxation techniques.

Research Awards

Research from the Rotunda Hospital and Perinatal Ireland was honoured at the world's most prestigious obstetric research meeting, the Society for Maternal Fetal Medicine (SMFM) annual clinical meeting in the USA. Dr. Daniel Galvin was awarded the Best Oral Research Presentation on the Perinatal Ireland multicentre GENESIS study, which investigated methods of predicting in advance which women will have a straightforward normal vaginal delivery or which will have a complicated labour.

Also at the SMFM meeting, Dr. Karen Flood was honoured by the American Journal of Obstetrics and Gynecology. Her research on "The role of brain sparing in the prediction of adverse outcomes in intrauterine growth restriction: results of the multicentre PORTO Study" was selected as one of the most cited papers in the last several years.

The Rotunda received an 'Honourable Mention' by the US Centres for Disease Control and Prevention (CDC) for its electronic tool, "Thrombocalc", which helps to identify women who are at risk of pregnancy associated blood clots. The award was in recognition of the innovative and unique approach to the prevention of blood clots in such a special population and setting. The Rotunda was the only hospital or medical facility outside of the United States to have been recognised in this regard by the CDC.

eHealth Advanced Certificate for General Electronic Referrals

The Rotunda was awarded this certificate from the HSE in recognition of our successful achievement in rolling out phase one of the National eReferral programme. This facilitates the consistent, complete and accurate transfer of patient referral data, between GPs and the hospital, mitigates against risks relating to handwriting and provides an opportunity to improve communication with GPs.

Health Management Institute (HMI) Leaders Awards

A Rotunda project, led by Ms. Siobhan Enright, Haemovigilance Officer, was selected to represent the Dublin North East region at the national Health Management Institute Leaders Awards ceremony in June 2016. The project was titled "Neonatal Transfusions: Protecting our most vulnerable patients".

National Standards for Safer Better Maternity Services

New National Maternity Standards were launched by the Minister for Health in December 2016. The structure and layout is similar to the original HIQA National Standards for Safer Better Healthcare. A self-assessment against these new standards will commence in early 2017 when multidisciplinary teams will be established to identify evidence of compliance, to rate our level of quality and to outline quality improvement plans (QIPs) required to increase our overall compliance.

National Standards for Bereavement Care Following Pregnancy Loss and Perinatal Death

These new national standards were launched in August 2016 following an extensive consultation process. The standards were reviewed by a multidisciplinary team to assess our compliance. Opportunities for improvement were identified as necessary. A national implementation team has been appointed to oversee their implementation nationally and they are due to visit the Rotunda in early 2017.

General Data Protection Regulation (GDPR)

This EU Regulation was published in May 2016, with full compliance being required by May 2018. There are many concepts in the GDPR that reflect current law. However, some requirements, such as the appointment of a Data Protection Officer, are new and the requirements will impose new and additional obligations on us. Preparatory work will commence in early 2017.

Publication Scheme (FOI Act 2014)

Under the Freedom of Information Act, we are required to publish information in an open and accessible manner on a routine basis outside of FOI, having regard to the principles of openness, transparency and accountability. We began publication of relevant data on our website in April 2016.

Laboratory Accreditation - INAB

This annual laboratory accreditation inspection took place in April 2016. The assessors were unanimous in complimenting the Rotunda for being a very collegiate work environment and in observing that clinical and laboratory staff work together in a very patient-focused way.

Open Disclosure Audit

The Rotunda was one of four sites nationally to be audited by the Quality Assurance and Verification. Division of the HSE on the implementation of open disclosure by reviewing the healthcare records of patients who had consented to the review of their records. The auditors reviewed hospital leadership and commitment, level and extent of staff training and an examination of a sample of safety incidents to determine if there is evidence of open disclosure. The audit was undertaken in December 2016, with the report being positive and complimentary of the leadership, governance and commitment to implementing open disclosure at the Rotunda.

Nursing and Midwifery Board of Ireland (NMBI) Inspection

This inspection to assess and re-accredit the Rotunda from a midwifery training perspective is scheduled for January 2017. A self-assessment was completed prior to the site visit and submitted to NMBI in September 2016.

Infection Prevention and Control Department

Head of Department

Dr. Richard Drew, Consultant Microbiologist

Staff

Ms. Anu Binu, Infection Control Midwife
Ms. Marian Brennan, Infection Control Midwife
Ms. Alva Fitzgibbon, Infection Control Midwife

Service Overview

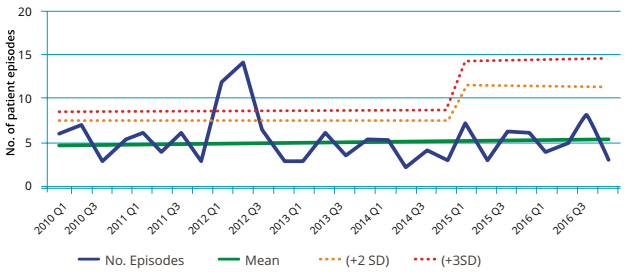
An annual Infection Prevention & Control plan which is submitted to the Infection Prevention and Control (IPC) Committee at the start of the year and progress is discussed at each meeting. A representative of the IPC team is on various hospital committees such as Quality and Patient Safety, Drugs and Therapeutics as well as the Medical Board. The Infection Prevention and Control Committee is chaired by the Master, Professor Fergal Malone, and the IPC team also meet weekly to deal with more immediate IPC issues. The purpose of the service plan is to highlight key areas in which the hospital can focus to improve patient care. This incorporates areas such as infection surveillance, decontamination of patient equipment and monitoring key performance indicators. Infection outbreaks and other significant events are reviewed at this group also.

Department Activity

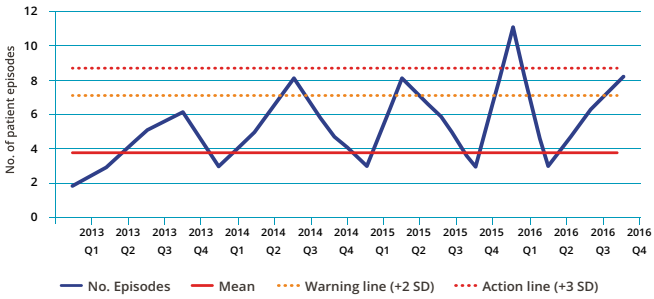
Surveillance

The IPC team provides ongoing surveillance of key infection-related issues such as maternal bacteraemia and multi-drug resistant organisms. Maternal bacteraemia rates were within expected limits and there was an overall downward trend in blood culture contamination. There was a concerning rise in extended spectrum beta-lactamases (ESBLs) in adult patients, which mirrors a rise that is occurring in the general population. Resistance to erythromycin is also increasing in Group B Streptococcal isolates which has implications for patients with penicillin allergy who develop genital tract sepsis.

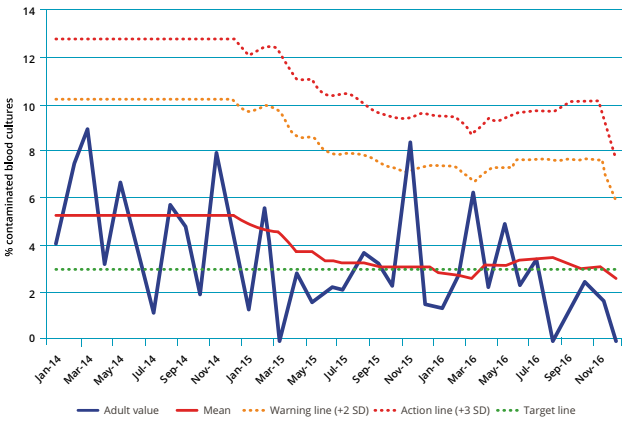
Clinically significant obstetric positive blood cultures



Clincally significant neonatal positive blood cultures



Adult contaminant percentage blood cultures



Monitoring

Internal audits are carried out in relation to hand hygiene and also other IPC-related issues, such as waste management and cleanliness across the hospital. Decontamination audits are performed by a member of the IPC team. Electronic devices were purchased to help local staff to perform their own audits and ensure that results can be generated in an efficient manner to facilitate dissemination of information.

Food hygiene testing is performed in line with National Regulations and these results are submitted to the catering manager. The Environmental Health Officer is also informed of major issues should they arise. Water quality and Legionella testing is done with the Facilities Management Department and action taken as appropriate.

Successes & Achievements 2016

Education & Training

- Regular hand hygiene audits and decontamination audits
- Teaching on the Rotunda Hospital Obstetric Emergency Training (RHOET) course
- Supporting implementation of the sepsis screening tool for gynaecology patients
- Teaching on the Critical Care Service Midwifery training course

Research

The Department has had several publications around the area of rapid molecular diagnostics and the management of outbreaks in neonatal intensive care units.

Enhancing Patient Care

The Infection Prevention and Control Department has introduced several multidisciplinary pathways which have aimed to improve patient care. Examples of these are the intrapartum fever pathway, breast abscess pathway, and also the recurrent vulvovaginal thrush pathway. A caesarean delivery surveillance programme has also continued during the year.

Challenges 2016

There were two infection outbreaks in the Neonatal Intensive Care Unit during the year, one with extended-spectrum beta-lactamase (EBSL) producing Klebsiella and the second with a gentamicin resistant E. coli bacterium.

Plans for 2017

The primary areas which the IPC team hope to focus on for 2017 include:

- Improved infection control in the NICU
- Improving rational antimicrobial use, especially of restricted antimicrobials
- Standardised management of preterm premature rupture of the membranes
- Improving antenatal screening for infectious diseases, particularly maternal colonisation with Group B streptococcus
- Infection control practices around caesarean delivery

Clinical Risk Department

Head of Department
Ms. Louise Cleary, Clinical Risk Manager

Staff
Ms. Michelle McTernan, Clinical Risk Advisor
Ms. Fiona Walsh, Clinical Risk Midwife
Ms. Lisa Pugh, Clinical Risk Administrator

Service Overview
The Clinical Risk Department is responsible for the ongoing development of a comprehensive clinical risk management programme across the hospital including risk identification, analysis and support in incident investigation and reviews. The Department maintains the clinical incident management system, notifies insurers of reported incidents, produces trend reports and provides feedback to other departments and committees in respect of incident trends.

Claims management is also a key function within the department and the risk management team is the key point of contact for the hospitals solicitors as well as the Clinical Indemnity Scheme (CIS) in this regard. The clinical risk and claims team also analyse claims data for learning to be implemented within the hospital.

Departmental Activity
During the year, there was close liaison and participation with the RCSI Hospitals Group with the development of the RCSI Hospitals Group Maternal and Child Health Senior Incident Management Forum (SIMF).

Additionally, a weekly Initial Incident Review Meeting was implemented, chaired by a senior consultant obstetrician gynaecologist, and Assistant Director of Midwifery, together with the Clinical Risk Manager. In the meetings, all identified Serious Incidents (SIs) and Serious Reportable Events (SREs) are discussed, before making recommendations to the Executive Management Team.

Successes & Achievements 2016
Education & Training
Learning from selected clinical cases continued to be shared through Clinical Risk staff training sessions and departmental patient safety meetings throughout the year.

Innovation
During the year, a dedicated departmental database was created to integrate all clinical incident and risk occurrences. This serves as a method of tracking the actions put in place regarding each incident form received by the department. It enables significant issues, risks and trends relating to clinical care to be identified. The information can then be directed back to specific departments so that staff and managers can work together to improve care for all patients of the Rotunda Hospital.

Quality Initiatives
Various recommendations for improvement, or indeed acknowledgement of the need for on-going effort in various training initiatives, were made throughout 2016. These initiatives continue to be strongly supported by the Hospital's Practice Development Unit. The following are examples of quality initiatives introduced in 2016:

- Training needs in fetal monitoring and use of oxytocin were identified following a number of clinical case reviews completed in 2016 and specific measures for education, support and monitoring were put in place as a result
- A falls guideline was implemented with the aid of the Practice Development Unit and Clinical Risk Department to reduce the incidents of reported falls
- Various audits were also recommended and conducted in 2016, triggered by reported trends identified from the clinical occurrence forms

Challenges 2016
Challenges encountered in 2016 included:

- The continued identification and reduction of risk within the hospital organisation as clinical volume and patient complexity increased
- Completion of Systems Analysis Reviews within the recommenced HSE time frame. The workload on Clinical Risk Department staff, as well as on clinical staff members of the hospital who perform these reviews, is very significant and will require additional resources to continue to deliver such reviews in a timely manner

Plans for 2017

The Department has a number of development plans for 2017, which include:

- Improvements to the patient handover process
- Development of an abdominal palpation masterclass in cooperation with Assistant Directors of Midwifery and the Practice Development Unit to standardise abdominal palpation and recognition of "small for dates" clinical features
- Continued dissemination of education efforts on "learning from incidents reported" to the wider hospital community

“I can’t thank the staff during my labour enough they were so helpful and caring”

Health and Safety Department

Head of Department

Mr. Les Corbett, Health and Safety Manager

Service Overview

The Rotunda Hospital is committed to ensuring full compliance with the Health, Safety and Welfare Act, 2005 within a busy healthcare environment. The Rotunda Health and Safety Statement is updated annually and is linked to the HSE Corporate Safety Statement. The facilities of the Rotunda Hospital are routinely examined and changes are implemented if necessary. Despite the age of the building, such changes have ensured that stringent health and safety standards are observed while continuing to develop a safer environment for all hospital end-users.

Departmental Activity

Health & Safety Committee

The Health and Safety Committee members inspected seven work areas during the year, and provided managers with an inspection report documenting follow-up recommendations. Three new Health and Safety Committee members were elected.

Two unannounced inspections were conducted by Health and Safety Authority Inspectors who met with key hospital committee members and information was satisfactorily supplied.

Work continued on the integration of the Health and Safety Authority (HSA) five-year plan and the HSA Safety & Health Audit for the Healthcare Sector which is being undertaken with selected Health and Safety Committee members and stakeholders.

Fire Prevention

Fire drills were conducted in all hospital areas twice during the year.

Following two fire audits conducted by an external fire consultant, recommendations for improvement were made and implemented.

Fire alarm testing (to check alarms and fire doors) was conducted on a weekly basis.

A fire register was updated and uploaded to the Hospital Intranet.

The Dublin Fire Brigade Pre-Plan Survey was completed and follow-up actions were implemented.

Security

Monthly meetings were held with Noonan Security Hospital Group Manager to ensure the provision of a quality service.

Incident Investigation

Staff are encouraged to report any incident that has caused, or has the potential to cause, a health and safety problem. During 2016, 98 incidents were investigated, many of which resulted in improvements to health, safety and security systems in order to prevent or manage hazards identified. All incidents were discussed at the Health and Safety Committee and the Quality and Patient Safety Committee meetings. Ten incidents were reported to the Health and Safety Authority.

Chemicals

Two Dangerous Goods Safety Adviser (DGSA) audits were conducted by an external agency, DCM Compliance, which identified some areas requiring corrective action. This was reported to the Health and Safety Committee and the Quality and Patient Safety Committee. The SafeDoc chemical management risk assessment database is continually being updated on the Hospital Intranet and the medical gas e-learning course for nurses/midwives and porters is now registered on Q-Pulse.

