Introduction from the Master

Welcome to this year's Annual Clinical Report

At an astonishing 191 years old, the Coombe Women & Infants University Hospital celebrated a truly special milestone in 2017. Fifty years ago, on Saturday 15th July 1967, the "New" Coombe Hospital was opened with enormous excitement. The new hospital had taken almost two years to build, and by the time it was completely furnished and equipped, had cost £900,000, approximately one third of the cost of a similar hospital in the UK. With 256 beds, it had twice the capacity of the old hospital and was considered to be the largest maternity unit in Britain and Ireland. Today, the Coombe Women & Infants University Hospital remains the largest provider of women and infants' healthcare in Ireland. As a tertiary-referral university-teaching hospital, in 2017 we cared for 8689 mothers, 8166 infants weighing ≥500g and operated on 6031 women. The corrected perinatal mortality rate was 2.95/1000.

To mark our special Golden Jubilee, on Saturday 15th July 2017, we celebrated 50 years of the "New" Coombe Hospital on our current site. Retired staff and friends joined us to share their special memories of that time, as we relished their tales of the "Old" Coombe and learnt about the state-of-the-art facilities that the "New" Coombe brought to advance the care of women and babies. We were reminded of Professor Feeney's words, "The Recording of events in the life of an institution is in a way an act of conservation, one of preservation of knowledge which might have been lost with the passage of time". I would like to thank Ms Mary Holden, Ms Ann Louise Mulhall, Ms Mary Moran, Professor Bernard Stuart, Dr John Murphy and Ms Harriet Wheelock, Keeper of Collections RCPI, who gave so generously of their time to uncover hidden gems in our history and I invite you to look at our history in more detail at the beginning of this Annual Clinical Report.

To ensure that we delivered safe, high quality care to our women, babies and their families, each member of the Coombe team played an essential role in 2017. There is no doubt that the year was filled with challenges and opportunities, with increased patient complexity, ongoing staff shortages, financial constraints and continued public focus on maternity services. Our staff rose to meet every challenge as they faced these obstacles head on. I wish to acknowledge the dedication and commitment of our team of medical, midwifery and nursing, allied health professionals, support staff and administrative staff and to thank them for their unrelenting efforts.

I wish to thank the Senior Management Team for their dedication, diligence and commitment, with each member playing a pivotal role to ensure the safe and smooth running of the Coombe; Mr Patrick Donohue, Secretary and General Manager, Ms Ann MacIntyre, Director of Midwifery and Nursing and Mr John Robinson, Financial Controller. I have always been extremely fortunate to be surrounded by such a dedicated and hard-working team and I cannot thank them enough for their support, encouragement and energy. I would like to sincerely thank Ms Vivienne Gillen, Hygiene Services Manager, for her dedication and support throughout the year.

I would like to express my gratitude to Ms Laura Forde, my PA, for her hard work and support throughout the year. This Annual Clinical Report is only one part of the year's work that would not exist without Laura's assistance and I would like to thank her most sincerely for her commitment. I would also like to thank Ms Emma McNamee, Ms Mary Holden and Ms Julie Sloan for their dedication, diligence and attention to detail in providing so much of the data for the report and throughout the year. I am deeply indebted to each of them.

Throughout 2017, the Chairman, Mr John Gleeson, and members of the Board of Guardians and Directors, worked tirelessly, on a completely pro bono basis, advocating for women, infants and families, and supporting the Hospital in too many ways to list. I wish to extend my sincere thanks to each of them for their support and their expertise.

Prof Michael Carey retired in 2017 from his post as Consultant Anaesthetist and Head of the Department of Peri-Operative Medicine / Anaesthesia although he will continue in his role as Deputy Chair of the Board of Guardians and Directors. His retirement will leave us with a tremendous void to fill and he will be greatly missed by me personally and by all of the staff. Michael's dedication, commitment and enthusiasm has ensured that the Department delivers excellence in education, training, innovation and patient care. He is held in the highest esteem by his colleagues and patients alike. I would like to thank Michael for the enormous contribution that he has made and for his immense support and to offer him my very best wishes for his retirement.

I also wish to acknowledge the huge support and commitment of the Management Executive, the Divisional and Departmental Heads and all of the members who serve on the various committees (both internal and external) which are central to the running of the Hospital.

During 2017, a number of new Consultant staff were appointed to substantive posts in the Hospital and I would like to congratulate and welcome each of them to

the Coombe; Dr Eoghan Laffan, Consultant Radiologist (CWIUH & OLCHC), Dr Hana Fucikova, Consultant Neonatologist – Transport (CWIUH, NMH, Rotunda) and Dr Stephen Smith (CWIUH & SJH). Dr David Rea, Consultant Radiologist resigned from his post at the Hospital during the year and I would like to thank him for his commitment to paediatric radiology and to wish him every success in his new post in Our Lady's Children's Hospital, Crumlin. I would also like to welcome Dr Iram Basit (Obstetrics & Gynaecology), Dr Shahid Saleemi (Neonatology), Dr Michelle Walsh (Anaesthetics) and Dr Yassir Mohammed who commenced in Locum Consultant posts with us during the year.

I would like to congratulate Dr Fionan Donohoe and Dr Eimear McSharry who were appointed as Lead NCHDs throughout the year. It was a pleasure to work closely with these doctors and I wish to acknowledge the significant contribution each of them made in post.

Throughout the year, Friends of the Coombe continued to provide much-needed support to the Hospital. I wish to thank the Chair, Ms Ailbhe Gilvarry, Ms Liz Burke and all of the Board members for their commitment during 2017. I would also like to acknowledge the work of Coombe Care, a voluntary Committee which works closely with the Medical Social Workers of the Coombe Women & Infants University Hospital to provide much needed support to those mothers and families most in need of assistance.

Achievements and Challenges in 2017

This year marked the second year of our Hospital's 5 year strategy which had been developed with the Board of Guardians and Directors and the Senior Management Team. This strategy continues to set the direction of the hospital, underpinned by our commitment to our mission of "excellence in the care of women and babies", and our values of excellence in everything we do, respect, progressive, woman and baby-centred, caring and pride in what we do, and our vision to be a "nationally and internationally recognised leader in healthcare for women, babies and their families".