Successes & Achievements 2016

There were several successes/achievements for the Hospital within the area of health and safety in 2016 including:

- Two training sessions were conducted for hospital fire wardens including 10 scheduled days of Fire Awareness Training. There was also E-learning Medical Gas Training for front line staff and additional Fire Awareness Training, Medical Gas Training and other relevant health and safety training events
- The hospital's Dangerous Goods Safety Adviser (DGSA) provided four on-site training sessions and an external agency, DCM Compliance, provided a further one day of in-house training

Innovation

- CCTV and access control systems were expanded and upgraded following audits.
- In response to 84 ergonomic workplace assessments, changes have been made to work stations, and the Hospital has provided ergonomic equipment as required. Two sit-stand workstations were evaluated to assist users in postural changes and assist users following rehabilitation.

Challenges 2016

The Department faced challenges throughout the year, which included:

- Managing the impact of ongoing Luas works on Hospital operations
- Managing server issues with the emergency paging system

Plans for 2017

The Department plans for 2017 include:

- Campus wide fire management risk assessment to be conducted
- Upgrade to emergency paging server system
- Revision of traffic management for front car park to take into account Luas commencement

Clinical Audit Department

Head of Department
Dr. Sharon Cooley, Consultant Obstetrician Gynaecologist

Staff
Ms. Mary Whelan, Clinical Audit Facilitator
Dr. Valerie Jackson, Clinical Audit & Surveillance Scientist
Mr. Colin Kirkham, Research Officer

Service Overview
The Rotunda Hospital Clinical Audit Department was established in June 2011 and has developed significantly since then to support a structured approach to evaluating and measuring our care processes against local, national and international standards.

Departmental 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 of the Clinical Audit Department. The Department provides a forum for the sharing and dissemination of clinical audit work in the Hospital, which is facilitated by the use of the clinical audit database, the bi-annual Rotunda Hospital Audit and Research Day, and quarterly audit results meetings.

Successes & Achievements 2016
Enhancing Patient Care
Register of Clinical Audit
In total, 67 clinical audits were registered in 2016 (46 first audits, 15 re-audits, 1 baseline audit and 5 continuous audits).

Clinical Audit Group weekly meeting
The core group within the Clinical Audit Department continues to meet on a weekly basis to discuss and approve audit applications. All reports and action plans received are also reviewed at this time.

Clinical Audit Steering Group
The Clinical Audit Steering Group meets on a quarterly basis.

Education & Training
The clinical audit team regularly delivers in-house educational sessions on the clinical audit cycle across all disciplines. Nine information sessions were held in 2016. A total of 71 staff members attended, with representatives from all clinical areas. In addition, 2 external workshops in the Centre for Midwifery Education (CME) were delivered for Advanced Midwife Practitioner, Advanced Nurse Practitioner, Clinical Midwife Specialist, and Clinical Nurse Specialist post holders.

Several audits were presented at national meetings in 2016, which included:

Communication when there is a stillbirth: Ms. Patricia Butler CMS, 35TH Annual International Nursing and Midwifery Research and Education Conference, RCSI, March 2016.

Cold Coagulation therapy: Ms. Adrienne Wyse and Dr. Paul Byrne, Cervical Check Colposcopy Forum December 2016. This audit was awarded first prize at the Institute of Obstetricians and Gynaecologists JOGS meeting in 2016.

Magnesium Sulphate administration for severe pre-eclampsia in HDU: Dr. Nada Warreth, Institute of Obstetrics and Gynaecology JOGS meeting in October 2016.

Pre-implementation audit of sepsis screening forms: Dr. Ita Shanahan and Dr. Sahar Ahmed, Institute of Obstetricians and Gynaecologists JOGS meeting October 2016.

Innovation
Revamp of the Clinical Audit Calendar
In 2016, hospital audit calendar was revamped as a proposed programme of clinical audit. The document will be easier to read and more concise then before, with each speciality outlining audits and re-audits they hope to carry out in the year ahead. The document will be sent to the Executive Management Team and also made available on the Hospital Intranet.

Increased access to clinical audit personnel
Funding was secured to purchase additional computer equipment for use by the clinical audit staff. This will facilitate meeting audit leads at times and locations convenient to them to review or finalise audit documentation. It is hoped this will improve engagement and audit turnaround times, thereby enhancing service user satisfaction with the clinical audit process as a whole and audit throughput.

Challenges 2016

Dissemination of findings

Ensuring clinical audit findings are disseminated throughout the organisation is an ongoing challenge. The Biannual Audit & Research Meeting, the Quarterly Results Meetings and email are invaluable in this regard. However, the Department acknowledges there may still be small groups of staff who cannot attend these meetings or do not regularly access email.

Plans for 2017

Networking and Leadership

The Department will continue to forge and develop links with audit peers on a national and international level through the newly initiated national clinical audit network.

In addition, the Department will continue to progress plans to develop a national maternity clinical audit hub in the Rotunda by creating a central repository of audits/topics with a view to identifying regional and national priorities and supporting local audit activity in smaller units.

Audit and the MN-CMS

The introduction of the MN-CMS electronic patient record will make audit data collection easier and more accurate. Members of the Department hope to receive advanced training in data extraction techniques from the MN-CMS system.

Biannual eZine Newsletter

An eZine newsletter is being considered to disseminate audit projects to all members of staff.

Satisfaction survey of service users

The Department hopes to conduct a satisfaction survey of service users to determine how they found the clinical audit process as a whole.

Clinical Audit workshops

A clinical audit workshop for Advanced Midwife Practitioners and Clinical Midwife/Nurse Specialists in conjunction with the Centre for Midwifery Education is planned.


Academia

Department of Research

Head of Department

Dr. Joanna Griffin, Director of Research and Academic Affairs

Staff

Dr. Elizabeth Tully, National Research Network Manager
Mr. Colin Kirkham, Research Officer
Ms. Jessica Colby Milley, Research Manager
Mr. Cormac McAdam, Communications Manager
Ms. Fiona Cody, Senior Research Sonographer
Ms. Lisa McSweeney, Senior Research Coordinator
Ms. Rachel McDermott, Research Assistant
Mr. Liam Dwyer, Research Assistant
Ms. Fiona Brady, Research Coordinator
Ms. Meadhbh Aine O'Flaherty, Research and Development Coordinator

Service Overview

The Rotunda Hospital Board has taken the key strategic step of providing seed financial and administrative support for a new Department of Research, which is tasked with collaborating with our major academic partner, the Royal College of Surgeons in Ireland, together with other partners to optimise the research output and profile of the Rotunda Hospital. Led by Dr. Joanna Griffin, 2016 has been a tremendously successful year for the Department with a number of new innovations and key strategic partnerships being developed.

Successes & Achievements 2016

Research Communications

The Research Department implemented a new communications strategy in 2016 to further disseminate the research output of the Hospital. The communications strategy involved optimising press coverage for the Rotunda Hospital's research outputs and events, as well as publicising research on social media platforms.

Events such as the Rotunda Hospital Research Day, World Thrombosis Day, the Influenza in Pregnancy Symposium, and World Prematurity Day provided a launching pad for "bursts" of traditional and social media activity. The Department succeeded in engaging patients, the public, healthcare professionals, students and policymakers, both online, in media and in person.

The Rotunda Hospital Twitter Account, moderated by the Research Department has steadily increased in followers and engagements over 2016. The Rotunda has seen an increase in staff presence, and confidence, on Twitter, resulting in the beginnings of a strong and dedicated online community surrounding the Hospital and its services and research.

The Research Department has also had success this year in publicizing Rotunda Hospital research in the traditional media, including a number of stories in national newspapers, and appearances on national broadcast media. This coverage has been inspired by the events and activities hosted in the Hospital that showcase the Department's research, and has been supported by social media follow-up.

Research Business Development Unit

In 2016, the Research Department established the Research Business Development Unit. The aim of the business unit is to diversify and increase research funding and resources for the Rotunda's key research themes by developing external partnerships with industry and other commercial organizations.

Medical Devices

The Business Development Unit has supported the validation and commercialisation process for a novel cord blood collection device invented by the Rotunda's Health and Safety Manager, Mr. Les Corbett. In November 2016, a patent was filed for the device and the regulatory pathway required to bring the device to market has been initiated. This project has allowed the Business Development Unit to map out the necessary steps from conceptualization to market readiness for Class I medical devices.

Technology Partnerships

In collaboration with our major academic partner, the Royal College of Surgeons in Ireland (RCSI), the Rotunda has been working with the leading Information and Communication Technology Company, Huawei, to collaborate in research and innovation in the area of mobile health (M-Health) opportunities. The Department has been working to combine our expertise to identify unmet needs and areas for improvement in maternal and newborn care, which could be addressed using information and communication technologies, "Big Data", and remote patient monitoring.

Natera SMART study

Natera is a leading, worldwide genetic testing and diagnostics company specializing in Non-Invasive Prenatal Testing (NIPT) for genetic disorders. The Natera-sponsored SMART study (SNP-based Microdeletions and Aneuploidy Registry) is a post-market study that aims to further evaluate the performance of a non-invasive prenatal screening test for fetal abnormalities. The SMART study was initiated at the

Rotunda in June 2016 and over 900 patients were recruited in 2016. This partnership has allowed the Rotunda to play an active role in the evaluation of new screening tests that are commonly used in obstetrics.

Rotunda Research Events

The Research Department held its inaugural Rotunda Research day in June 2016. An App for assessing the risk of thrombosis in pregnant women, how to predict the need for an emergency caesarean delivery using simple maternal and fetal measurements, and how to screen more efficiently for Group B Streptococcus in pregnancy were some of the exciting and innovative projects presented at the Rotunda Hospital Research Day in June 2016.

In October 2016, the Research Department contributed to the development of 'Thrombosis Risk in Pregnancy: What You Need to Know', a new patient information programme, developed by researchers in the Rotunda and introducing the world-class thrombosis research ongoing in the Rotunda Hospital and its partner institutions.

To launch the new programme and to celebrate World Thrombosis Day 2016, the Rotunda Hospital hosted a Patient Information and Academic Conference on Thursday October 13th, 2016.

The aim of the conference was to raise awareness of thrombosis and its risks, both in obstetrics and oncology, and to showcase some of the current thrombosis research in Ireland.

Research Ethics Committee

The Department plays an important role in assisting the hospital Research Ethics Committee in both an advisory and administrative capacity. In 2016, a total of 24 applications were reviewed by the hospital's Research Ethics Committee and the Research Advisory group reviewed 28 additional applications.

Challenges 2016

Challenges encountered in 2016 included:

- Ongoing challenge of maintaining and growing diverse funding streams
- Utilising limited space efficiently to accommodate the growing Department
- Establishing new and effective communication channels with staff, press, industry and the public

Plans for 2017

Plans for 2017 include:

- Redeveloping and updating the rotunda.ie website, along with the Rotunda Intranet
- Developing the new Rotunda Innovation Hub, and marking the launch with an Innovation Day and Workshop
- Launching and coordinating a series of new major, multi-centre, national trials

Royal College of Surgeons in Ireland Department of Obstetrics and Gynaecology

Head of Department

Professor Fergal Malone, Professor & Chairman

Staff

Professor Fionnuala Breathnach, Associate Professor
Professor Paul Byrne, Honorary Clinical Professor
Professor Sam Coulter-Smith, Honorary Clinical Professor
Dr. Bridgette Byrne, Senior Lecturer
Dr. Karen Flood, Senior Lecturer
Dr. Ronan Gleeson, Senior Lecturer
Dr. Carmen Regan, Senior Lecturer
Dr. Carole Barry, Honorary Senior Lecturer
Dr. Jennifer Donnelly, Honorary Senior Lecturer
Dr. Edgar Mocanu, Honorary Senior Lecturer
Dr. Hassan Rajab, Honorary Senior Lecturer
Dr. Hala Abu Subeih, Maternal Fetal Medicine Subspecialty Fellow
Dr. Ann McHugh, Specialist Registrar / Tutor
Dr. Cathy Monteith, Specialist Registrar / Tutor
Dr. Siglinde Muellers, Specialist Registrar / Tutor
Dr. Niamh Murphy, Specialist Registrar / Tutor
Ms. Claire O'Rourke, Midwife Sonographer
Ms. Ann Fleming, Midwife Sonographer
Dr. Elizabeth Tully, National Research Network Manager
Dr. Fiona Brady, Research Coordinator
Ms. Jessica Colby-Milley, Research Coordinator
Ms. Fiona Cody, Research Sonographer
Dr. Patrick Dicker, Epidemiologist / Statistician
Mr. Liam Dwyer, Research Coordinator
Mr. Cormac McAdam, Research Communications Officer
Ms. Rachel McDermott, Research Assistant
Ms. Grainne McSorley, Research Nurse
Ms. Meadhbh Aine O'Flaherty, Research and Development Coordinator
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 academic year, a total of 4,049 fetal ultrasound examinations were performed at the Centre. A marked decline in first trimester screening using nuchal translucency, in favour of a significant increase in demand for early non-invasive prenatal testing (NIPT) risk assessment, has continued as the efficiency of NIPT becomes more popular.

Teaching

183 medical students participated in the RCSI Obstetrics & Gynaecology core seven-week clinical teaching rotations. The RCSI Department of Obstetrics and Gynaecology has a leadership role in providing teaching and assessment for undergraduates at the Rotunda Hospital, National Maternity Hospital, Our Lady of Lourdes Hospital Drogheda, Midland Regional Hospital Mullingar, St. Luke's Hospital Kilkenny, and Waterford Regional 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 participated in a novel programme to train Physician Associates, under the direction of the RCSI School of Medicine. This programme trains a new type of medical support staff, who work as a member of a medical team under the supervision of a doctor in a range of support roles for various clinical practices.

Research

1) Perinatal Ireland

Perinatal Ireland is a multi-centre, all-Ireland research consortium focused on carrying out research into women's and children's health. The consortium, which was the first Health Research Board (HRB) funded obstetric network in the country, links the seven-major academic obstetric hospitals across the island of Ireland as well as representatives of all seven medical schools on the island of Ireland. The network is headquartered at the RCSI Department of Obstetrics & Gynaecology at the Rotunda Hospital and is an international leader in obstetric and paediatric research.

In 2016 the results of both the TEST and Genesis studies were presented to international and national audiences to significant acclaim and further dissemination of these research studies is ongoing. The TEST study was a pilot project evaluating the feasibility of randomising patients in the first trimester to aspirin or placebo to reduce the incidence of pre-eclampsia, with decisions being taken based on first trimester multi-marker risk assessment. The Genesis study evaluated a range of obstetric predictors for difficult vaginal delivery. Both studies will now be followed by formal randomised clinical trials.

2) HRB Mother and Baby Clinical Trial Network Ireland

In 2014, RCSI was joint recipient (together with University College Cork) of a HRB Clinical Trials Network Grant of €2.5 million to fund a five-year programme of clinical trials in the perinatal area. The HRB Mother and Baby Clinical Trials Network Ireland (HRB MB-CTNI) is a unique partnership between two successful research entities, Perinatal Ireland and the INFANT centre in Cork, further solidifying the existing collaboration and partnership between the seven largest academic obstetrics units on the island.

In 2016, the following trials were conducted by the network:

PARROT - This is a multi-centre stepped wedge randomised trial of a point-of-care device to measure plasma PIGF (Placenta Growth Factor) in women with suspected pre-eclampsia prior to 37 weeks' gestation.

TEST – This is a pilot study to assess the effectiveness of aspirin for low risk women in their first pregnancy versus women who were prescribed aspirin on the basis of a positive early pregnancy screening test for pre-eclampsia and fetal growth restriction.

MINT – This is a pilot study assessing the role of milrinone therapy in treating newborn infants with persistent pulmonary hypertension (PPHN).

IRELAND – This is a pilot study investigating the role of aspirin in the pregnancy outcome of women with pre-gestational diabetes.