The Quality, Patient Safety and Risk Team worked tirelessly throughout the year and I would like to thank Ms Evelyn O'Shea, Quality Manager, Ms Susan Kelly, Clinical Risk Manager (until April 2017) and Ms Anna Deasy, Clinical Risk Manager (from May 2017), for their dedication and support in driving the quality, safety and risk agenda within the Hospital and also for the assistance that they provide to all staff. The team continued in their structured approach to engage with women, staff and leadership to develop, deliver, implement and evaluate a comprehensive quality, safety and risk programme to provide assurance regarding our delivery of person-centred high-quality care in the Hospital. Susan Kelly retired from her post in April after 38 years of service in the Hospital and I would like to acknowledge her unwavering commitment and dedication to women and babies during all of her time at the Coombe and wish her every happiness in her retirement.

A number of quality improvements were undertaken within the Hospital throughout the year which demonstrated great results. In addition, LEAN methodology continued to be employed by staff with many more staff achieving qualifications in this area of quality improvement. Once such quality improvement project was the OASIs (Obstetric Anal Sphincter Injuries) project, the aim of which was to reduce the overall rate of OASIs in our Hospital by 33% from 3% to 2%, over a 6-month period. The project was immensely successful, achieving in fact a 56% rate reduction. The rate of OASIs was reduced in Spontaneous Vaginal Deliveries by 48% from 2.19% to 1.13%, ($p<0.05$) and in Operative Vaginal Deliveries by 69% from 6.06% to 1.88%, ($p<0.05$). This QI project is continuing, with ongoing education sessions, debriefing and audit. Frontline ownership and effective staff engagement ensure the success and effectiveness of this QI project. This successful project now serves as a demonstrator project to initiate additional QI projects to reduce clinical incidents and improve clinical outcomes for our women and infants.

Despite exclusion of the maternity hospitals, each of our gynaecology inpatients was invited to participate in our in-house version of National Patient Experience Survey in May 2017 (a HSE-DoH-HIQA collaborative). Our Response Rate was 59% (DMHG response rate 48.5% and the national target was a 40% response rate) and our results were generally very positive and consistent with the feedback that we receive from our patients (compliments, complaints and suggestions). Our patients' overall satisfaction was 90.2% (DMHG result 83%). Following on from the survey, two QI projects have been launched to improve discharge information and nutrition services for gynaecology patients.

The revised Quality & Safety Leadership Rounds undertaken by the Senior Management Team continued to provide an opportunity for frontline staff to identify and discuss any quality and safety concerns that they have within the hospital, and particularly within their specific department.

Revised National Standards for the Prevention and Control of Healthcare Associated Infections in Acute Healthcare Services were published on 23rd May 2017 with a self-assessment tool issued to all hospitals for completion by the beginning of May. Monitoring visits to assess compliance against these new standards began shortly afterwards and HIQA conducted an unannounced inspection of the Hospital in May, only the second hospital to be visited at that time. The Inspectors met with staff in the clinical areas and reviewed training records, audit reports and cleaning schedules. They also met formally with the Infection Prevention and Control Team and the Senior Management Team. The

Aspergillus-control measures in place as part of the Baby Clinic refurbishment works were reviewed and the Inspectors also visited Our Lady's Ward and the Neonatal Centre (NICU, HDU and SCBU). As part of the inspection, they also reviewed the Quality Improvement Plan relating to the Operating Theatre Department and their inspection in August 2016. Overall the inspectors were pleased with their visit to the Hospital. They acknowledged the Hospital's injection practices and aseptic non-touch techniques. Opportunities for improvement in terms of space within the Neonatal Centre and clean and dirty utility areas were identified. The inspectors acknowledged the significant work that had been conducted in Theatre to improve conditions, and emphasised the outstanding urgent need for major capital works which the Hospital is progressing with the HSE.

Later in the year, HIQA conducted an announced inspection of the Hospital in relation to Medication Safety. In preparation for the inspection, the Hospital was asked to provide baseline information regarding the governance of medication and the medication safety programme within the Hospital. The inspection involved a series of staff interviews, review of documentation, a patient survey and onsite observation of practices. In the report subsequently issued by HIQA, they reported that the medication safety agenda was being actively progressed at the Hospital. They noted clear leadership from the Chief Pharmacist and the Medication Safety Pharmacist, supported by the multidisciplinary team and senior Hospital managers working to provide medication safety across the hospital. They acknowledged that the Hospital had a clear medication management plan and a variety of quality improvement initiatives which had been implemented relating to medication safety. They also highlighted that medicines related incidents and near misses were tracked, trended and graded, and where trends were identified, action was taken to prevent reoccurrence of such variance. They recommended that the hospital should continue its good work to promote these quality assurance systems and continue the strong focus placed on medication safety through the continuation of progress made to date.

In October, the Hospital's Laboratory Department underwent its annual inspection by the Irish National Accreditation Board. The assessors commended the staff for the high-quality services provided and their robust systems and audit. In particular, they praised the staff for their patient-centred approach and I would like to acknowledge the hard work of all the staff throughout the year and to congratulate them on their success and continued accreditation.

The Hospital was inspected by the Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland with regard to accreditation of SHO and SpR training posts. As part of this inspection, they reviewed the facilities available for training. They commended the commitment of Consultant trainers within the Hospital to training and were very impressed with the training opportunities and support provided to trainees.

The Hospital successfully maintained compliance with the European Working Time Directive (EWTD) in relation to the 24-hour maximum shift, with non-compliance threatening unaffordable financial penalties. Recruitment of additional NCHDs, changes to NCHD rosters, and further development of formal handovers helped to alleviate some of the challenges associated with achieving compliance with the 48-hour week limit. I would like to thank the NCHDs, Consultants, Midwives and Nurses who played a vital role in helping us achieve compliance while maintaining a safe and high-quality service for our patients.

Staffing recruitment and retention across midwifery and nursing staff remained a major focus throughout the year, with a much welcomed uplift in appointments towards the latter part of the year as a number of new midwives from Italy and Spain joined our staff. The Hospital continued to advertise on the website and in national and international journals and also attended recruitment fairs both at home and overseas. The measures introduced in the previous year of additional Healthcare Assistants, portering staff, administrative staff and additional phlebotomy services continued to help alleviate the midwifery and nursing staff pressures. Close and continued monitoring of staffing levels across all sectors will continue in 2018.

In recognition of the ongoing need for investment in our infrastructure, a number of refurbishment and upgrading works were completed throughout the year, including replacing our X-ray equipment, essential upgrades to our electrical plant, theatre and CSSD refurbishments, the development of a new Biomedical Engineering workshop and the redevelopment of the old library and academic centre. The largest of the refurbishments was a complete upgrade of the Baby Clinic and feedback from patients and staff regarding the newly opened facilities has been extremely positive. The dedication and teamwork displayed by all involved in this project allowed us not only to complete the works on time, but to do so while maintaining a full and safe service for our babies. Other areas of the Hospital, including St Patrick's Ward and the Operating Theatre Department have been prioritised for refurbishment and development and despite not receiving funding in 2017, it is hoped that funding will be secured in 2018.

Throughout the year, the three Dublin Maternity Hospitals continued to meet formally through the Joint Standing Committee of the Dublin Maternity Hospitals. I would like to thank Mr Don Thornhill, Chairman for his leadership and expertise.

We continued to work closely with the Dublin Midlands Hospital Group throughout the year and I would like to

sincerely thank Dr Susan O'Reilly, Group CEO, and our other colleagues in the Group and the HSE for their support to the Hospital.

I continued to attend the Trinity Health Ireland (THI) meetings which strengthen the links between the Coombe, St James's Hospital, Tallaght Hospital and Trinity College Dublin. Professor Paul Browne completed his tenure as Head of the Medical School at the end of June, with Professor Michael Gill taking over the reins. I would like to acknowledge the contribution made by Prof Browne to THI and the support he has given to the Hospital. I would also like to congratulate Prof Gill on his appointment and wish him every success in his new role.

Our services

Throughout 2017, we continued to provide a most extensive surgical gynaecology service and more than ever, due to increased demand for gynaecology services, it is essential that we continue to expand our capacity in the Coombe. The Outpatient Waiting Lists for Gynaecology services remained at an unacceptable level, with demand far-outstretching capacity. Validation of waiting lists made significant inroads in reducing unnecessary appointments, reducing DNA rates and overall freeing up much needed capacity.

The strategy to address these waiting lists is multi-dimensional and during 2017, we were delighted to expand our outpatient gynaecology clinics to care for patients who were waiting the longest for care with Dr Iram Basit providing two additional outpatient clinics per week. In addition to these clinics, we were delighted to open our new Ambulatory Hysteroscopy Service on 19th July 2017. We started with three clinics per week and we plan to increase this further in the 2018. Feedback from patients and staff has been extremely positive.

Other plans to address the Gynaecology Outpatient Waiting lists continued with the National Women and Infants Health Programme (NWIHP) also focussed on the national waiting list situation. It is anticipated that additional funding will be made available in 2018. The Hospital's gynaecology waiting lists are collected by the National Treatment Purchase Fund and reported nationally however NTPF funding in 2017 focussed on theatre waiting lists rather than outpatient waiting lists.

In tandem with these initiatives, we continued to liaise with a number of GPs to consider the rollout of a GP-led Clinic within the Hospital. Such clinics would help to alleviate existing pressures on the gynaecology outpatient services, ensuring that women whose care could be managed at the Primary Care level, would have access to those practitioners with a particular interest in Gynaecology, and thus the patients remaining on waiting lists for Consultant care are those that require Consultant care. Progression of the plans for the new Theatre Development remains essential to increase the overall capacity for Gynaecology. The Hospital had also applied for funding for two new Consultant Obstetricians and Gynaecologists to address the capacity/demand mismatch. From the Hospital's perspective, there remains an urgent requirement to secure additional resources in terms of staffing and equipment and the Hospital will continue to work with the DMHG and the NWIHP in this regard.

I wish to thank Dr Tom D'Arcy, Director of Gynaecology, Dr Terry Tan, Director of Peri-operative Medicine / Anaesthesia, Professor John O'Leary, Director of Pathology, Ms Frances Richardson, Ms Alison Rothwell and all of the staff who continue to build our extensive gynaecology service.

The Coombe continued to provide services and vital education for the National Cervical Screening Programme (NCSS), thanks to our Colposcopy Unit, the Laboratory and the National Cytology Training Centre. The overall number of smear tests processed by the Laboratory in 2017 was in excess of 26,000. HPV triage for low grade abnormalities continued to expand and develop.

Throughout the year, patient complexity continued to increase, and I would like to express my gratitude to the Consultants, NCHDs, Midwives, Nurses, Allied Health Professionals, Support Staff and Administrative Staff who enabled the Coombe to meet the demands of complex care.

We continued to provide the busiest dedicated consultant-provided maternal medicine clinic in the country in 2017 with multidisciplinary specialists from the Coombe, St James's and Tallaght hospitals providing a regional and national service to mothers with serious co-morbidities. The demand for maternal medicine input has increased and we will need to resource the services and personnel required to support a full service across our Hospitals.

The Perinatal Ultrasound and Fetal Medicine departments continued to provide diagnostics of the highest quality, particularly for babies with complex congenital anomalies including cardiac disease because of our close proximity to Our Lady's Children's Hospital Crumlin and the all-island service, extending our services to include mothers and babies from the North of Ireland, continued to flourish.

Birth Reflections was introduced in 2017 under the guidance of Ms Ann Fergus, aimed at women planning delivery or who have delivered within the past year. The feedback from women has been incredibly positive since its introduction. Women continued to use the pool on Delivery Suite for labour and delivery as part of the Water Immersion Study (WIS) during the year and in April, to celebrate the first 100 water births, Ms Paula Barry and members of the Practice Development Team organised for all 100 families with their water babies and toddlers to be invited back to the Hospital to

celebrate the achievement. Despite significant staffing challenges, staff on the Delivery Suite focussed on delivering 1:1 care where possible and drove continuous quality improvements throughout the year. I would like to thank Dr Aoife Mullally, Labour Ward Lead, Ms Ann Fergus, Ms Nora Vallejo, Ms Fidelma McSweeney and all of the staff of the Delivery Suite and Maternity Floors for their tremendous work during 2017.

The Neonatal Intensive Care Unit continued to provide highly specialised care in 2017 to the smallest and youngest babies born not just here in this hospital but who were transferred from other units around the country who did not have these facilities. We continued to partake in the National Neonatal Transport Service and looked after 140 very low birth weight infants (<1500g). I would like to thank Dr John Kelleher, Director of Paediatrics and Newborn Medicine, Ms Bridget Boyd, Ms Ann Kelly, Ms Mary Ryan and all of our neonatal staff for their continued hard work and dedication.

Our focus on research and innovation continued in 2017 as a leading hospital for research in all aspects of women and infants' healthcare. The Research Laboratory at the Coombe maintained its international reputation for cutting edge molecular medicine with grant income in this area exceeding €52.9 million over the past number of years. I wish to acknowledge the vital role that all of our Academic leaders and partners play in maintaining research and education high on the Hospital's agenda.

Other important events in the Coombe Calendar

Education & Training

Education, one of the key pillars of the Coombe remained a priority in 2017 with the Hospital hosting a number of conferences throughout the year.