Successes and Achievements 2016

In 2016, the Department published 17 scientific articles in international publications with major scientific impact, and was one of the most prominent international participants at the world's largest obstetric research meeting, the Society for Maternal Fetal Medicine, held in Atlanta. The Department also secured two external grant awards to study maternal hyperoxygenation and to disseminate its research outputs.

Challenges 2016

The main challenge for the Department in 2016 was maintaining high standards of clinical teaching for undergraduate medical students despite ever-increasing numbers of students needing to be taught the core specialty of obstetrics and gynaecology. The quality of teaching has been maintained through the recruitment of additional academic staff and dynamic tutor registrars.

Plans for 2017

In 2017, the Department will further optimise its teaching efficiency by developing a new suite of simulation techniques for undergraduate medical students at the new RCSI York Street city centre campus development. This state-of-the-art facility will come on-stream in 2017 and will enable the Department to remain at the forefront of innovation in teaching.

The Department will continue to enhance its research portfolio, with additional PhD and MD candidates conducting a range of randomised and observational clinical trials.

Library and Information Service

Head of Service

Ms. Anne M O'Byrne, Head Librarian

Service Overview

The Library and Information Service (LIS) of the Rotunda Hospital, provides reference/study facilities, as well as electronic access and computer facilities, to the staff and students 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. Midwifery students may also use the facilities during their courses of study.

Facilities include the following services: study facilities (15 study spaces), networked computer access (6 personal computers), "24 Hour access facilities", and integrated print-photocopy services. Electronic facilities include access to electronic journals and medical databases through ATHENS registration, to support evidence-based practice. Access to the library catalogue online, Internet and e-mail facilities support communication processes.

The Library and Information Service provides appropriately qualified staff to assist in the dissemination of Library & Information Services to users.

Successes & Achievements 2016

Service Developments

In 2016, a number of key developments were put in place to aid service development.

To coincide with the 1916 Centenary, the Head Librarian, as Chair of the "1916: Birth of a Nation Exhibition" Working Group, was responsible for the creation and leadership of this nationally acclaimed exhibition. Through a series of partnerships historically, both internal and external, the Exhibition showcased the role of five key medical women who supported the women and babies of Dublin in 1916 at a time of turmoil and uncertainty.

Exhibition development continued through 2016 until the formal Opening of the Exhibition, by the First Lady of Ireland, Mrs Sabina Higgins, on Sunday March 6th, 2016. The Exhibition ran for the month of March (including weekly lecture slots). It was reported in media articles and on radio. The "Irish Times Podcast Series" (March) included a review of Exhibition content and an interview with the Head Librarian. The Exhibition was a success with a total footfall of nearly 4,000 visitors to the historic Pillar Room.

In recognition of this success the Master of the Rotunda, Professor Fergal Malone, agreed to a re-hanging of part of the Exhibition content as a permanent display in the Rotunda in April 2016 and to the digitisation of the full content for the Rotunda website. In further recognition the Library Association of Ireland awarded this digital content with the "Web Archiving Award" on December 13th, 2016.

End-User-Training Programmes

The Library and Information Service continues to support electronic access to its evidence-based resources. Through its induction programmes and end-user training, users are made aware of evidence-based tools and access points. In this context in November 2016, the Library and Information Service hosted two "Open Days" for staff as follows:

- "Medicines Complete": internal and smartphone/tablet access (November 2016)
- "Uptodate Anywhere": registration for staff and training (December 2016)

Both services extend access beyond traditional IP or ATHENS access and make both tools available at the bedside.

Communication

In keeping with the principle of information sharing, the library continues to produce its newsletter "Trimester" on a quarterly basis and now has a designated "Research Issue" in September. The graphic design of the Rotunda Delivery Newsletter, is also produced by Library and Information Service Staff thereby reducing costs.

A new publication "Rotunda Charter" was produced in December 2016 and is now available on the Rotunda website.

The Library and Information Service continues to support the Research activities of staff through its contribution to the LENUS & OLAS Databases. Users are supported in systematic reviewing and literature search facilities.

The Rotunda Foundation

Staff
Ms. Sheila Thompson, General Manager
Mr. Chetan Chauhan, Marketing Executive

Board Members
Mr. Andrew Wortley, Chairperson / Director
Ms. Marie Malone, Secretary /Director
Ms. Sylvia Graham, Director
Mr. Colm Reilly
Ms. Josephine Black

Advisors to Board
Mr. James Clancy, Company Secretary
Ms. Joanne Byrne, Presence PR
Mr. Daragh O'Shaughnessy, Ksi Taxation Advisor

Overview
The Rotunda Foundation is the official fundraising arm of the Rotunda Hospital and operates as a registered charity. It was established in 1971 under the name of 'Friends of the Rotunda' and incorporated as a "Limited Company by Guarantee and Not Having a Share Capital".

The charity has a firm commitment to transparency, accountability and an adherence to good governance, best practice and performance. It publishes audited annual accounts approved by Ksi Faulkner Orr Accountants.

The Foundation relies on revenue it generates annually from fundraising activities, corporate sponsorship and donations and does not receive any funding from the State.

Successes & Achievements 2016
Research Funding
Some of the most significant achievements for the Foundation this year have been through support of the Rotunda's research and training programmes and in particular by providing seed capital to finance high-quality research and the training of healthcare staff. The Foundation has used donations to support specialist services and to purchase new essential equipment. Some of the research and training programmes include:

- **HOTPOT Study** – This study evaluates whether sonographic assessment of pulmonary vascular reactivity following maternal hyperoxygenation therapy might predict fetal outcome in fetuses at risk of pulmonary hypoplasia. The principal investigator is Prof Fionnuala Breathnach, with co-principal investigators Dr. Afif El-Khuffash and Dr. Orla Franklin. The lead researcher is Dr. Ann McHugh.
- **PEAR Study** – This research project investigates a panel of biomarkers which may be useful in the prediction of gestational diabetes in the first trimester thus facilitating early intervention and improving perinatal outcomes. The principal investigator is Prof Fionnuala Breathnach, and the lead researcher is Dr. Siobhan Corcoran.
- **CTG Study** – This study evaluates whether intrapartum CTG features and partogram characteristics might help predict fetuses with poor tolerance of labour. The principal investigator is Dr. Breda Hayes.
- **Echocardiography Training** – This funding award is being used to provide training in neonatal echocardiography, and the lead researcher is Professor Afif El-Khuffash.

Equipment Purchased
- Neo Cerebral Oxyalert Nirsensor x 10 for Neonatal Intensive Care Unit.
- Cuddle Cot Systems x 2 for Bereavement Support Services.
- EchoCom Neo – A computer-based training system for learning or training to perform cardiac ultrasound examinations on new-borns for the Neonatal Intensive Care Unit.
- MED Surgical Oculight SLX Infrared for the Neonatal Intensive Care Unit.
- Video Intubation System for Neonatal Intensive Care Unit.

Fundraising & Events
The Foundation does not receive any State funding and generates revenue each year by actively encouraging Rotunda staff, patients, their families and friends to participate in various fundraising activities.

The Rotunda Knitters Volunteer Group
The Group continues to supply the Rotunda Foundation with their amazing hand-crafted knitwear for newborn and premature babies born at the Rotunda. Complimentary Gift Packs are frequently distributed to new parents in celebration of memorable events such as World Prematurity Day, National Breastfeeding Week, St Valentine's Day, St Patricks Day, Spring Awakening, Summer Joy, Winter Warmth and Merry Christmas. The knitters will be supporting "Tentacles

for Tinies", a new initiative that will be introduced into the Neonatal Intensive Care Unit in 2017.

Donations Appeal for Mothers & Baby

This supports the Rotunda's Medical Social Work Team who each year need to provide support to pregnant mothers who find themselves in a crisis with little or no money to care for their newborn infants. The Rotunda Foundation Donations Appeal asks for new, or nearly new, items of clothing or general overnight toiletries for both mother and baby.

The Rotunda Pillar Room

Another substantial source of revenue in aid of the Rotunda Foundation is generated each year through the hire of The Pillar Room Complex as a facility for private and corporate functions. It is used by the Hospital for teaching purposes and as an examination hall. During March 2016, the Rotunda commemorated "1916: The Birth of a Nation" Exhibition and Launch and in June, the Pillar Room held the Rotunda Research Day Conference sponsored by the Rotunda Foundation.

The Board of the Rotunda Foundation wishes to express its gratitude to all those who organised and supported fundraising activities during 2016.

Challenges 2016

The Rotunda Foundation addressed the many controversies that faced Ireland's community, voluntary and charity sector during 2016. These controversies, involving a handful of organisations, placed the entire sector under intense public scrutiny.

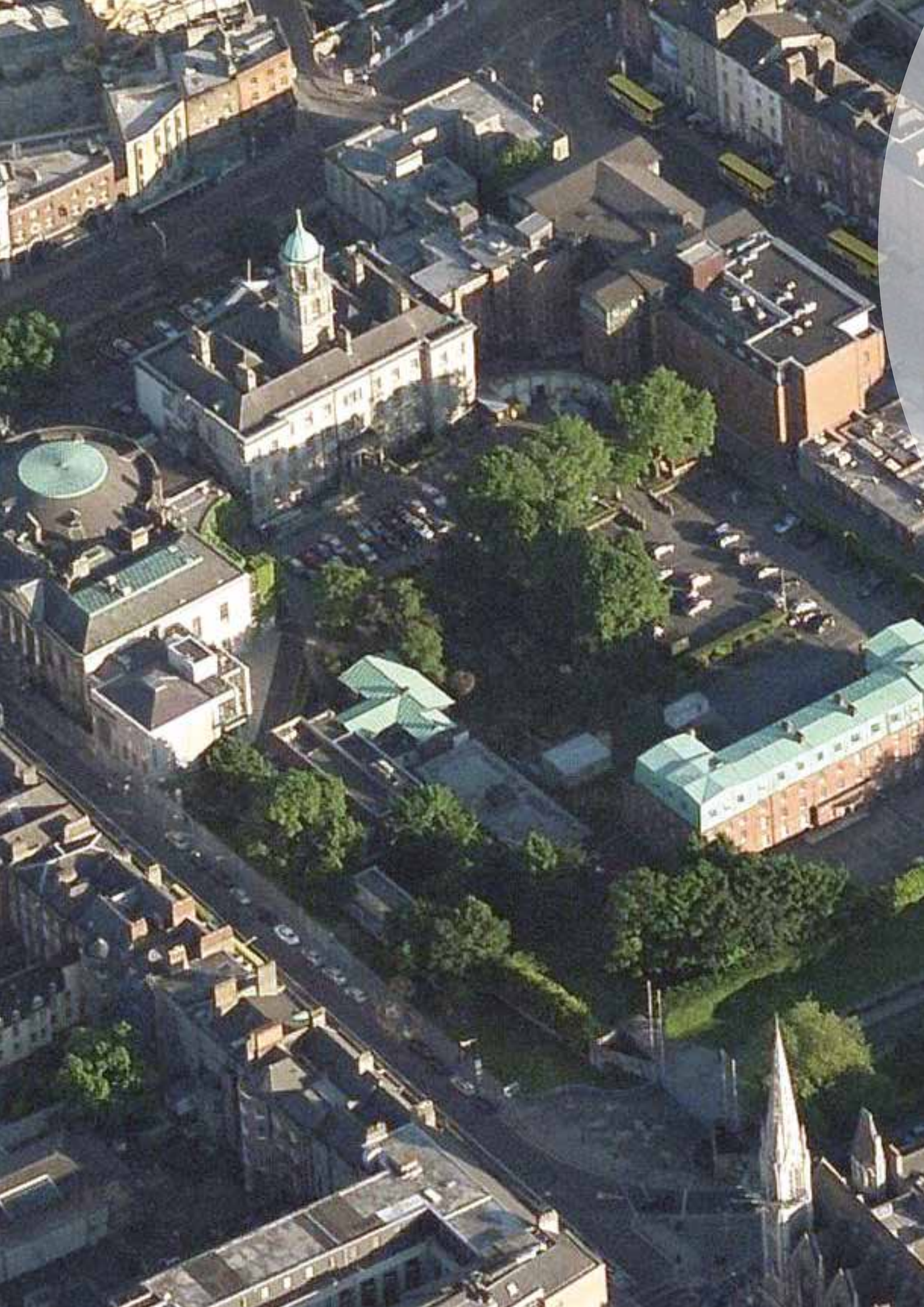
Responding to this, the Board of the Rotunda Foundation took appropriate action to expand its membership to embrace a wider diversity of expertise and improve its Governance. It also placed greater emphasis upon transparency by publishing high quality information on the impact of its work and upon improving its financial reporting procedures.

Plans for 2017

The Rotunda Foundation recognises that the charity sector is going through a profound economic, social and technological change and the environment in which charities are working is altering dramatically. These changes have posed new challenges for charities, resulted in some high-level failures, and have led to greater scrutiny of the sector than ever before. However, the Rotunda Foundation believes that it achieves excellent work and will continue to earn the trust and respect of its stakeholders and beneficiaries. It believes that it will continue to bring valuable innovation and sustainable financial support to assist the delivery of services provided by the Rotunda Hospital for the benefit of the wider community it serves.

In 2017, the Foundation aims to expand its activities and its use of digital technology to raise awareness and realise a greater potential with regard to major campaign fundraising, volunteering and communications.

THE ROTUNDA FOUNDATION



Corporate Services

Human Resources Department

Head of Department

Mr. Kieran Slevin, Human Resources Manager

Staff

Ms. Cathy Hyland Ryan, Deputy HR Manager
Ms. Catherine Keating, HR Officer
Mr. Donough O'Reilly, HR Officer
Ms. Anita Smith, HR Officer
Ms. Ursula White, HR Officer
Mr. Shane Long, Assistant HR Officer

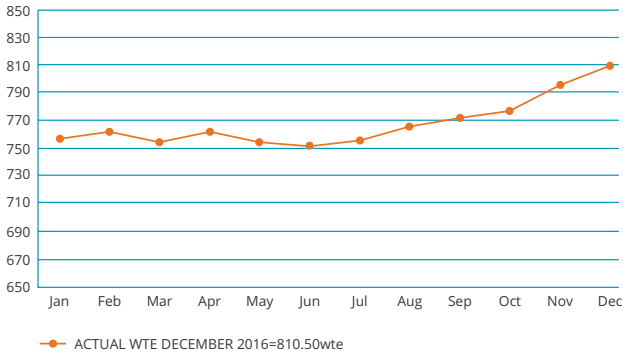
Service Overview

The Human Resources Department continued throughout 2016 to provide HR corporate services across the hospital for Medical, Midwifery/Nursing, Allied Health Professional, Management/Administrative, and Support Services staff.

Headcount Management

The Rotunda year end whole time equivalent staff was 810.5. We acknowledge the approval of funding for 25 additional midwives during the year resulting from the National Birth-rate Plus review of midwifery requirements in maternity services. We also acknowledge the approval of 7 new consultant posts across the disciplines of Obstetrics and Gynaecology, Anaesthetics and Neonatology. Some of these posts are joint appointments with Connolly Hospital and will begin to build the clinical relationships and expertise required across both hospitals.