The 10th Annual Essence of Midwifery Conference "Making a Difference in Maternity Care" took place in May and Dr Andrew Simm, Consultant Obstetrician in Nottingham City Hospital presented the Maureen Mc Cabe Lecture on "Gentle Caesarean Birth". With attendees from all over the country, the feedback was excellent.

The 6th Annual Czech Lecture and Exhibition "The Life Before Birth" was held in September. Professor Zbynek Stranak, Professor of Neonatology, Institute for the Care of Mother and Child, Prague, spoke about Congenital Diaphragmatic Hernia and the challenging issue of unpredictable outcome. Professor Jan Evangelista Jirasek, Professor of Embryology and Reproductive Medicine, Institute for the Care of Mother and Child, Prague, gave a lecture entitled "Human Prenatal Development and Basic Malformations". He also displayed his photographic exhibition "The Life Before Birth", featuring a series of photographs of human development that he had collected over seven decades.

The Annual Guinness Lecture Symposium took place in November and I would like to thank Professor Sean Daly who organised the symposium which focused on Preterm Birth and featured presentations from local, national and international experts in this area. Professor James Dornan delivered the Hospital's 45th Guinness Lecture entitled "Women - The Journey is Far From Over" which was extremely well-received, both enlightening and thought-provoking and I was absolutely delighted to welcome Professor Dornan and his wife to the Hospital.

The Hospital also held a Study Day for General Practitioners during the year which focused on the management of Gynaecological problems.

Annual Service of Remembrance

The Annual Service of Remembrance was held in April for the families of those who have been bereaved. I would like to thank all of the members of the Bereavement Team for their dedication and compassion in organising this event and in supporting families and indeed staff throughout the year.

Cultural

We were delighted to welcome 4elements Theatre Company to the Hospital who staged two performances of their play "Daughters of a Revolution" in September. Described as "a challenging theatre piece exploring women's experience of maternity in Ireland", the play was extremely well attended and thought-provoking.

Visitors to the Coombe

I was delighted to welcome Minister Catherine Byrne, Minister of State at the Department of Health with responsibility for Health Promotion and the National Drugs Strategy, to the Hospital in February to discuss the planned new National Drugs Strategy and meet with members of the Addiction Services Team. The services for mothers and babies provided between the Hospital and the community were discussed and the ongoing challenges were highlighted, in particular the lack of residential detox facilities for pregnant or postnatal women. In addition, the lack of cohesion between the services for drug addiction and alcohol addiction was highlighted.

Following on from the launch in 2016 of the National Standards for Bereavement Care following Pregnancy Loss and Perinatal Death, Dr Keelin O'Donoghue, Consultant Obstetrician & Gynaecologist and Chairperson of the Implementation Team, and Ms Riona Cotter, Project Manager, visited the Hospital to meet with members of the End of Life Care Committee and to visit key clinical areas specifically caring for families with perinatal palliative care and bereavement.

A delegation of Obstetricians and Midwives from Norway visited the Hospital on 10th May 2017 to meet with staff from the HSE Clinical Programme in Obstetrics and Gynaecology, members of the Senior Management Team and other members of staff to discuss the development and implementation of the IMEWS - Irish Maternity Early Warning System.

For the second year in succession, we were delighted to welcome a delegation from Mozambique to the Hospital. The delegation included the Mozambique Ambassador to Ireland, representatives from the Ministry of Health, Mozambique and representatives from the Embassy of Ireland in Maputo, Mozambique and their visit was organised by Dr David Weakliam, HSE Lead for the Global Health Programme, who has been working with Mozambique to support Quality Improvement Initiatives. The specific focus of this year's visit was on neonatal care. They visited the Neonatal Intensive Care Unit, and met with staff throughout the hospital. Staff from our Neonatal Unit plan to visit Mozambique in 2018.

Health & Wellbeing

Raising awareness of the importance of Workplace Health and Well-being remained a key focus of the Hospital in 2017, with numerous events organised to encourage and support staff to stay healthy, eat well and exercise. To celebrate National Workplace Wellbeing Day in May, Professor Jim Lucey, Medical Director of St Patrick's Mental Health Services, Dublin, and Clinical Professor of Psychiatry at Trinity College Dublin, visited the Hospital and presented to staff on the challenges of Mental Health. I would like to thank and congratulate all of the staff involved in the Health and Well-being Committee during the year for their enthusiasm, energy and determination.

The Annual Friends of the Coombe Golf Classic, organised by Ms Liz Burke, was held in Killeen Castle Golf Club. It was a most enjoyable and successful day. I would like to thank Liz and the Friends of the Coombe for their continued invaluable support to the Hospital throughout the year.

Christmas brought lots of excitement to the Hospital, starting with the Inaugural Christmas Tree Decoration Competition organised by Dr Eimear McSharry, Lead NCHD. All Departments were encouraged to bring out their baubles, tinsel and wackiest (or even tackiest) Christmas decorations and I'd like to congratulate St Gerard's Ward who won first prize and also acknowledge the efforts of the Pharmacy and Physiotherapy Departments who shared second place. Closer to Christmas, the landings and stairwells of the Hospital were filled with the sounds of the Coombe Choir singing Christmas Carols which was such a treat for staff and patients alike. I would like to thank the Choir for their beautiful and uplifting voices.

National Context

National Maternity Strategy

Following on from the launch in January 2016 of Ireland's first ever Maternity Strategy, the National Women and Infants Health Programme (NWIHP) was established in January 2017 to ensure its implementation. Mr Killian McGrane was appointed as Programme Director, and thereafter came the appointments of Dr Peter McKenna as Clinical Director and Ms Angela Dunne as the National Lead Midwife. The NWIHP's National Maternity Strategy Implementation Plan was launched in October in Dr Steevens' Hospital and I would like to congratulate the team on their appointments and I look forward to working with them in their new roles.

National Performance Metrics

Each of the three Dublin Maternity Hospitals continues to produce Annual Clinical Reports which are not only published but are peer-reviewed and assessed each year by an external assessor at the Annual Reports meeting now organised by the Institute of Obstetricians and Gynaecologists. In addition to the Annual Clinical Reports, each of the 19 maternity units submits data nationally relating to patient safety and quality of care to a number of agencies for review, including the Hospital Groups, the State Claims Agency, the National Perinatal Epidemiology Centre and the Quality Assurance Programme of the HSE Clinical Care Programme in Obstetrics and Gynaecology.