Rotunda WTE (Whole Time Equivalents)



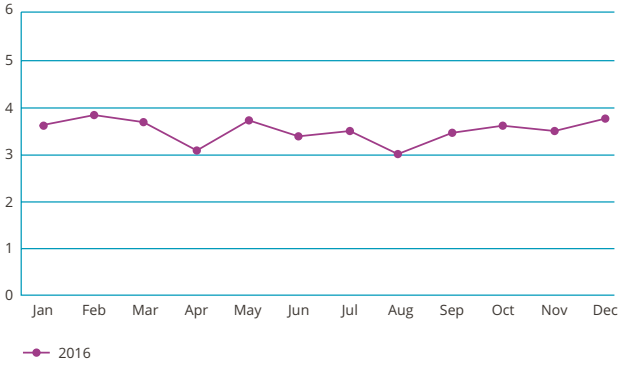
Workforce Planning

Workforce planning for the Rotunda Hospital continued in 2016 to ensure there was an alignment with the Hospital's Strategic Plan 2014 - 2016. In particular, a significant input was made to the national midwifery workforce analysis project.

Absenteeism

The absenteeism rate in the Rotunda across all disciplines in 2016 was 3.5%; this reflects a minor increase from 2015 which was 3.4% and demonstrates the overall commitment of staff and continuous effective management of absence. Throughout 2016 the Rotunda Hospital continually had absence rates lower than the national average for HSE hospitals and also consistently had one of the lowest rates of absence within the RCSI Hospitals Group.

2016 % Absenteeism



Employee Resourcing

One hundred and twenty-four recruitment competitions were supported in 2016, with an average recruitment turnaround time of eight weeks. In addition, a number of interns on work placement programmes, (Job Bridge and European Study Abroad), were facilitated. The Job Bridge interns were placed in administration, a media design role and clinical engineering. Most of the interns in 2016 were subsequently offered employment as vacancies arose.

Employee Development

A wide range of training and development programmes were provided during 2016, to ensure employees and management were equipped with the skills and abilities to achieve the hospital's strategic goals. Below are some of the training and development opportunities offered to employees in 2016:

- RCSI/Rotunda Hospital Leadership and Development Programme in conjunction with the RCSI. The Hospital sponsored 10 of our staff to undertake this programme. The aim of the programme is to ensure graduates increase their capacity to fulfil managerial / leadership roles, learn how to interpret data to improve business analysis, develop cross-disciplinary learning and

undertake quality improvement projects applicable to the Rotunda Hospital

- Improving the Patient Experience – this programme is designed to increase staff awareness of the importance of clear and consistent communication between staff and patients
- Policy and Procedure Training such as Dignity at Work, Attendance Management, Grievance and Disciplinary Management,
- Pre-retirement planning courses

Employee/Industrial Relations

The HR Manager continually engaged with the trade unions represented in the hospital during 2016 on a variety of issues in relation to cost efficiency measures and ensuring all parties were compliant with the Public Service Agreement and the Lansdowne Road Agreement (LRA). The positive employee relations/industrial relations environment that exists in the Rotunda is reflected in the fact that during 2016 the Hospital was not subject to any industrial actions. There continues to be a willingness by management, staff and the various trade unions representing staff to resolve issues at a local level without recourse to external parties including the Workplace Relations Commission (WRC).

Service Developments

In March 2016, due to the positive feedback from our employees, the Rotunda Hospital renewed our contract for our Employee Assistance Programme (EAP) with the VHI. The EAP continued to provide assistance to staff on a confidential basis, which is a core principle of the EAP service. The range of services provided to our staff in need included specialist information, legal information, financial information, face-to-face counselling, and telephone counselling. In September we held our inaugural Staff Employee Wellness event. The objective was to promote wellness and education sessions held on topics such as nutrition, fitness, building resilience, personal wellbeing and relaxation techniques.

In collaboration with the Finance Department, the rollout of a Biometric Time Management System (TMS) led to significant improvements to nearly 100% compliance with the European Working Time Directive (EWTD) for our Non-Consultant Hospital Doctors (NCHDs). The benefits to the staff and the Rotunda is that that we can now effectively manage and record the hours worked by staff electronically and integrate this data with the payroll system thereby ensuring as an organisation we are EWTD compliant. The hospital is committed to the further rollout of the TMS System hospital-wide in 2017 and is actively engaging with employees and their representatives to ensure a seamless implementation.

Challenges for 2016

One of the primary challenges throughout 2016 was to source staff in a time efficient manner to ensure appropriate staffing levels were maintained across all disciplines. The complexity of employee relations cases and the goal to manage and resolve cases internally also continued to be a significant challenge.

Plans for 2017

It is expected that in 2017 the Human Resources Department will be audited by a number of external agencies to ensure it is fully compliant with regulatory/legislative requirements, including best practices, and this will entail a significant body of work. HR will also be actively engaged in a number of projects to include full compliance with the National Vetting Bureau (Children's and Vulnerable Persons) Act 2012, further rollout of TMS, the appointment of a Training and Development Manager and continuing to maintain a stable and positive employee/industrial relations environment locally.

Finance Department

Head of Department
Mr. James Hussey, Head of Finance and Procurement

Staff
Mr. Alan Holland, Financial Accountant
Ms. Liz Dunne, Payroll and Superannuation Manager
Mr. Ed Smith, Patients Accounts Manager
Mr. Denise Rogers, Creditors
Ms. Carmel Kennedy, Creditors
Mr. Sean Williamson, Procurement

Service Overview
The Finance Department is responsible for:

- Budgetary Management and Service Support
- Cash flow and Treasury management
- Financial Compliance and regulation
- Business Case support and Funding management
- Payroll & Pensions - Management, control and process of €53.4m in pay and pensions
- Patient Accounts - Generation, management and collection of €12.4m in income.
- Creditors - Control and Management of €13.9m in creditor payments
- Procurement - Contracts and Stores Management

Departmental Activity
Initial Financial allocation in 2016 was €45.995m (Table 1)

Table 1 – Rotunda Initial HSE Financial Allocation 2016

Pay	€52.054m
Non – Pay	€13.554m
Income	(€19.613m)
Total	**€45.995m**

Maternity services are demand-led and therefore cost drivers are determined by clinical demands and in ensuring that the Hospital is resourced to provide a safe and quality healthcare service. The Rotunda's initial profile of projected expenditure for 2016 to maintain a safe level of service and excluding service developments was as follows (Table 2).

Table 2 – Rotunda Projected Funding Requirement 2016

Pay	€53.418m
Non – Pay	€13.911m
Income	(€17.439m)
Total	**€49.890m**

Initial Funding as outlined therefore indicated a projected shortfall in funding of €3.895m (-8%) in 2016. In addition, there was a cumulative carry forward shortfall from 2014 and 2015 of (€219,000) which need to be addressed with our core funders, the RCSI Hospitals Group / HSE.

An initial financial shortfall of this magnitude presented a significant challenge across all spectrums of finance. Achieving financial break even through cost containment measures and value for money initiatives only was not achievable and would require supplementary budget adjustments. An additional adverse impact of this financial shortfall in funding is its impact on cash flow which significantly impacts on the Hospital's ability to meet its statutory obligations to employees and suppliers. Financial Risks in 2016 were:

- Funding shortfall
- Cash flow management
- Pensions shortfall
- Lack of capital funding for essential medical equipment replacement and minor capital works and refurbishments
- Non-reimbursement by Private Medical Insurers of legitimate hospital charges

Successes & Achievements 2016
Activity Based Funding /Patient Level Costing
The Rotunda Hospital is the only Dublin Maternity Hospital that continued to participate in the Gap Analysis Study on Patient Level Costing. The Hospital has compiled, collated and returned all 2015 inpatient/day activity and financial data for final submission to this Gap Analysis Study in preparation for implementation of an improved budgetary management system. This will provide us with comprehensive patient-level data and enhanced business intelligence.

Payroll and Superannuation
Measures from the Haddington Road Agreement were implemented and some reversals of FEMPI measures were actioned in 2016. Ongoing savings continue to be

achieved in variable pay costs such as agency and overtime. All superannuation obligations to hospital employees and pensioners were met in 2016.

Creditors

€13.912m in non-pay expenditure was processed through Creditors in 2016. Despite reduced funding and major cash constraints in 2016, the Hospital fulfilled all obligations to their suppliers under the Prompt Payments Act in 2016.

Patient Accounts/Cash Office

A significant challenge still facing Patient Accounts is the continuing non-payment and part payment of legitimate statutory charges for inpatient or day service by the Private Medical Insurers. A framework agreement and memorandum of understanding was agreed with the VHI in 2016 which has significantly cleared and reduced pended debt with VHI and improved their payment process.

Procurement

The Procurement Department has worked with Health Business Services (HBS), the business division of the HSE, to initiate cost reduction and non-pay savings in 2016. A number of contracts were renewed and rolled into 2017 with the agreement of HBS and a number of procurement requests are being progressed in collaboration with the HBS.

Budgetary Management

Extensive negotiations and consistent and continual communication have been engaged with funding bodies in order to bridge the initial funding shortfall. These include:

- HSE/RCSI Hospitals Group
- National Cancer Screening Service
- Pre-Hospital Emergency Care Council - Neonatal Transport

A substantial supplementary budget allocation was negotiated in Quarter 4 2016. This, in conjunction with cost containment measures and value for money initiatives, was instrumental in achieving effective financial break-even in 2016.

Table 3: Final Budgetary Out-Turn 2016

Actual Expenditure (€'000)	Budget (€'000)	Variance (€'000)	% Variance
€49,880	**€49,658**	**(€222)**	**(0.45%)**

Financial Statements 2016

The external auditors of The Rotunda Hospital are Deloitte. Proper accounting records have been kept which disclose the financial position of the Rotunda Hospital and comply with accounting standards laid down by the Minister for Health. The Financial Statements give a true and fair view of the state of financial affairs of the Hospital at December 31st, 2016 and have been certified by external auditors.

Challenges 2016

Cash Flow

Cash flow and the management of cash was the most significant financial risk and challenge facing the Hospital in 2016. This is a high priority financial risk for The Rotunda as a Voluntary Hospital as the Hospital requires cash funding in order to maintain safe service and meet regulatory and fiduciary obligations to employees and creditors.

Finance Department Key Performance Indicators for 2017

- Ensure that The Rotunda is adequately financially funded and resourced in 2017 in order to continue to provide safe quality services.
- Ensure that there is a sufficient cash flow in order to meet our obligations to all stakeholders.
- Source funding for essential medical equipment replacement and minor works programme.
- Further develop the culture within the Finance Department to create a more responsive, service-orientated Department.
- Integrate feeder systems such as Pharmacy and Catering to Financial Systems to produce more timely and relevant information.
- Develop business intelligence and financial reporting to ensure that the Executive Management Team, Heads of Departments and Rotunda Board receive timely and relevant reports to support decision-making and service outputs.
- Develop services within finance so that the Hospital can provide more responsive, relevant and timely information on pension and payroll requests.
- Provide support to organisational roll-out of the Time Management System (TMS) for personnel management.
- Develop links with other maternity hospitals so that the Hospital can work collaboratively to resolve common issues such as non- payment of legitimate debts by Private Medical Insurers.

Facilities Management Department

Head of Department
Mr. Ray Philpott, Head of Support Services

Staff
Mr. Brendan Memery, Technical Services Manager
Mr. Martin Colford, Electrician
Mr. Philip O'Brien, Plumber
Mr. Donn Brennan, Plumber
Mr. Derek Memery, Plumbing Contractor
Mr. Alan Newman, Carpenter
Mr. Alex McDermott, General Operative

Service Overview
2016 was an extremely busy year for the Facilities Management Department. Constant monitoring of all aspects of the infrastructure is essential in a building dating back to 1757. A number of complex infrastructure projects were progressed in 2016. Some projects were extremely complicated and intrusive on clinical areas and many required inputs from medical staff and other disciplines. Project meetings were regularly held with external and internal personnel. This ensured that work progressed smoothly and in a timely manner and all parties were consulted on developments.

Successes & Achievements 2016
The following are the main projects completed in 2016:

- Installation of electrical and data cables in all clinical areas to enable the roll out of the new electronic patient record (MN-CMS) project. Meetings were convened with all relevant parties and the project was completed on schedule, on budget and with minimal disruption to patients and staff. This was a critical piece of work to ensure the hospital meets the requirements of introducing the electronic patient record system throughout the organization. The entirety of the Facilities Management Department played a role to ensure minimal disruption within the hospital at this time, and to ensure patient safety was always kept at an optimum. This background work has allowed the hospital to be in a position to introduce the electronic patient record system in November 2017
- Re-development of postnatal bathroom facilities in both the West and East wings of the original Rotunda 1757 building in order to comply with HIQA regulations
- Renovation of the new Master's Office and Administration staff offices and Board Room
- Removal of main and sub-electrical cables from a retaining wall that was showing evidence of being structurally unsound, which could disrupt the electrical supply to the whole hospital. This was a structurally, mechanically and electrically challenging project as we had to ensure that electrical services were maintained throughout the hospital in a safe manner

Challenges 2016
The constant maintenance of a building such as The Rotunda, which has many areas that are historic and protected, is challenging. Rapid response to any environmental or building issue is always challenging.

Plans for 2017
It is envisaged that 2017 will be an equally busy year with the following projects planned for progression or completion:

- Modular Build – design, planning and budgeting in preparation for work to commence, in order to provide a three-storey extension for the Delivery Suite, Operating Theatres, and Assessment and Emergency Department
- Planning for the complete refurbishment of the Delivery Suite
- Installation of a new electrical generator
- Complete renovation of the Dalrymple Lecture Theatre
- Installation of new passenger and goods elevators
- Relocation of the Physiotherapy Department in order to facilitate the renovation of the Fetal Medicine Service and relocation/renovation of the Day Assessment Unit. Relocation of Facilities Management Department Electrical improvements to fuse-boards currently ongoing in a number of areas throughout the hospital
- Electro Thermal imaging in compliance with insurance requests relating to compliance with buildings insurance

Information Technology Department

Head of Department
Mr. Cathal Keegan, IT Manager

Staff
Mr. Gerard Payn, IT Systems Administrator
Mr. Martin Ryan, IT Infrastructure Manager
Mr. Derek Byrne, Applications/Integration Manager
Ms. Eimear McLoughlin, IT Support Officer
Mr. Anthony Shannon, IT Support Officer
Ms. Fiona Quill, IT Support Officer

Service Overview
The Information Technology Department (IT) supports the development and maintainence of the IT function throughout the Hospital. This is facilitated with Helpdesk support for over 800 users and the Department manages an estate of over 1,500 connected devices. Industry best practice is continuously reviewed to provide optimal service reliability and technological advancements are monitored to assess how best they can be leveraged to improve hospital services. Data security is essential in a healthcare setting and the Department has worked closely with the Health Services Executive (HSE) to strengthen their position from both an administrative and clinical device perspective. All staff employed in the Hospital are reminded of the vital role that they play in IT data security.

Successes & Achievements in 2016
The Rotunda Hospital's IT Department continued a programme to update the IT infrastructure throughout the Hospital in preparation for the implementation of Maternity and Newborn – Clinical Management System (MN-CMS) in 2017. In conjunction with our Facilities Management Department a programme of works was undertaken to substantially increase the availability of power and network points in our Postnatal, Prenatal and Gynaecology wards.

A comprehensive wireless survey was carried out to facilitate the implementation of a new wireless network, which is required for the impending MN-CMS system in 2017. This survey highlighted the challenges of working within the confines of a historical building like the Rotunda and necessitated a higher concentration of wireless access points to overcome the thick stone walls.

An upgrade of the Exchange 2003 email server to Exchange 2010 commenced in June 2016. This was a large project that first necessitated the upgrade of the Active Directory Infrastructure and domain controllers. Over 600 mailboxes were migrated to the new system which affords a number of improved features such as increased storage, archiving, database replication and mobile device support.