National Standards

Dr Margo Wrigley and Ms Fiona O'Riordan visited the Hospital in November to discuss the new Specialist Perinatal Mental Health Service Model of Care. This new model of care was formally launched later in the month in Farmleigh. As part of the implementation agreement, the Hospital has received confirmation of funding for a Clinical Nurse Specialist in Mental Health and will be proceeding with the recruitment of this post. Approval for additional new posts is expected in 2018.

Children First

The Children First Act which was fully enacted on 1st December 2017 increased the responsibilities of all hospital staff for the protection and safe guarding of children. All hospitals are required to develop a child protection and safeguarding statement, a risk assessment regarding children associated with their service and policies and procedures for the identification and management of Child Protection/Welfare concerns. In addition, all staff must undergo mandatory training in relation to this. I would like to thank Ms Rosemary Grant, Children First Lead in the Hospital for all her work to ensure that we were fully prepared for the enactment.

Birthrate Plus

The Birthrate Plus report had previously highlighted the deficits in relation to midwifery staffing levels nationally and outlined the need for 35 additional midwives in the Coombe to meet existing service demands. Partial funding had been received towards the end of 2016 and we were really delighted to receive the remainder this year.

Coombe and Midlands Regional Hospital Portlaoise

Work continued during 2017 on the development of a collaborative clinical network across the Coombe and the Midlands Regional Hospital Portlaoise. I would like to thank Dr Michael O'Connell, Mr Michael Knowles, Dr Susan O'Reilly, the staff on both sites, and Ms Laura Magahy and Mr Chris O'Keeffe from MCO Projects for their continued support and commitment.

New Children's Hospital and the Coombe

In March, I attended the Oireachtas with representatives from the Children's Hospital Group and the National Paediatric Hospital Development Board to present plans for the New Children's Hospital, and later that month, I also met with the Department of Health to discuss the proposed tri-location of the Coombe on the St James's Hospital campus. It was with great excitement in May, that the Foundation Stone for the new Children's Hospital was cast. Later in the year, Minister for Health, Simon Harris TD, announced the publication of the General Scheme of the Children's Health Bill 2017, to create a single statutory entity to run the new national Children's Hospital. The new body will take over the services of the existing three Dublin children's hospitals and run the new children's hospital, as well as the paediatric outpatient and urgent care centres at Connolly and Tallaght Hospitals. By ultimately combining the specialties of the maternity, paediatric and adult hospitals in this tri-location, the quality of care for our women and babies will be greatly enhanced. We look forward to developing this model of healthcare excellence, ensuring a seamless continuity of care for our patients. There remains however no indicative timeframe for our move.

Maternal & Newborn – Clinical Management System (MN-CMS)

The MN-CMS Project, which involves the design and implementation of an electronic health record for all women and babies in maternity services in Ireland, went live in 2017 in 3 hospitals around the country. It is anticipated that the rollout of this project to our Hospital will commence in 2018 and we await confirmation of a definite timeline from the national project office.

Protection of Life During Pregnancy and the Eighth Amendment

The Citizens' Assembly, which had been established to consider amongst other things, the Eighth Amendment of the Constitution, continued to meet throughout the year and their recommendations were reported to the Houses of the Oireachtas. Having considered the recommendations of this Assembly, the Joint Oireachtas Committee published its Report on the Eighth Amendment of the Constitution in December. Heated debates surrounding termination of pregnancy continued throughout the year and a referendum is planned for 2018 to determine whether or not to amend the Constitution.

Awards

I would like to congratulate Dr Niamh O'Cathain, Paediatric SPR and winner of the Master's Medal for her presentation entitled "Levels of Glucose in Cord Samples (LOGICS)", which demonstrated that umbilical arterial glucose levels were below the recommended range in a significant proportion of the neonatal population. Infants with low cord glucose were significantly more likely to require admission to the Neonatal Unit and Dr O'Cathain has postulated that corresponding fructosamine levels may indicate the possibility of hypoglycaemia in utero". I would also like to congratulate all of the other NCHDs who submitted abstracts and presented their research at the Master's Medal.

Congratulations also to Dr Robert McGrath, this year's winner of the Dr James Clinch Prize for Audit, and his supervisor Professor Martin White. Dr McGrath was awarded the prize at the recent Guinness Lecture Symposium for his audit entitled "Capillary blood gas analysis following low umbilical cord pH - a completed audit cycle". The initial audit was performed which highlighted the need for changes to the guideline, thus reducing unnecessary tests in healthy babies. The re-audit confirmed successful introduction of the revised guideline, with 77% fewer capillary blood gas analyses performed. This work has resulted in significant savings in terms of costs and manpower, but also importantly reduced interruptions to the mother-baby bonding experience. Further improvements and audits are planned. I would like to thank all of the staff who submitted their audits for the Dr James Clinch Prize for Audit 2017.

At the State Claims Agency's Quality, Patient Safety and Clinical Risk National Conference, Ms Evelyn O'Shea and the OASIs Quality Improvement Team won first prize for their poster. I would like to congratulate everyone involved for their hard work and tenacity in achieving such a marvellous result. This work was also presented at the "Nursing and Midwifery Planning and Development Unit, Dublin South, Kildare and Wicklow Conference - Caring today for a healthier tomorrow: The Nursing and

Midwifery contribution" and at the INMO All Ireland's Midwifery Conference in Armagh.

I am absolutely thrilled to congratulate Friends of the Coombe who have been named the charity partner of the Galway Cycle 2018. The Galway Cycle, which is organised by current and former students of Maynooth University, is now into its 30th year. Every year approximately 300 cyclists cycle from Maynooth to Galway and back to raise funds for an Irish children's charity. To date, they have raised more than €1,000,000. Having been nominated by a family who had been cared for by the Coombe's palliative care and bereavement service, Ms Brid Shine, CMS Bereavement and Ms Liz Burke, Friends of the Coombe, were invited to join two other charities at the Galway Cycle AGM to pitch a project which would be put to a collective vote. We are delighted that Friends of the Coombe was successful. The partners will now work with the committee and cyclists to raise money for the refurbishment of three rooms on St. Gerard's Ward, which will create a bespoke Bereavement Suite. I would like to thank Brid and Liz for their input into the presentation and for providing those present at the Galway Cycle AGM with an insight into the human side of compassionate, family-friendly perinatal hospice care. There will be lots of opportunities over the coming months for us all to get involved in this partnership, and in the Cycle itself.

Going forward in 2018

Looking ahead to 2018, there is little doubt that it will present us with a new set of challenges and opportunities, in addition to the current ones. We must continue to advocate for the very best standards of care and to surpass expectations. Robust investment in our services, our staff and ultimately our women and infants, is absolutely critical.