With the assistance of the HSE's Windows XP replacement programme, the team successfully replaced and recycled 140 legacy out-of-support PCs with newer Windows 7 models. These new PCs are of a small form factor configuration which works well with the limited space available in most of the clinical areas around the hospital.

Plans for 2017
2017 will be a challenge to ensure we are fully prepared for the new MN-CMS electronic patient record with the requirement to configure and install over 300 additional pieces of computer equipment. Integration and interfacing of patient vital signs will also be a requirement.

The major task for 2017 will be the readdressing of the internal IP address structure to facilitate direct access to the National Health Network (NHN). When this is in place it will provide a more efficient means of inter-hospital collaboration and ease of access to national systems.

Education and Training will continue to play an important part in the functioning and progression of the department.

“Staff are excellent, friendly and very nice. Easy to approach which means so much.”

Support Services: Catering, Portering and Household Services Department

Heads of Department

Mr. Ray Philpott, Head of Support Services
Mr. Yoichi Hoashi, Catering Manager
Mr. Paul Shields, Head Porter
Ms. Catherine L'Estrange, Household Services Manager

Catering Service

Successes & Achievements 2016

The Catering Service had a number of notable achievements during 2016, which included:

- Happy Heart "Bronze" Awarded by Irish Heart Foundation
- Delivery of Calorie Posting as per HSE Policy in the Staff Restaurant
- Organisation of Wellness Week in conjunction with the Human Resources Department and Healthy Ireland Committee
- Hosting a Coffee Morning for the World Premature Baby Day in conjunction with the Rotunda Foundation
- Sales of 80 Christmas puddings to colleagues and profits went to the Rotunda Foundation – plan to at least double this sales projection for 2017
- Staff Restaurant income increased significantly in 2016
- Introduced vending machines throughout the campus which drove increased catering revenue
- Two Ward Supervisors attended and successfully completed QQI Level 5 "Implementing Food Safety Management Systems"

Service Improvements

Based on a detailed staff survey, improvements in the Staff Restaurant were delivered, and an improved offering was provided as part of the Happy Heart Bronze Award.

A Sandwich Bar & Build Your Own Salad Bar was introduced in the Staff Restaurant.

Dedicated Infant Formula Room became operational with additional resources provided by the hospital.

Customer Service Training was completed for all staff in addition to mandatory Health and Safety Training.

Plans for 2017

The Catering Service has several new service plans for 2017, which include:

- Improving efficiencies in patient meal order management by introducing electronic order processing to eliminate errors, reduce waste and to streamline overall service
- Seeking support for funding to enable 24/7 catering service (currently catering service finishes at 8pm)
- Applying for FSAA (Food Safety Assurance Award) accreditation for food safety management
- Improving Private Patients' food options and patient menu with greater dietetic input, to further improve revenue generation
- Considering "on-demand" meals for Private Rooms, as well as dining for partners
- Provision of further Hospitality / Customer Care training for front-line staff

Portering Service

Service Overview

The Portering Service supports all areas in the hospital with a variety of activities from movement of immobile patients to delivering stock items. The services are provided on a 24/7 basis 365 days each year. As well as completing routine and regular work schedules the porters respond rapidly to support urgent requests in patient care areas. The team are committed to the ethos of customer satisfaction and are to be congratulated for the high standards they achieve each year.

The Portering Service manages the waste and recycling efforts of the hospital and in 2016 there was an 80% recycling target reached.

Plans for 2017

Proposed improvements in waste recycling include the introduction of more compost bins in certain areas where a high volume of paper tissue is used. The result will hopefully be a reduction in general wastage levels and an increase in compost generation within the Rotunda hospital.

Household Services

Service Overview

Household Services plays a key role in ensuring the Rotunda Hospital achieves the highest possible hygiene standards. A constant programme of self-audit is carried out to ensure compliance with National Hygiene Standards. The results are communicated to staff throughout the Hospital to encourage the ethos and culture of high hygiene standards.

Successes & Achievements 2016

In 2016, there were a number of increased demands on the Household Services. These demands were managed by successfully re-engineering current resources to meet requirements. The commitment and dedication of staff within Household Services ensured that the very highest hygiene standards were achieved throughout the hospital.

Education & Training

Household Services carries out in-house staff training regularly throughout every year. Topics including managing manual tasks, colour coding of waste, use of equipment training and hand hygiene are covered on a rotational weekly basis. Staff also undertake training on detergent usage, manual handling, waste management and fire safety training. All the Supervisors undertook the British Institute of Cleaning Science Train-the-Trainer programme and are certified as instructors. All training records have been input to the Human Resources staff training system.

Plans for 2017

Household Services plans to continue to achieve high standards of hygiene and staff satisfaction in 2017.

Patient Services Department

Head of Department
Ms. Niamh Moore, Patient Services Manager

Team Leaders*
Ms. Susan Daly, Colposcopy
Ms. Denise Gleeson, Adult Outpatients
Ms. Kathy Hayes, Paediatric Outpatients
Ms. Joan Doyle, Paediatric Outpatients
Ms. Julie Mc Evoy, Admissions/Reception
Ms. Jacinta Core, Laboratory Medicine
Ms. Louise O'Hara, Healthcare Records & Ward Clerks
Ms. Noeleen Costello, Central Appointments & Gynaecology Out-Patient service
Ms. Margaret Griffin, Central Appointments & Gynaecology Out-Patient service

* The team leaders oversee administrative assistant staff across the spectrum of clinical services in the Rotunda Hospital.

Service Overview
The Patient Services Department provides front line and back office support to ensure the smooth operation of patient appointments and management of patient records. This includes twenty-four-hour support at the main hospital reception and phone lines, as well as all scheduled clinical appointments and medical typing.

Successes & Achievements 2016
This was the first year in which the Department contributed to the Health Service Executive monthly outpatient waiting list figures for public Gynaecology. It was also the first year that no public patient waited more than 12 months for their first gynaecology appointment.

A Digital Dictation was implemented in both the adult and paediatric typing pools. This system will integrate with the Maternity Newborn – Clinical Management System when it is introduced in 2017.

The Healthlink e-referrals was implemented in Q3 2015, so 2016 is the first full year of e-referrals being received into the hospital for Gynaecology, Obstetric & Ultrasound requests from GPs.

Key performance Indicators were developed and reported on weekly by Team Leaders across the Department in 2016.

Challenges 2016
Retention and motivation of staff was a constant challenge. Some staff left to go to similar organisations due to higher grades on offer for similar roles. It has also been a constant challenge to deliver service without disruption when staffing levels are below complement; however, no patient appointment / admission / procedure was delayed due to reduction in staff.

Key staff within the Department were involved in weekly national work stream conference calls to support the implementation planning for MN-CMS. This caused additional challenges on top of day to day work load.

It is a daily challenge to provide the best customer service due to the layout and infrastructure of areas that administration support. There has been no increase in office/reception space available to the team in any area. Additional services were supported (Outpatient Hysteroscopy Service, additional benign gynaecology clinics, additional community midwifery-provided clinics, etc.) and increased activity without additional space for administrative staff to work in.

The hospital telephone switchboard dates to the 1990's and it is challenging to provide a 21st century customer service with such equipment.

It is sometimes challenging to ensure that patients are scheduled in the correct outpatient service due to the quality of the referral letters.

Plans for 2017
Like many other departments, 2017 will challenge the Patient Services Department to be MN-CMS ready. Staff training in the system will be critical and we plan to have Super Users within all relevant areas to support the local administrative teams.

Clinical Reporting Unit

Head of Unit
Ms. Kathy Conway, Head of the Clinical Reporting Unit

Staff
Ms. Martina Devlin, HIPE Clinical Coder
Ms. Eilis Feehan, HIPE Clinical Coder
Ms. Carmen Gabarain, HIPE Clinical Coder
Ms. Siobhan Mc Nally, IPIMS Support Officer

Service overview
The Clinical Reporting unit oversees 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 management system and other data support systems. There are routine periodic reports produced for hospital management and local managers as well as reports that are exported to the Health Service Executive and other external agencies.

Internal Reports
- A monthly Dash Board is produced to assist hospital management in analysing and planning for activity in all areas. This report is also circulated to the Board of Governors
- Ad hoc reports on specific activity are produced as required
- Reports for the purpose of audit or research

External Reports
- RCSI Hospitals Group Senior Incident Management Forum (SIMF)
- Irish Maternity Indicator System report to HSE
- Patient Activity Statement to RCSI Hospitals Group and to HSE as well as publishing on Rotunda website
- Business Intelligence Unit report to HSE
- Annual submission for Vermont Oxford Network
- Export HIPE data to Hospital Pricing Office (HPO)

Successes & Achievements 2016
All episodes of Inpatient and Day Case activity were coded within the 30 days of discharge deadline without exception. There were 10,870-day cases and 14,884 inpatients coded during 2016.

The Unit has achieved cost saving for the hospital by producing historic data reports for some clinical research/ audit projects and thereby reducing the cost of chart retrieval from archives.

An external review of Hospital In-Patient Enquiry (HIPE) coding was conducted by the Healthcare Pricing Office (HPO). The audit found HIPE data in the Rotunda Hospital to be very high quality, with excellent knowledge and application of coding guidelines such as ACS 0001 Principal Diagnosis, ACS 0002 Additional Diagnoses and obstetrics coding guidelines. The auditors found that HIPE staff are well supported by management in the hospital.

Plans for 2017
The Clinical Reporting Unit staff will be actively engaged in the preparation and implementation of the new MN-CMS electronic patient record system. Staff will be trained on the system to enable them to code all records to the usual high standard.

Discussions are in progress to redesign the Dashboard and produce a new Key Performance Metric report on a monthly basis in 2017.

Governance

Board of Governors

The Board of Governors is an independent group established by a Royal Charter of December 2nd, 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 with the Executive Management Team. The Board reviews, approves and monitors annual business plans, as well as reviewing financial performance against targets. It also monitors legal risk, ethical risk and environmental compliance. It is within the Board's remit to appoint the Master. The Board approves the appointment of other senior management and consultants and also monitors the performance of the Executive Management Team to ensure that Board policy is implemented. The Board of Governors ensures that financial risks are audited and that an annual report is produced for the Rotunda Hospital.

The Board manages its functions through a number of committees:

- General Purposes Committee
- Risk Committee
- Property Advisory Committee
- Performance and Remuneration Committee
- Governance Audit Committee

Rotunda Hospital Board of Governors - 2016

Governors

Dr. David Abrahamson
Mr. Alan Ashe
Dr. Maria Wilson Browne
Dr. Cliona Buckley
Mr. Cedric Christie
Dr. Sam Coulter Smith
Dr. Michael Darling
Mr. John Diviney
Dr. Frederick Falkiner
Mr. James Frawley (resigned December 2016)
Dr. James Gardiner
Dr. Mary Henry
Mr. Michael Horgan (resigned April 2016)
Mrs. Nuala Johnson
Ms. Noreen Kearney (resigned November 2016)
Dr. Mary Keenan
Venerable Gordon Linney
Professor Tom Matthews
Dr. Peter McKenna
Mr. Richard Nesbitt
Mrs. Kristina Odlum
Ms. Hilary Prentice (resigned as Chairman April 2016)
Mr. Ian Roberts
Ms. Rebecca Ann Ryan (resigned December 2016)
Very Reverend Dean Victor Stacey (retired April 2016)
Professor Patricia Noonan Walsh (Chairman from May 2016)
Dr. Melissa Webb

Ex –Officio Officers

His Excellency, The President of Ireland
The Lord Mayor of Dublin
Most Reverend Dr. Michael Jackson, Archbishop of Dublin
Dean of St. Patrick's, The Very Rev. Dr. William Wright Morton
Venerable David Pierpoint, Archdeacon of Dublin
Councillor Teresa Keegan

“Thank you so much, Rotunda Hospital.”

Appendices

Appendix 1:

Rotunda Hospital Clinical Summary Data 2016

1. Total Mothers Attending	Total 2016
Mothers who delivered babies weighing >500 grams	8,405
Mothers who delivered babies weighing <500 grams {including miscarriages}	1,386
Hydatidiform Molar Pregnancies (complete and partial)	29
Ectopic Pregnancies	204
Total Mothers Delivered	**10,024**

*This figure includes complete & Partial Hydatidiform Molar Pregnancies

2. Maternal Deaths	Total 2016
Maternal Deaths	0

3. Births (Babies Delivered)	Total 2016
Singletons	8,222
Twins	342
Triplets	21
Quadruplets	4
Total Babies delivered weighing 500 grams or more	**8,589**

4. Obstetric Outcome	Total 2016	%
Spontaneous Vaginal Delivery	4,178	50%
Forceps	446	5%
Vacuum	877	10%
Caesarean Delivery	2,904	35%
Induction of Labour	2,464	29%

Breech Deliveries included in spontaneous vaginal delivery - 19

Appendix 1:

Rotunda Hospital Clinical Summary Data 2016

5. Total Perinatal Deaths	**59**
Antepartum Deaths	35
Intrapartum Deaths	2
Stillbirths	37
Early Neonatal Deaths	22
Late Neonatal Deaths	4
Congenital Anomalies	19

6. Perinatal Mortality Rates	**Per 1,000 Births**
Overall Perinatal Mortality Rate per 1,000 Births	6.9
Perinatal Mortality Rate Excluding Lethal Congenital Anomalies	4.6
Perinatal Mortality Rate Including Late Neonatal Deaths	7.3
Perinatal Mortality Rate Excluding Unbooked or In-utero Transfer Cases	6.3
Perinatal Mortality Rate Excluding Unbooked or In-utero Transfer or Lethal Congenital Anomalies Cases	4.1

7. Maternal Age	**Nulliparous**	**Multiparous**	**Total Mothers**
< 20	154	26	180 (2%)
20-24 years	491	266	757 (9%)
25-29 years	820	800	1,620 (19%)
30-34 years	1,130	1,603	2,733 (33%)
35-39 years	689	1,826	2,515 (30%)
≥40 years	174	426	600 (7%)
Total	**3,458**	**4,947**	**8,405**

Appendix 1:

Rotunda Hospital Clinical Summary Data 2016

8. Parity	Total Mothers	%Total Mothers
Para 0	3,459	41%
Para 1	3,025	36%
Para 2-4	1,823	22%
Para 5+	98	1%
Total	**8,405**	**100%**

9. Country of Birth / Nationality at Delivery				
	2015	%	**2016**	%
Irish	4,420	53%	4,943	59%
EU	1,263	15%	1,602	19%
Non-EU	870	10%	884	10%
Unknown /Unrecorded	1,808	22%	976	12%
Total	8,361	100%	8,405	100%

10. Socio-economic group				
	2015	%	**2016**	%
1	350	4%	321	4%
2	1,225	15%	1,062	134%
3	825	10%	727	9%
4	275	3%	247	3%
5	299	4%	251	3%
6	187	2%	122	1%
7	1,174	14%	1,144	13%
8	3,369	40%	3,964	47%
9	1	0.01%	0	0%
10	656	8%	567	7%
Total	**8,361**	**100%**	**8,405**	**100%**

Appendix 1:

Rotunda Hospital Clinical Summary Data 2016

11. Birth Weight	**Total 2016**
500 - 999 gms	62 (0.8%)
1,000 - 1,499	65 (0.8%)
1,500 - 1,999	114(1%)
2,000 - 2,499	334 (4%)
2,500 - 2,999	1,078 (13%)
3,000 - 3,499	2,844 (33%)
3,500 - 3,999	2,923 (34%)
4,000 - 4,499	1,041 (12%)
4,500 - 4,999	123 (1%)
≥5,000	5 (0.1%)
Total	**8,589**

12. Gestational Age			
	Nulliparous	**Multiparous**	**Total Mothers**
<26 weeks	21	16	37 (0.4%)
26 - 29 + 6 days	35	20	55 (0.6%)
30 – 33 + 6 days	65	56	121 (1%)
34 – 36 + 6 days	184	266	450 (5%)
37 – 41 weeks + 6 days	3,202	4,677	7,879 (92%)
≥42 weeks	44	3	47 (0.6%)
Total	**3,551**	**5,038**	**8,589**

Appendix 1:

Rotunda Hospital Clinical Summary Data 2016

13. Perineal trauma following vaginal delivery			
	Nulliparous	**Multiparous**	**Total Mothers**
Episiotomy Episiotomy	1,106	352	1,458 (26%)
First Degree Laceration	130	455	585 (11%)
Second Degree Laceration	502	1,094	1,596 (29%)
Third Degree Laceration	111	46	157 (3%)
Fourth Degree Laceration	6	2	8 (0%)
Other (Lacerations not requiring sutures)	218	497	715 (13%)
Intact Perineum	108	876	984 (18%)
Total Vaginal Deliveries	**2,181**	**3,322**	**5,503**

14. Third or Fourth Degree Tears*			
	Nulliparous	**Multiparous**	**Total Mothers**
Occurring Spontaneously	42	42	84
Associated with Episiotomy	14	0	14
Associated with Forceps	30	5	35
Associated with Vacuum	23	1	24
Associated with Vacuum & Forceps	16	0	16
Associated with O.P. position	12	3	15

*Total 3rd degree not listed as some women have a 3rd degree tear with both episiotomy and instrumental delivery.