The recruitment and retention of all healthcare staff must remain a priority at national level to guarantee the provision of high-quality and safe care to women and infants, both next year and far beyond. Our highly-skilled and talented workforce rightly demands the very best standards. Recognition of the importance of education, training, research and innovation is essential and must form an integral part of clinical strategic planning and considerations.

Ensuring the implementation of the National Maternity Strategy and developing a national strategy for gynaecology services to address the ever increasing demands must be prioritised.

It remains my great privilege to serve as Master of the Coombe Women & Infants University Hospital and I again thank the Board and staff for their support. I look forward to leading the Hospital into 2018.

Dr Sharon Sheehan

Master/CEO

Awards

Master's Medal 2016 - 2017

Congratulations to Dr Niamh O'Cathain, Paediatric SPR and winner of the Master's Medal for her presentation entitled "Levels of Glucose in Cord Samples (LOGICS)", which demonstrated that umbilical arterial glucose levels were below the recommended range in a significant proportion of the neonatal population. Infants with low cord glucose were significantly more likely to require admission to the Neonatal Unit and Dr O'Cathain has postulated that corresponding fructosamine levels may indicate the possibility of hypoglycaemia in utero.

Dr James Clinch Prize for Audit

Congratulations also to Dr Robert McGrath, this year's winner of the Dr James Clinch Prize for Audit, and his supervisor Professor Martin White. Dr McGrath was awarded this prize at the Guinness Lecture Symposium for his audit entitled "Capillary blood gas analysis following low umbilical cord pH - a completed audit cycle". The initial audit was performed which highlighted the need for changes to the guideline, thus reducing unnecessary tests in healthy babies. The re-audit confirmed successful introduction of the revised guideline, with 77% fewer capillary blood gas analyses performed. This work has resulted in significant savings in terms of costs and manpower, but also importantly reduced interruptions to the mother-baby bonding experience.

Awards to Midwives, Nurses and Students in 2017

Ann Louise Mulhall Scholarship Award
Paula Barry
Sarah Mahony

Clinical Lead Educator Award
Patricia O'Hara

Best Clinical Educator Awards
Nora Vallejo
Michelle Walsh
Megan Sheppard

Awards to Midwifery Students

Gold Medal BSC Midwifery
BSc 2011- 2015 - Maebh Ní Shúilleabháin
BSc 2012 -2016 - Emma Feeley

Silver Medals BSC Midwifery
BSc 2011-2015 - Jennifer O'Gorman
BSc 2012- 2016 - Darry Reed

Gold Medal Higher Diploma in Midwifery
Aisling O' Donnell

Silver Medal Higher Diploma in Midwifery
Elaine Small

Dr. T. Healy Awards – Best Overall Clinical Student Midwife
BSc 2011-2015 - Jennifer O'Gorman
BSc 2012- 2016 - Emer Curran
Higher Diploma - Paula Fernandez Esteban

Congratulations to all of our Doctors, Midwives, Nurses and Midwifery Students for their outstanding achievements

Dr Sharon Sheehan
Master/CEO

Executive Summary

Obstetrical activity

A total of 8689 mothers attended the Hospital in 2017, 7975 mothers delivering 8166 infants weighing ≥ 500g, including 195 sets of twins, 7 sets of triplets, and 134 infants ≤ 1500g.

Obstetrical demographics

29.9% of mothers who booked in the Hospital in 2017 were born outside the Republic of Ireland; (31.1% in 2016; highest in 2011: 31.6%). 20.5% of mothers were unemployed; similar to last year (highest in the last 7 years in 2011: 26.0%). Communication difficulties were reported in 6.1% of mothers at booking (5.7% in 2016). 0.3% of mothers were < 18 years (lowest in the the last 7 years); 7.2% of mothers were ≥ 40 years (highest in 7 years; lowest in 2011: 4.8%). Nulliparae accounted for 41.1% of mothers (highest in the last 7 years). 26.6% of pregnancies were unplanned (lowest rate in the last 7 years); worryingly only 49.6% of mothers had taken pre-conceptual folic acid prior to booking for antenatal care; 9.4% were current smokers; this was the lowest percentage over 7 years (highest in 2011: 14.2%); 0.7% reported consuming alcohol at the time of booking (highest in 2011: 2.6%); 0.3% were taking illicit drugs or methadone (range over 7 years: 0.2% - 0.8%); 7.5% had a history of previous drug use (similar trend over the last 7 years); 18.5% of mothers had a history of psychological/psychiatric disorders (the highest rate in 7 years) including 4.6% with a history of post-natal depression; 0.9% had a history of domestic violence (range over 7 years: 0.9% - 1.1%). At booking less than half (49.3%) were in the healthy weight range, 1.7% were underweight (BMI < 18.5) and 29.7% were defined as overweight (BMI 25-29.9). Overall 19.1% were obese (Class 1-3), with 2.3% defined as morbidly obese (Class 3), (highest rates in last 7 years). 12.7% had history of one previous Caesarean section at booking (range over the last 7 years: 11.7-13.8%) and 4.2% had a history of two or more sections (consistent over the last 4 years).

Obstetrical Interventions and Outcomes

The induction rate in 2017 was 34.8% (highest in 2012, 35.3%). The percentage of nulliparae having a spontaneous vaginal delivery was 37.8% (lowest rate over the last 7 years, highest in 2013: 43.2%). The percentage of parous mothers having a spontaneous vaginal delivery was 64.3% (highest in 2012: 69.4%). The use of forceps has remained relatively stable at 5.3%, higher in nulliparae than multiparae (11.0% v 1.4% respectively). Ventouse rates have remained relatively stable overall at 4.1%.

The rate of LSCS in 2017 (31.8%) was the highest rate in the last 7 years (lowest rate: 27.1% in 2012). The rate of LSCS in nulliparae (singleton with cephalic presentations) in spontaneous labour is 12.2%; induction in nulliparae significantly increased the risk of LSCS (35.5% in 2017). The overall VBAC rate for mothers with one previous LSCS continues to decline and was 25.0% in 2017 (highest in 2013: 34.1%). 65.9% of mothers with one previous LSCS (and no previous vaginal delivery) had an elective repeat LSCS (63.7% in 2016); the VBAC rate for mothers with one previous LSCS and at least one vaginal delivery was 51.9% (highest in 2012: 60.3%). There has been a marked decline in overall VBAC rates over the past 7 years.

The number of operative vaginal deliveries conducted in theatre this year compared to last year remained stable (80). There were 6 Classical Caesarean sections performed in 2017 (range over last 7 years: 2-7).