15. Stillbirth in Normally Formed Infants			
	Nulliparous	**Multiparous**	**Total Mothers**
Placental	4	9	13
Cord Accident	1	5	6
Feto Maternal Haemorrhage	0	2	2
Infection	0	1	1
Unexplained	0	4	4
Total	**5**	**21**	**26**

* Autopsy rate 27/59 (42%)

Appendix 1:

Rotunda Hospital Clinical Summary Data 2016

16. Perinatal Mortality in Congenitally Malformed Infants			
	Nulliparous	**Multiparous**	**Total Mothers**
CNS Abnormalities	2	5	7
Cardiac Abnormalities	0	3	3
Renal Abnormalities	0	3	3
Chromosomal Abnormalities	0	1	1
Diaphragmatic Hernia	0	5	5
Total	**2**	**17**	**19**

*Autopsy rate 27/59 (42%)

17. Early Neonatal Deaths in normally formed infants			
	Nulliparous	**Multiparous**	**Total Mothers**
Prematurity	2	7	9
Infection	1	3	4
Placental	0	1	1
Total	**3**	**11**	**14**

*Autopsy rate 27/59 (42%)

18. Hypoxic Ischaemic Encephalopathy*	
Grade 1	4
Grade 2	2
Grade 3	1

*Inborn babies only

Appendix 1:

Rotunda Hospital Clinical Summary Data 2016

19. Severe Maternal Morbidity	**Total**
Massive Obstetric Haemorrhage	34
Emergency Hysterectomy	9
Transfer to ICU/CCU	10
Eclampsia	0
Acute Renal or Liver Dysfunction	25
Pulmonary Oedema /Acute Respiratory Dysfunction	6
Severe Sepsis	7
Uterine Rupture	3
Status Epilepticus	2
Other	6

20. Body Mass Index				
Body Mass Index (Kg/m²)	**2013**	**2014**	**2015**	**2016**
Underweight: <18.5	215 (3%)	168 (2%)	168 (2%)	175 (2%)
Healthy: 18.5 - 24.9	4,619 (53%)	4,762 (54%)	4,454 (53%)	4,407 (52%)
Overweight: 25 - 29.9	2,283 (26%)	2,342 (27%)	2,323 (28%)	2,307 (28%)
Obese class 1: 30 - 34.9	804 (9%)	890 (10%)	838 (10%)	923 (11%)
Obese class 2: 35 - 39.9	267 (3%)	288 (3%)	294 (4%)	306 (4%)
Obese class 3: >40	83 (1%)	117 (1%)	116 (1%)	129 (2%)
Unrecorded	377 (4%)	220 (3%)	168 (2%)	158 (2%)
Total Deliveries	**8,648**	**8,787**	**8,361**	**8,405**
Overweight or Obese	**3,437 (40%)**	**3,637 (41%)**	**3,571 (43%)**	**3,685 (44%)**

Appendix 2:

Rotunda Hospital Comparative Summary Results for 10 Years

Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Babies born	8,456	8,799	8,912	8,792	9,319	9,041	8,841	8,980	8,538	8,589
Perinatal Deaths	66+10*	64+7*	56+5*	69+5*	59+2*	66+2*	63+6*	68+2*	71	54+5*
Uncorrected Perinatal Mortality Rate	9.0	8.1	6.8	8.4	6.5	7.5	7.8	7.7	8.3	6.9
Corrected Perinatal Mortality Rate	5.6	5.7	4.7	5.7	3.7	4.9	4.5	4.5	4.8	4.1
Total Mothers Delivered	9,290	9,655	9,709	9,594	10,547	10,397	10,314	10,814	10,078	10,024
Maternal Deaths	0	1	1	3	3	2	3	2	1	0
Caesarean Section %	27	26	29	28	29	29	31	31	32	35
Forceps/Vacuum %	17	20	19.8	21	19	18	17	17	17	16
Epidural %	47	49	49	47	46	48	47	47	47	45
Induction %	20	21	23	27	29	28	29	30	29	29

*Unbooked inutero transfers

Appendix 3:

Rotunda Hospital Perinatal and Maternal Mortality 2016

Perinatal Deaths	Total
Antepartum Deaths	35
Intrapartum Deaths	2
Stillbirths	37
Early Neonatal Deaths	22
Late Neonatal Deaths	4
Congenital Anomalies	19

Perinatal Mortality Rates	Per 1,000 Births
Overall Perinatal Mortality Rate per 1,000 Births	6.9
Perinatal Mortality Rate Excluding Lethal Congenital Anomalies	4.6
Perinatal Mortality Rate Including Late Neonatal Deaths	7.3
Perinatal Mortality Rate Excluding Unbooked Cases	6.3
Perinatal Mortality Rate Excluding Unbooked Cases and Excluding Lethal Congenital Anomalies	4.1

Gestational Age at delivery

Stillbirths		
20 0/7 - 23 6/7 weeks	2	5%
24 0/7 - 27 6/7 weeks	7	19%
28 0/7 - 31 6/7 weeks	8	22%
32 0/7 - 36 6/7 weeks	10	27%
37 0/7 - 39 6/7 weeks	7	19%
≥ 40 0/7 weeks	3	8%
Total	**37**	**100%**

Appendix 3:

Rotunda Hospital Perinatal and Maternal Mortality 2016

Early Neonatal Deaths		
20 0/7 - 23 6/7 weeks	4	18%
24 0/7 - 27 6/7 weeks	8	36%
28 0/7 - 31 6/7 weeks	4	18%
32 0/7 - 36 6/7 weeks	2	9%
37 0/7 - 39 6/7 weeks	3	14%
≥ 40 0/7 weeks	1	5%
Total	**22**	**100%**

Weight at Delivery

Stillbirths		
500 - 999g	11	30%
1,000 – 1,499g	4	11%
1,500 – 1,999g	7	18%
2,000 – 2,499g	4	11%
2,500 – 4,999g	11	30%
≥ 5,000g	0	0
Total	**37**	**100%**

Early Neonatal Deaths		
500 - 999g	11	50%
1,000 – 1,499g	4	18%
1,500 – 1,999g	3	14%
2,000 – 2,499g	0	0%
2,500 – 4,999g	4	18%
≥ 5000g	0	0%
Total	**22**	**100%**

Maternal Deaths	**Total 2016**
Maternal Deaths	0

Appendix 4:

Outpatient Activity Data 2016

Clinic	New Attendances	Return Attendances	Total
Antenatal & Postnatal	11,251	34,458	45,709
Gynaecology	2,357	5,419	7,776
Paediatrics	4,732	3,352	8,084
Endocrinology	2,693	2,904	5,597
Gastroenterology	49	27	76
Haematology	253	314	567
Anaesthetics	1,011	7	1,018
Nephrology	275	721	996
Psychiatry	376	591	967
Infectious Diseases	127	124	251
Allied Health	5,448	9,215	14,663
Diagnostic / Radiology	3,162	19,078	22,240
Total	**31,734**	**76,210**	**107,944**

Appendix 5:

Financial Information:

Non-capital income and expenditure account for the year ended December 31, 2016 (and comparison to 2015).

	2016 €'000	2015 €'000
CUMULATIVE NON-CAPITAL DEFICIT BROUGHT FORWARD FROM PREVIOUS YEAR	**219**	182
PAY		
Salaries	**49,188**	47,375
Superannuation and gratuities	**4,369**	4,570
	53,557	51,945
NON-PAY		
Direct patient care	**5,861**	5,300
Support services	**4,980**	5,578
Financial and administrative	**2,997**	3,470
	13,838	14,348
GROSS EXPENDITURE FOR THE YEAR (including prior year deficit)	**67,614**	66,475
Income	**(17,567)**	(18,161)
Total Net Expenditure (Gross Expenditure less income)	**-50,047**	-48,314
DEFICIT FOR THE YEAR (including prior year deficit)	**50,047**	48,314
Determination – HSE notified for the year	**(49,658)**	(48,095)
CUMULATITVE DEFICIT CARRIED FORWARD TO FOLLOWING YEAR	**389**	219

Appendix 6:

Clinical Audits registered during 2016

Speciality	Title of audit	Audit type
Administration	Compliance with the Assessment and Emergency Department triage process	First Audit
Anaesthetics	Use of cell salvage and blood cross-matching practice for patients with placenta praevia	First Audit
Anaesthetics	Fasting prior to elective caesarean delivery	First Audit
Anaesthetics	Antenatal anaesthetic review and early epidural in high BMI pregnant patients	First Audit
Anaesthetics	Maternal obesity and its effects on delivery outcomes	First Audit
Anaesthetics	Failure of epidural top-ups for caesarean delivery: incidence, management and risk factors	First Audit
Anaesthetics	Royal College of Obstetricians and Gynaecologists 2015 indication frequency for antenatal thrombo-prophylaxis	First Audit
Anaesthetics	Anaesthesia for high risk cardiac obstetric patients	First Audit
Community Midwifery	Compliance with the NBAC inclusion criteria and antenatal care pathway	First Audit
Community Midwifery	Domestic violence enquiry for women attending community midwifery team	First Audit
Community Midwifery	Postnatal discharge to Community Midwifery Team of women with history of hypertension or on antihypertensive medication	First Audit
Gynaecology	Audit of red cell transfusion post-ERPC	First Audit
Gynaecology	Blood Transfusion in Gynaecology: The Rotunda Experience	First Audit
Gynaecology	Compliance with National Cancer Screening Service Standards for LLETZ procedures	Re-audit
Infection Control	Time to first dose intravenous antibiotics	Continuous
Infection Control	Decontamination for medical equipment and environment	Continuous
Infection Control	Management of patients diagnosed with pyelonephritis in the postnatal period following introduction of a care pathway	First Audit
Mental Health	Follow up of high Edinburgh Postnatal Depression scores at discharge and two weeks postpartum	First Audit
Neonatology - Medical	Bilious vomiting in term neonates	First Audit
Neonatology - Medical	Efficacy of echocardiography for diagnosis of congenital cardiac conditions and persistent pulmonary hypertension of the newborn in infants with prolonged respiratory distress in the NICU	First Audit
Neonatology - Medical	Inhaled Nitric Oxide in a Tertiary Neonatal Intensive Care Unit	Re-audit
Neonatology - Medical	Delay of retro-transfer of babies in NICU	First Audit
Neonatology - Medical	Documentation In Neonatal Abstinence Syndrome	First Audit
Neonatology - Medical	Therapeutic hypothermia in hypoxic ischaemic encephalopathy	Re-audit
Neonatology - Medical	Evaluating use of smartphones and assessing use of jaundice application against Rotunda guidelines	First Audit
Neonatology - Medical	Documentation of full blood results following neonatal septic workup	First Audit
Neonatology - Medical	Neonatal examination checklist	Re-audit
Neonatology - Medical	Timing of administration of first dose of anti-retrovirals to infants born to HIV positive mothers	First Audit

Appendix 6:

Clinical Audits registered during 2016

Neonatology - Medical	Thyroid function tests in neonates with Down syndrome over a four year period	First Audit
Neonatology - Medical	Retrospective review of patients diagnosed, both antenatally and postnatally, with Trisomy 21 and their subsequent care during the neonatal period (2010-2015)	First Audit
Neonatology - Medical	Assessment of audit within the paediatric department	First Audit
Neonatology - Medical	Incidental findings on targeted neonatal echocardiography (TnECHO)	Re-audit
Neonatology - Medical	Very low birth weight infant nutrition – the first seven days	First Audit
Neonatology - Medical	Completeness of medical communication sheet in SCBU and NICU	First Audit
Neonatology - Medical	Migration of tip of peripherally inserted central catheters in very low birth infants with various arm positions	Re-audit
Neonatology - Medical	Neonatal resuscitaire equipment	First Audit
Neonatology - Medical	Are cranial ultrasounds being performed according to the Departmental Schedule?	First Audit
Neonatology - Nursing	Recording gastric feeding practices on the neonatal unit	First Audit
Neonatology - Nursing	Neonatal Early Weaning Scores on the Postnatal wards	First Audit
Nursing/Midwifery	Documentation of domestic violence enquiry at antenatal visits in Private and Semi Private Clinics	First Audit
Nursing/Midwifery	Time of first expressed breast milk administration to babies 1,500 grams and less	First Audit
Nursing/Midwifery	Time-out practice in main operating theatres	Continuous
Nursing/Midwifery	Is there a need to cross-match blood pre-operatively for placenta praevia patients?	Re-audit
Nursing/Midwifery	Resuscitation trolleys - daily and weekly checks	Continuous
Nursing/Midwifery	National Early Weaning Score use in gynaecology ward	First Audit
Nursing/Midwifery	Time interval to medical review in Day Assessment Unit	First Audit
Nursing/Midwifery	SATU contact with GP for patients less than 18 years of age following their SATU attendance	First Audit
Nursing/Midwifery	Compliance of the timing and checks for written consent to elective treatment	Re-audit
Obstetrics	Pre-Implementation assessment of sepsis screening form	Baseline Audit
Obstetrics	Third and fourth degree perineal tears	Re-audit
Obstetrics	Ectopic pregnancy outcomes over 5 years	First Audit
Obstetrics	Antenatal management of women with a previous history of early preterm labour	Re-audit
Obstetrics	Cost-benefit of routine screening for Varicella	First Audit
Obstetrics	Antenatal corticosteroid use in elective caesarean delivery before 38 weeks 6 days	Re-audit
Obstetrics	Completeness of documentation regarding shoulder dystocia	Re-audit
Obstetrics	Magnesium sulphate administration for fetal neuroprotection	Re-audit
Obstetrics	Tocolytic use in the management of preterm labour	First Audit
Obstetrics	Quality improvement project on incidence of obstetric anal sphincter injury	First Audit

Appendix 6:

Clinical Audits registered during 2016

Obstetrics	Aspirin for the prevention of pre-eclampsia: Are we adhering to International and Rotunda guidelines?	Re-audit
Obstetrics	Management of obstetric cholestasis	First Audit
Obstetrics	Postnatal re-admissions	First Audit
Pathology	Blood Sampling to Transfusion – Can we time it better? Time period between blood sample taken from a neonate to when blood (Pedi-pack) is collected for transfusion	Re-audit
Pathology	Quality of perinatal and neonatal autopsy reports	Continuous
Pharmacy	Start Smart Then Focus	First Audit
Pharmacy	Venous thromboembolism risk assessment and prescription of risk-appropriate thrombo-prophylaxis in postnatal women	First Audit
Pharmacy	Epidural safety in labour - compliance with international medication safety recommendations	First Audit
SATU	Percentage of female patients who presented within 120 hours and appropriately received emergency contraception	First Audit

Appendix 7:

Staff Research Publications

Bleker SM, Buchmuller A, Chauleur C, Ní Áinle F, Donnelly J, Verhamme V, Jacobsen AF, et al. 2016. Low molecular weight heparin to prevent recurrent VTE in pregnancy: rationale and design of the high-low study: a randomized trial of two doses. Thrombosis Research, 144: 62-68.

Breatnach CR, Franklin O, James AT, McCallion N, EL-Khuffash A. 2016. The impact of a hyperdynamic left ventricle on right ventricular function measurements in preterm infants with a patent ductus arteriosus. Archives of Diseases of Childhood Fetal Neonatal Edition. doi: 10.1136/archdischild-2016-311189.

Breatnach CR, Levy PT, James AT, Franklin O, El-Khuffash A. 2016. Novel echocardiography methods in the functional assessment of the newborn heart. Neonatology 110: 248-260.

Bryant JM, Drukoningen DM, Drew R. 2016. Emergence and spread of human mycobacterium. Science, 354: 751-755.

Burke N, Flood K, Muellers S, Murray A, Dunne E, Cotter B, Dempsey M, Dicker P, Geary MP, Kenny D, Malone FD. 2016. Reduced spontaneous platelet aggregation: a novel risk factor for adverse pregnancy outcome. European Journal of Obstetrics, Gynaecology and Reproductive Biology, 199: 132-136.

Burke N, Burke G, Breathnach F, McAuliffe F, Morrison JL, Turner M, Dornan S, Higgins J, et al. 2016. How to predict cesarean delivery in the nulliparous patient: results from the prospective multi-center Genesis Study. American Journal of Obstetrics & Gynecology, 214(1): 15

Burke N, Burke G, Breathnach F, McAuliffe F, Morrison JL, Turner M, Dornan S, Higgins J, et al. 2016. A fetal head circumference above the 90th centile is a significant risk factor for cesarean delivery and complicated labor: results from the prospective multi-center Genesis Study. American Journal of Obstetrics & Gynecology, 214(1): 197

Burke N, Burke G, Breathnach F, McAuliffe F, Morrison JL, Turner M, Dornan S, Higgins J, et al. 2016. Effect of induction of labor on cesarean delivery rates in nulliparous patients: results from the prospective multi-center Genesis Study. American Journal of Obstetrics & Gynecology, 214(1): 343–344

Burke N, Donnelly JC, Burke G, Breathnach F, McAuliffe F, Morrison J, Turner M, Dornan S, et al. 2016. Do birth plans improve obstetric outcome for first time mothers: results from the multi-center Genesis Study. American Journal of Obstetrics & Gynecology, 214(1): 276.

Butler GH, Boyle M, Lynch SA, Ryan S, Mc Dermott M, Capra M. 2016. One to watch: A germ cell tumour arising in an undescended testicle in rubinstein-taybi syndrome. Journal of Paediatric Haematology Oncology, 38: 191-192.

Carroll AE, Eogan M, Monteith C, Drew R. 2016. Case-control study of neonatal GBS disease risk factors in a Dublin maternity hospital over a 13-year period. International Journal of Gynaecology and Obstetrics, 135: 117-118.

Cheong-See F, Schuit E, Arroyo-Manzano D, Khalil A, Barrett J, Joseph KS, Asztalos E, Hack K, Lewi L, Lim A, Liem S, Norman JE, Morrison J, Combs CA, Garite TJ, Maurel K, Serra V, Pereles A, Rode L, Worda K, Nassar A, Aboulghar M, Rouse D, Thom E, Breathnach F, et al. 2016. Prospective risk of stillbirth and neonatal complications in twin pregnancies: systematic review and meta-analysis. BMJ 354, i4353.

Cody F, Unterscheider J, Daly S, Geary MP, Kennelly MM, McAuliffe FM, O Donoghue K, Hunter A, Morrison JJ, Burke G, Dicker P, Tully EC, Malone FD. 2016. Journal of Clinical Ultrasound, 44: 34-39.

Corcoran S, Briggs K, O Connor H, Mullers S, Monteith C, Donnelly J, Dicker P, Franklin O, Malone FD, Breathnach FM. 2016. Prenatal detection of major congenital heart disease-optimising resources to improve outcomes. European Journal of Obstetrics, Gynaecology and Reproductive Biology, 203: 260-263.

Crowley MP, Kevane B, O Shea SI, Quinn S, Egan K, Gilligan OM, Ní Áinle F. 2016. Plasma thrombin generation and sensitivity to activated protein C among patients with myeloma and monoclonal gammopathy of undetermined significance. Clinical Applied Thrombosis Haemostasis, 22: 554-562.

De Boode WP, Singh Y, Gupta S, Bohlin K, Dempsey, E, Groves A, Eriksen BH, van Laere D, Molnar Z, Nesstaas E, Rogerson S, Schubert U, Tissot C, van der Lee R, van Overmeire B, el-Khuffash A. 2016. Recommendations for neonatologist performed echocardiography in Europe: consensus statement endorsed by European Society for Paediatric

Research (ESPR) and European Society for Neonatology (ESN). Paediatric Research, 80: 465-471.

Dempsey MA, Flood K, Burke N, Murray A, Cotter B, Mullers S, Dicker P, Fletcher P, Geary M, Malone FD, Kenny D. 2016. Viable pregnancies beyond 28 weeks gestation in women with a history of unexplained recurrent miscarriage have reduced platelet function. 2016. European Journal of Obstetrics, Gynaecology and Reproductive Biology, 200: 76-81.

El-Khuffash A, Weisz DE, McNamara PJ. 2016. Reflections of the changes in patent ductus arteriosus management during the last 10 years. Archives of Diseases in Childhood Fetal and Neonatal Edition, 101: 474-478.

European IVF-Monitoring Consortium (EIM) for the European Society of Human Reproduction and Embryology (ESHRE), Calhaz-Jorge C, de Geyter C, Kupka MS, de Mouzan J, Erb K, Mocanu E, Motrenko T, Scaravelli G, Wyns C, Goossens V. 2016. Assisted reproduction technology in Europe, 2012: results generated from European registers in ESHRE. Human Reproduction, 31: 1638-1652.

Haddow JE, Craig WY, Neveux LM, Palomaki GE, Lambert-Messerlain G, Malone FD, D'Alton ME, First and Second Trimester Risk of Aneuploidy (FaSTER) Research Consortium. 2016. Free thyroxine during early pregnancy and risk of gestational diabetes. PLoS One 11, Feb 24, e0149065.

Halling C, Malone FD, Breathnach FM, Stewart MC, McAuliffe FM, Morrison JJ, Dicker P, Manning F, Corcoran JD. Perinatal Ireland Research Consortium. 2016. Neuro-developmental outcome of a large cohort of growth discordant twins. European Journal of Paediatrics, 175: 381-389.

Hayes BC, Ryan S, Mc Garvey C, Mulvany S, Doherty E, Grehan A, Madigan C, Matthews T, King MD. 2016. Brain magnetic resonance imaging and outcome after hypoxic ischaemic encephalopathy. Journal Maternal Fetal Neonatal Medicine, 29:777-782

Henihan AM, McCombe G, Klimas J, Swan D, Anderson R, Bury G, Dunne C, Keenan E, Lambert JS, Meagher D, O'Gorman C, O'Toole T, Saunders J, Smyth BP, Shorter G, Kaner E, Cullen W. 2016. Feasibility of alcohol screening among patients receiving opioid treatment in primary care. BMC Family Practice.

Hehir M, Breathnach FM, McAuliffe FM, Geary MP, Daly S, Higgins J, Hunter A, Morrison JJ, Burke G, Higgins S, Mahony R, Dicker P, Tully EC, Malone FD. 2016. Gestational hypertensive disease in twin pregnancy: influence on outcomes in a large national prospective cohort. Australian and New Zealand Journal of Obstetrics and Gynaecology, 56: 466-470.

Hehir MP, Burke N, Burke G, Breathnach F, McAuliffe F, Morrison JL, Turner MJ, Dornan S, et al. 2016. Increased fetal adiposity is a risk factor for cesarean delivery – results of the national prospective Genesis Study. American Journal of Obstetrics & Gynecology, 214(1): S225

Hehir M, McTiernan A, Martin A, Carroll S, Gleeson R, Malone FD. 2016. Improved perinatal mortality in twins: changing practice and technologies. American Journal of Perinatology, 33: 84-89.

Holohan M, O Doherty R, Murphy S. 2016. Maternal mortality in women with epilepsy. Irish Medical Journal, 109: 469.

Huggard D, Drew R, McCallion N. 2016. Neonatal bacteraemia among 112,360 live births. Irish Medical Journal, 109: 467.

Husarova V, Donnelly G, Doolan A, Garstka M, Ní Áinle F, McCaul C. 2016. Preferences of Jehovah's Witnesses regarding haematological supports in an obstetric setting: experience of a single university teaching hospital. Internal Journal of Obstetric Anaesthesia, 25: 53-57.

Husarova V, McCaul CL. 2016. Incidence of general anaesthesia for caesarean section in parturients from different geographic regions: a 7-year retrospective study in a single European university centre. European Journal of Anaesthesiology, 33: 466-468.

Husarova V, Macdarby L, Dicker P, Malone FD, McCaul CL. 2016. The use of pain relief during labor among migrant obstetric populations. International Journal of Gynaecological Obstetrics, 135: 200-204.

James AT, Corcoran JD, Breatnach CR, Franklin O, Mertens L, el-Khuffash A. 2016. Longitudinal assessment of left and right myocardial function in preterm infants using strain and strain rate imaging. Neonatology, 109: 69-75.

James AT, Corcoran JD, Franklin O, el-Khuffash A. 2016. Clinical utility of right ventricular fractional area change in preterm infants. Early Human Development, 92: 19-23

James AT, Corcoran JD, McNamara PJ, Franklin O, el-Khuffash A. 2016. The effect of milrinone on right and left ventricular function when used as a rescue therapy for term infants with pulmonary hypertension. Cardiology in the Young, 26: 90-99.

Langen E, Weiner SJ, Bloom SL, Rouse DJ, Varner MW, Reddy IM, Ramin SM, Caritas SN, Peaceman AM, Sorokin Y, Sciscone A, Carpenter MW, Mercer, BM, Thorp JM, Malone FD, Iams JD. 2016. Association of cervical effacement with the rate of cervical change in labor among nulliparous women. Obstetrics and Gynaecology, 127: 489-495.

Lee A, Loughrey JP. 2016. The role of ultrasonography in obstetric anaesthesia. Best Practice & Research Clinical Anaesthesiology, 31: 81-90.

Maher N, Gleeson N, Darcy T, Byrne B. 2016. Comparison of blood transfusion and surgical complications in peripartum hysterectomy when anticipated and unanticipated. Journal of Obstetrics and Gynaecology 36: 15-18.

Malone FD. 2016. What is the new management of acute preterm labor? Obstetrics and Gynaecology 127: 398-399.

McCombe G, Leahy D, Klimas J, Lambert JS, Cullen W, Henihan AM. 2016. Commentary on Zeremski et al. 2016. Improvements in HCV-related knowledge among substance users on opioid agonist therapy after an educational intervention. Journal of Addiction Medicine, 10: 363-364.

McDonnell R, Monteith C, Kennelly M, Martin A, Betts D, Delany V, Lynch SA, Coulter-Smith S, Sheehan S, Mahony R. 2016. Epidemiology of chromosomal trisomies in the East of Ireland. Journal of Public Health (Oxford) E Pub, Sep. 2.

McGettrick P, Ferguson W, Jackson V, Eogan M, Lawless M, Ciprike V, Varughese A, Coulter-Smith S, Lambert JS. 2016. Syphilis serology in pregnancy: an eight-year study (2005-2012) in a large teaching maternity hospital in Dublin, Ireland. International Journal of STD and AIDS. 2016: 619-623.

Mone F, Mulcahy C, McParland P, Stanton A, Culliton M, Downey P, McCormack D, Tully E, Dicker P, Breathnach F, Malone FD, McAuliffe FM. 2016. An open-label randomized-controlled trial of low dose aspirin with an early screening test for pre-eclampsia and growth restriction (TEST): trial protocol. Contemporary Clinical Trials, 49: 143-148.

Moore R, Adler H, Jackson V, Lawless M, Byrne M, Eoghan M, Lambert JS. 2016. Impaired glucose metabolism in HIV-infected pregnant: a retrospective analysis. International journal of STD and AIDS, 27: 581- 585.

Mullers S, Burke N, Flood K, Cowman J, O Connor, H, Cotter B, Kearney M, Dempsey M, Dicker P, Tully, E, Geary MP, Kenny D, Malone FD. 2016. Altered platelet function in Intrauterine platelet growth restriction: a cause or a consequence of utero placental disease? American Journal of Perinatology, 33: 711-799.

Nassan M, Harrity C, Rajab H, Ranisavljevic N, Khalid S, Mocanu E. 2016. Patients with cancer at the margins of reproductive age had reduced levels of anti-Mullerian hormone compared with patients experiencing infertility. International Journal of Gynaecology and Obstetrics 133: 226-229.

Neary E, el-Khuffash A, Cotter M, Kirkham C, McCallion M. 2016. Plasma transfusion to prevent intraventricular haemorrhage in very preterm infants. Cochrane Database of Systematic Reviews, Issue 9: CD12341.

Nielsen M, Sheikh N, Fitzgerald E, Meehan M, LeBlanc D, Eogan M, el-Khuffash A, Drew RJ. 2016. Screening for early onset invasive group B streptococcal disease in neonates in an Irish hospital (2001-2014): a retrospective audit. Infectious Diseases, 49: 466-470.

O'Higgins AC, Jackson V, Lawless M, Le Blanc D, Connolly G, Drew R, Eogan M, Lambert JS. 2016. Screening for asymptomatic urogenital chlamydia trachomatis infection at a large Dublin maternity hospital: results of a pilot study. Irish Journal of Medical Science, 186: 393-397.

O'Malley EG, Popivanov P, Fergus A, Tan T, Byrne B. 2016. Maternal near miss: what lies beneath? European Journal of Obstetrics Gynaecology and Reproductive Biology, 19: 116-120.

O'Maoldomhnaigh C, Drew RJ, Gavin P, Cafferkey M, Butler KM. 2016. Invasive meningococcal disease in children in Ireland: 2001-2011. Archives of Diseases in Childhood, 101: 1125-1129.

O Shea LC, Hughes C, Kirkham C, Mocanu EV. 2016. The impact of blastomere survival rates on developmental competence of cryo-thawed Day 2 embryos. 2016. European

Journal of Obstetrics Gynaecology and Reproductive Biology, 197: 98-102.

Ray ST, Drew RJ, Hardiman F, Pizer B, Riordan A. 2016. Rapid identification of microorganisms by filmarray blood culture identification panel improves clinical management in children. Paediatric Infectious Disease Journal 35: 134-138.