A total of 1719 mothers had their booking appointments completed in the community-based clinics; 19.9% of all bookings, representing an increase on the previous year (17% in 2016). Uptake of the Early Transfer Home (ETH) programme continued to be high with 1832 women availing of this service. The DOMINO scheme continued its expansion in 2017 and 66.1% of women in this scheme had a spontaneous vaginal delivery. The caesarean section rate for these women was 14.3%.

Exclusive breastfeeding rates (37.0%) remain low by international standards and have significant socio-economic and ethnic patterns; an additional 23% of babies were fed by a combination of breast and formula. A comprehensive breastfeeding support service is available; educational programmes for health carers have been extended to include student nurses on obstetric placement, medical students and healthcare assistants.

Obstetrical Complications

Rates of primary post-partum haemorrhage (PPH) have risen dramatically over the past 7 years however 2017 saw a particularly sharp increase to 21.9%, up from 18.9% in 2016. This worrying rise was evident across all categories. There was an increase in the PPH incidence in spontaneous labour in nulliparae (18.2%; 15.1% in 2016) and an increase in the incidence in induced labour in nulliparae (30.8%; 25.3% in 2016). For all modes of delivery in nulliparae and parous women, the reported incidence of PPH was higher than the previous year. PPH rates in women delivered by caesarean section rose to 45.3% overall compared to 38.0% in 2016. Emergency caesarean sections were associated with a higher rate of PPH compared to elective caesarean sections (50.1%

and 40.9% respectively). The overall rate of PPH in twin deliveries was 48.9% (46.9% in 2016). The incidence of manual removal of the placenta reduced very slightly in 2016 (1.0%; 1.2% in 2016), and the percentage of women having a PPH decreased in this group (62.3%; 67.4% in 2016).

The method of measuring blood loss in theatre changed in 2010 during the ECSSIT Study and a more recent study in the Delivery Suite, the LABOR Trial, has resulted in more direct measurement of blood loss. This change in measurement may possibly account for some of the increase rates. While the rates of blood transfusion did increase in 2017 from 2.4% to 2.8%, some of these transfusions were in antenatal women. The rate of transfusion > 5 units was 0.1% and remains at an acceptable level. PPH rates continue to be monitored closely as part of a Quality Improvement project to reduce the incidence of PPH.

The rate of severe maternal morbidity decreased marginally from 7.7/1000 in 2016 to 7.1/1000 in 2017 (57 women). Massive Obstetric Haemorrhage remains the leading cause of severe maternal morbidity. In 2017 there were 30 cases of Massive Obstetric Haemorrhage (33 in 2016) defined according to revised criteria (estimated blood loss > 2.5L and/or treatment of coagulopathy). There were three peripartum hysterectomies performed.

There were 210 obstetrical admissions to the High Dependency Unit (198 in 2016); 36% of these admissions were related to haemorrhage (37% in 2016) and 32% were due to hypertension/PET (24% in 2016). Of note 15 patients were admitted for MgSO4 for fetal neuroprotection for anticipated premature delivery. There were no cases of eclampsia. A total of 6 women were admitted to HDU with sepsis, and there were no cases of septic shock. There were 3 cases of uterine rupture. Three women were transferred to ICU: unbooked and presented at 11 weeks with pneumonia (1), CVA 3 weeks post normal delivery (1) and seizures at 30 weeks (1). Two women were transferred to CCU: postnatal collapse with pulmonary oedema and cardiomyopathy (1), DVT and bilateral PEs at 28 weeks (1).

There were no maternal deaths.

There was a marked increase in the number of patients attending the Combined Clinic for Diabetes (832 in 2017, 737 in 2016). Increased BMI, demographic changes and revised diagnostic criteria have contributed to this increase. Oral hypoglycaemic therapy (Metformin) continues to result in a reduction in the number of women requiring admission and Insulin therapy. A total of 775 mothers developed Gestational Diabetes; 125 were treated with Insulin, 254 with Metformin, 85 with Insulin and Metformin, and 311 with Diet alone. There was a marked decrease in the number of infants born weighing ≥4500g in 2017 (118; 144 in 2016) despite the significant increase in the incidence of Gestational Diabetes. The incidence of shoulder dystocia remains relatively unchanged over the last 7 years (0.6%).

The recorded incidence of third degree tears in vaginal deliveries fell compared to the previous year (2.0%, 2.6% in 2016). A total of 3 (0.1%) fourth degree tears were reported (11 in 2016). A Quality Improvement Team had been established to focus on reducing these injuries and the positive impact of this work was evident.

In 2017 there were 381 new referrals to the multidisciplinary Medical Clinic. The consultant-led high-risk service with a dedicated in-patient maternal medicine team was established in 2012 and has continued to provide a comprehensive service for CWIUH mothers and those referred from other units around the country. The most common indications for referral relate to thrombosis/haemorrhagic disorders (115), cardiac disease (43), renal/ hypertensive disease (58), cerebrovascular disease (31) and liver/GI disease (41). The number of women attending for preconceptual care was similar to the previous year (25 in 2017; 20 in 2016).

A total of 162 women attended the Preterm Birth Clinic at a gestation of less than 30 weeks and at each visit a cervical length measurement was obtained. From 18 weeks, fetal fibronectin tests are used in conjunction with cervical length measurements to create individualised care plans in an attempt to prevent preterm birth and reduce the morbidity associated with prematurity. The clinic forms part of a UK-based preterm birth network which seeks to expand the knowledge around this challenging area.

Early Pregnancy Assessment Unit (EPAU)

There were a total of 4213 visits to EPAU in 2017; 2535 new and 1678 return attendances. Dr Somaia Elsyaed completed her Clinical Fellowship in EPAU and Dr Mei Yee Ng commenced her Clinical Fellowship. A total of 1639 miscarriages were seen in the unit and of these that were not completed, 31.6% were managed conservatively, 28.3% were managed medically and 40.1% were managed surgically. A total of 69 ectopic pregnancies were diagnosed in the unit with 60.9% requiring surgical management.

Fetal Medicine

The Fetal Medicine service has continued to develop in 2017 with a total of 28,858 scans performed (29,828 in 2016). All mothers booked at CWIUH are offered both routine dating and a 20-22 week structural scan. 152 structural abnormalities and a total of 49 cases of aneuploidy were diagnosed. A total of 122 invasive prenatal procedures were performed (71 amniocenteses and 51 chorionic villus samples). We introduced a facility for patients to avail of Non-invasive Prenatal Testing

(NIPT) in 2017 and a total of 375 women availed of this test.