Sheridan-Pereira M, Murphy J, Sloan J, Crispino G, Leahy A, Corcoran JD, Dempsey E, Elnazir B, Gavin, P, Sharif F, Gul R, Satas S, Murphy J, Gormally S, Shanaa I, Waldron D, McMahon P, Carson J, Blanken M, Bont L, Paes B. 2016. Respiratory syncytial virus preterm (32-34 completed weeks of gestation) risk estimation measure for RSV hospitalization in Ireland: a prospective study. Paediatric Infectious Diseases Journal, 35: 19-24.

Stapleton PJ, Murphy M, McCallion N, Brennan M, Cunney R, Drew RJ. 2016. Outbreaks of extended spectrum beta-lactamase-producing enterobacteriaceae in neonatal intensive care units: a systematic review. Archives of Diseases in Childhood Fetal and Neonatal Edition, 101: 72-78.

Ting JY, Resende M, More K, Nicholls D, Weisz DE, el-Khuffash A, Jain A, McNamara PJ. 2016. Predictors of respiratory instability in neonates undergoing patent ductus arteriosus ligation after the introduction of targeted milrinone treatment. Journal of Thoracic Cardiovascular Surgery, 152: 498-504.

Van Meighem T, Doherty A, Baczyk D, Baud D, Carvalho J, Kingdom J. 2016. Apelin in normal pregnancy and pregnancies complicated by placental insufficiencies. Reproductive Sciences, 23: 1037-1043.

Vaughan DA, Harrity C, Sills S, Mocanu EV. 2016. Serum estradiol: oocyte ratio as a predictor of reproductive outcome: an analysis of data from > 9000 IVF cycles in the Republic of Ireland. Journal of Assisted Reproductive Genetics, 33: 481-488.

Walsh JM, Malone FD. 2016. Reducing the risk of venous thromboembolism in pregnancy. The safe motherhood initiative thromboembolism bundle. Seminars in Perinatology, 40: 93-95.

Waqas S, O'Connor M, Levey C, Mallon P, Sheehan, G, Patel A, Avramovic G, Lambert JS. 2016. Real life experience of Dolutegravir (DTG) in HIV infected treatment naïve patients from a tertiary care university hospital in Ireland. SAGE Open Medicine Oct 25: 4.

Warnaby CE, Seretny M, Ní Mhuircheartaigh R, Rogers R, Jbabdi S, Sleigh J, Treacy I. 2016. Anaesthesia induced suppression of human dorsal anterior insula responsivity at loss of volitional behavioural response. Journal of the Society of Anaesthesiologists, 124: 766-778.

Weisz DE, Martins FF, Nield LE, el-Khuffash A, Jain A, McNamara PJ. 2016. Acetaminophen to avoid surgical ligation in extremely low gestational age neonates with persistent hemodynamically significant patent ductus arteriosus. Journal of Perinatology, 36: 649-653.

Wuytack F, Smith V, Cleary BJ. 2016. Oral non-steroidal anti-inflammatory drugs (single dose) for perineal pain in the early postpartum period. Cochrane Database of Systematic Reviews, 7, CD011352.pub2.

Appendix 8:
Staff List

Master
Professor Fergal Malone

Clinical Director
Dr. John Loughrey

Secretary/General Manager
Pauline Treanor

Director of Midwifery/Nursing
Margret Philbin

Consultant Obstetrician & Gynaecologist
Dr. Carole Barry
Dr. William Boyd
Professor Fionnuala Breathnach
Dr. Naomi Burke
Professor Paul Byrne
Dr. Kushal Chummun
Dr. Gerdaline Connolly
Dr. Sharron Cooley
Dr. Sam Coulter-Smith
Dr. Jennifer Donnelly
Dr. Maeve Eogan
Dr. Karen Flood
Dr. Eve Gaughan
Dr. Ronan Gleeson
Dr. Mary Holohan
Dr. Etaoin Kent
Professor Fergal Malone
Dr. Peter McKenna
Dr. Edgar Mocanu
Dr. Rishi Roopnarinesingh
Dr. Tom Walsh

Consultant Neonatologist
Dr. Karina Butler
Dr. David Corcoran
Dr. Afif El-Khuffash
Dr. Adrienne Foran
Dr. Jan Franta
Dr. Breda Hayes
Dr. Mary King
Professor Naomi McCallion

Consultant Pathologist
Dr. Deirdre Devaney
Dr. Emma Doyle
Dr. Noel McEntaggart
Dr. Eibhlis O'Donovan

Consultant Anaesthetist
Dr. Mary Bowen
Dr. Anne Doherty
Dr. Niamh Hayes
Dr. John Loughrey
Dr. Conan McCaul
Dr. Caitriona Murphy
Dr. Róisín Ní Mhuircheartaigh
Dr. Patrick Thornton

Consultant Cardiologist
Dr. Niall Mahon

Consultant Haematologist
Dr. Fionnuala Ní Áinle

Consultant Paediatric Haematologist
Dr. Melanie Cotter

Consultant Microbiologist
Dr. Richard Drew

Consultant Medical Pathologist
Dr. Philip Mayne

Consultant in Infectious Diseases
Dr. Wendy Ferguson
Dr. Patrick Gavin
Dr. Jack Lambert

Consultant Paediatric Cardiologist
Dr. Orla Franklin

Consultant Endocrinologist
Dr. Maria Byrne
Dr. Brendan Kinsley

Consultant Radiologist
Dr. Neil Hickey
Dr. Áilbhe Tarrant

Consultant Paediatric Radiologist
Dr. Stephanie Ryan

Consultant Psychiatrist
Professor John Sheehan

Consultant Nephrologist
Dr. Colm Magee
Dr. Conall O'Seaghdha

Consultant Gastroenterologist
Dr. Barry Kelleher
Dr. Padraic MacMathuna

Consultant Orthopaedic Surgeon
Dr. Paul Connolly

Consultant Ophthalmologist
Dr. Michael O'Keeffe

Occasional Consultant
Mr. Tom Creagh
Dr. Tony Geoghegan
Professor Tom Gorey
Dr. Leo Lawlor
Dr. Hugh McCann
Mr. Kevin O'Malley
Dr. Declan Sugrue

Specialist Registrar/Registrar in Obstetrics and Gynaecology
Dr. Mona Abdelrahman
Dr. Sahar Ahmed
Dr. Noor Azura Mohamed
Dr. Donal Brennan (First Assistant Master)
Dr. Rachel Elebert
Dr. Irum Farooq
Dr. Catherine Finnegan
Dr. Aoife Freyne
Dr. Kate Glennon
Dr. Eibhlin Healy
Dr. Niamh Keating
Dr. Patrick Maguire
Dr. Nicola Maher (Assistant Master)
Dr. Claire McCarthy
Dr. Aoife McTiernan
Dr. Ruaidhri McVey (Assistant Master)
Dr. Catherine O'Gorman
Dr. Chris Philip
Dr. Sandhya Ramesh Babu
Dr. Meena Ramphul
Dr. Marie Rochford
Dr. Gillian Ryan
Dr. Yulia Shahabuddin
Dr. Workineh Tadesse
Dr. Sanchila Talukdar
Dr. Nor 'Azie' Wahab

Registrar Tutor/Lecturer in Obstetrics and Gynaecology
Dr. Ann McHugh
Dr. Cathy Monteith
Dr. Sieglinde Mullers
Dr. Niamh Murphy

Fellow in Maternal Fetal Medicine
Dr. Hala Abu Subeih

Senior House Officer in Obstetrics and Gynaecology
Dr. David Ayodele Aina
Dr. David Brennan
Dr. Eleanor Cape
Dr. Orla Delaney
Dr. Daniel Galvin
Dr. Eibhlin Healy
Dr. Aiden Jennings
Dt. Anouck Kampeijer
Dr. Claire Keavney
Dr. Nick Kruseman
Dr. Alana Lawlor
Dr. Joan Lennon
Dr. Denise Lundon
Dr. Evelyn Lynn
Dr. Alan McIntyre
Dr. Ciara Nolan
Dr. Rosanna O'Keefe
Dr. Anna Ryan
Dr. Ita Shanahan
Dr. Maryann Siu
Dr. Orla Smith
Dr. Ronan Sugrue

Specialist Registrar/Registrar in Paediatrics
Dr. Elena (Alex) Blanaru
Dr. Neidin Bhushan
Dr. Alina Deliu
Dr. Michael Fitzgerald
Dr. Karina Forde
Dr. Nadeem Khan
Dr. Marguerite Lawler
Dr. Maria Mannion
Dr. Carmel Moore

Dr. Imran Riazat
Dr. Emma Ruth
Dr. Aedin Ryan
Dr. Phani (Bhushan) Sanneerappa
Dr. Naveed Sheikh
Dr. Aisling Smith
Dr. Lorraine Stallard
Dr. Lyudmyla Zakharchenko

Research Tutor/Lecturer in Paediatrics
Dr. Nurul Aminudin
Dr. Colm Breathnach
Dr. Elaine Neary
Dr. Adam Reynolds
Dr. Elizabeth Tagleaur

Senior House Officer in Paediatrics
Dr. Gnaranaraj Ajita
Dr. Catherine Breen
Dr. Susan Byrne
Dr. John Coveney
Dr. Irene Ekundayo
Dr. Zarah Farnes
Dr. Jsun Loony Wong
Dr. Therese Martin
Dr. Mark O'Rahelly
Dr. Simona Plesca
Dr. Bronwyn Power
Dr. Ayish Shaikh
Dr. Catalin Soroiu
Dr. Roy Stone
Dr. Niamh Walsh
Dr. Entasham Yousuf

Specialist Registrar/Registrar in Anaesthesia
Dr. Dalia Abdelrahman
Dr. Fatima Al-Hinai
Dr. Naeem Ashraf
Dr. Imran Azher
Dr. Eamonn Coleman
Dr. Tom Drew
Dr. Sheila Duggan
Dr. Naveen Jalota
Dr. Louise Judge
Dr. Al Mandhari
Dr. Saad Muzzammil
Dr. Doireann O'Flaherty
Dr. Eunicia Ursu
Dr. Vanitha Zutshi

Senior House Officer in Anaesthesia
Dr. Coilin Collins Smyth
Dr. Luck Dockrell
Dr. Rachel Horan
Dr. Timothy Keady

Fellow in Obstetric Anaesthesia
Dr. David Cosgrave
Dr. Wajid Khan

Clinical Registrar in Orthopaedics
Dr. Hilary Lane

Senior House Officer in Histology
Dr. Catherine Connolly

Registrar in Heamatology
Dr. Safa Eltom
Dr. Barry Kevane

Midwifery – Assistant Director
Ms. Marian Brennan
Ms. Catherine Halloran
Ms. Fiona Hanrahan
Ms. Marie Keane
Ms. Aideen Keenan
Ms. Janice MacFarlane
Ms. Anne O'Byrne
Ms. Mary O'Reilly
Ms. Mary Whelan
Ms. Patricia Williamson

Advanced Neonatal Nurse Practitioner
Mr. Mark Hollywood
Ms. Christine McDermott
Ms. Edna Woolhead

Advanced Midwife Practitioner
Ms. Bernie Gregg

Clinical Midwife Manager III
Ms. Catriona Cannon
Ms. Mary Deering
Ms. Sinead Finn Heaney
Ms. Jane Hickey
Ms. Orla O'Byrne

Clinical Skills Facilitator
Mr. Trevor Barrett
Ms. Linda Chiles
Ms. Niamh Hegarty
Ms. Felicity Kalu
Ms. Charmaine Scallan

Clinical Practice Co-Ordinator
Ms. Sinead Landy
Ms. Marie Longworth
Ms. Michelle Mc Ternan (Brazil)

Allocations Officer BSc Midwifery
Ms. Jennifer Lee

Postgraduate Diploma in Midwifery Clinical Co-Ordinator
Ms. Margaret Harrington

Clinical Midwife Manager II
Ms. Marian Barron
Ms. Anu Binu
Ms. Virginie Aubert Bolger
Ms. Mary Brady
Ms. Patricia Butler
Ms. Linda Chiles
Ms. Hazel Cooke
Ms. Sinead Corbett
Ms. Catherine Creed
Ms. Marina Cullen
Ms. Liz Doran
Ms. Rhona Drummond
Ms. Jackie Edwards
Ms. Debra England
Ms. Helen Enyinnaya
Ms. Noelle Farrell
Ms. Margaret Merrigan Feenan
Ms. Marguerite Fitzgibbon
Ms. Alva Fitzgibbon
Ms. Aileen Fleming
Ms. Mary Fogarty
Ms. Orla Foley
Ms. Geraldine Gannon
Ms. Annette O'Connor (Green)
Ms. Julie Heslin
Ms. Veronica Mc Hugh
Ms. Monica Kavanagh
Ms. Nollaig Kelliher
Ms. Bridget Kerrigan
Ms. Gillian Lane
Ms. Mairead Lawless
Ms. Helen Lonergan
Ms. Jacqueline Murrin
Ms. Fionnuala Nugent
Ms. Joan O'Beirnes
Ms. Finola O'Neill
Ms. Gemma Owens
Ms. Chanelle Porter
Ms. Ajita Rajendra Raman
Ms. Ciara Roche
Ms. Paula Scully
Ms. Janice Short
Ms. Elizabeth Tobin

Clinical Nurse Manager II
Ms. Bernice Breslin
Ms. Deirdre Coghlan
Ms. Rasamma Joseph
Ms. Jennifer O'Neill
Ms. Derval Toomey Dickson

Colposcopy Nurse Co-ordinator
Ms. Selena Igoe
Ms. Carol O'Rourke
Ms. Rose Thorne

Clinical Midwife Specialist
Ms. Aisling Bhreathnach
Ms. Heather Cruise
Ms. Jane Dalrymple
Ms. Anne Gallagher
Ms. Maura Lavery
Ms. Lizbeth Lehane
Ms. Deirdre Nolan
Ms. Mary O'Mahoney
Ms. Deirdre Richardson
Ms. Catherine Irene Twomey

Clinical Nurse Specialist
Ms. Catherine Hallahan
Ms. Siobhan Mulvany
Ms. Aideen Walsh

Paramedical Heads of Department
Mr. Brian Cleary (Chief Pharmacist)
Ms. Cinny Cusack (Senior Physiotherapist)
Ms. Sinead Devitt (Head Medical Social Worker)
Ms. Anna Claire Glynn (Head of Clinical Nutrition)
Mr. John O'Loughlin (Laboratory Manager)

Administrative Heads of Department

Ms. Sheila Breen (Quality and Patient Safety Manager)
Ms. Louise Cleary (Clinical Risk Manager).
Ms. Kathy Conway (Clinical Reporting Unit)
Mr. James Hussey (Financial Controller)
Mr. Cathal Keegan (IT Manager)
Ms. Niamh Moore (Patient Services Manager)
Ms. Anne O'Byrne (Head Librarian)
Mr. Kevin Slevin (Human Resource Manager)
Mr. Sean Williamson (Materials Manager)

Support Department Heads

Mr. Les Corbett (Health and Safety Manager)
Mr. Henry Gelera (Clinical Engineering Manager)
Mr. Yoichi Hoashi (Catering Manager)
Ms. Catherine L'Estrange (Household Manager)
Mr. Brendan Memery (Technical Services Manager)
Mr. Ray Philpot (Support Services Manager)
Mr. Paul Shields (Head Porter)

Chaplain

Rev. Alan Boal
Fr. Eddie Conway
Ms. Ann Charlton
Ms. Susan Dawson
Rev. David Gillespie
Rev. Dr. Laurence Graham
Very Rev. Damian O'Reilly

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

www.rotunda.ie
Tel: 01 817 1700