The weekly Combined Fetal Medicine/Paediatric Cardiology Clinic has grown significantly since its formal establishment in 2010 with referrals from units nationwide. It is now the largest national referral service for prenatal diagnosis of congenital heart disease in Ireland. Women are seen within one week of referral. Of the fetal ECHOs performed, 116 structural cardiac abnormalities were detected in addition to 13 major rhythm disturbances.

At the Multiple Birth Clinic, led by Dr Aisling Martin, a total of 202 multiple pregnancies were looked after in 2017; 195 sets of twins and 7 sets of triplets. 33% of twins were delivered at or beyond 37 weeks gestation. The preterm delivery rate in the multiple pregnancies overall was 67%.

In 2017 the Department also hosted two fellowship posts: the Bernard Stuart Fellow in Perinatal Ultrasound and the Rotunda/Coombe/Columbia Subspecialty Fellow.

Perinatal/Neonatal Outcomes

The overall Perinatal Mortality Rate (PMR) for infants born weighing ≥ 500g was 6.00/1000; the corrected PMR rate was 2.95/1000. 13 of the 16 normally formed stillbirths weighed ≤ 2500g, with 8 of these weighing ≤1500g; abruption (9), fetal thrombotic vasculopathy (3), abruption with cord accident (1), infection (1) and illicit drug use (1) were the most common causes of death among the normally-formed stillborn infants. One death was unexplained. There were 2 intra-partum deaths, in babies with known congenital anomalies.

Congenital malformation (14) and sepsis (2) with respiratory problems were the main causes of early neonatal death (22); 8 of the 22 early neonatal deaths occurred in normally formed infants, with 3 of these babies weighing < 1000g. There were 10 late neonatal deaths; 7 of these occurred in normally formed babies, with 5 of these weighing less than 1000g.

There were 1020 admissions to the Neonatal Centre. 140 infants were reported to the Vermont Oxford Network in 2017. The overall survival for VLBW infants in 2017 was 87.8% and importantly survival of VLBW infants without specified morbidities was 65%. The low incidence of chronic lung disease at 36 weeks (19% v VON 24.8%) appears to correlate with the low rate of invasive ventilation. Patent Ductus Arterious (PDA) was identified in 3.2% of VLBW infants; with only one baby requiring ligation (0.8% v 3.2% ligation rate in VON). The strategy of conservative PDA treatment, frequent use of point of care ultrasound and cardiology support from Dr Orla Franklin appears to have been particularly effective in this context. The VLBW cohort is continuing to show low incidence of severe intraventricular/periventricular (PIVH) haemorrhage (3.2% v VON 7.9%).

Seven neonatal deaths occurred in normally formed infants born weighing ≥ 1000g: sepsis (2), HIE grade III (2), SIDS (1), Coagulopathy with subgaleal haemorrhage (1), out of hospital cardiac arrest with NEC sepsis (1).

10 inborn infants were classified with HIE grade II/III; all were treated by Total Body Cooling according to TOBY trial criteria; 2 infants died within the first 2 days of life, 7 infants had normal neurodevelopmental follow-up (follow-up ranging from 4 - 18 months) and there was no follow-up information available for 1 infant.

Gynaecology

In 2017 there were 5012 gynaecological operations performed (5255 in 2016). The slight reduction in numbers related to essential refurbishment works which took place in the Operating Theatre Department and CSSD during the year. The gynaecology service provided by consultants based in the CWIUH across this hospital, St. James's Hospital and Tallaght Hospital continues to be the busiest surgical service in the state. Increasing caesarean section rates continue to put pressure on theatre capacity and thankfully the Emergency Obstetric Theatre on the Delivery Suite has helped to alleviate some of the infrastructural challenges posed.

There has been a marked increase in the number of minimal access surgeries performed in the hospital over the last seven years. While the overall number of laparoscopic hysterectomies (laparoscopic-assisted vaginal, total, subtotal and radical hysterectomy) fell slightly compared to the previous year (92; 112 in 2016), the number of open hysterectomies (vaginal, total abdominal, subtotal and radical hysterectomy) remained very low (37). Similar trends have been seen in tubal/ovarian surgeries over the past seven years, with a total of 785 procedures performed laparoscopically in 2017 compared to only 27 open procedures.

Urogynaecology operations remained prevalent in 2017 (410; 365 in 2016) with the expansion of treatment options for women with complex pelvic floor dysfunction continuing – both vaginal and advanced laparoscopic interventions. Urogynaecology MDT meetings were held during the year and continue to be very beneficial. Intravesical hyaluronic acid instillations for bladder hypersensitivity continued during the year. There was a slight decrease in the number of botox treatments for refractory Detrusor Overactivity (30; 39 in 2016).

There were 1863 first visit attendances at the Coombe Colposcopy Clinic in 2017, a 10% decrease compared to 2016, and 4046 return visits, which represented an 3% increase on the previous year. A total of 604 excisional procedures were performed in the clinic and 82 in theatre. A total of 26,185 smears were processed

through the Laboratory in 2017, compared to 26,161 in 2016.

Gynaecological surgical complications during 2017 included uterine perforation (6), bladder injury (2), bowel injury (2), transfer to HDU (5). There was 1 reported incidence of blood transfusion > 5l. No patient required transfer to ICU.

Peri-operative Medicine

During 2017, 3165 epidurals were sited in labour; the epidural rate was 39.7%, (highest in the last 7 years in 2011, 45.2%); 98.3% of elective Caesarean sections and 93.7% of emergency Caesarean sections were performed under regional anaesthesia. The Emergency Obstetric Theatre on the Delivery Suite continued to cater for emergency cases between 08.00 and 17.00 hours. This has been a great advance in patient care, allowing for timely intervention without transfer delays.

The multidisciplinary Acute Pain Service led by the Department of Peri-operative Medicine continued to operate effectively in 2017; with almost all surgical patients reviewed within 24 hours of surgery. This service also includes a Pharmacist and a Physiotherapist. The introduction of electronic PCA pumps continues to enhance the monitoring of opiod requirements.

The Pre-operative Anaesthetic Assessment Clinic continued to ensure that all women scheduled for major surgery and day case surgery undergo an appropriate anaesthetic review; this continued to greatly facilitate same day admission for all major gynaecology patients. The DOSA (day of surgery admission) rate reached in excess of 98%. During the year 97% of all patients presenting for elective surgery were evaluated at this clinic.

The Chronic Pain Clinic has continued to be of huge benefit to both obstetrical and gynaecological patients with refractory pain.

Structured training and research programmes within the Department of Peri-operative Medicine, under the leadership of Prof Michael Carey, have continued to attract anaesthetic trainees and the Hospital was selected by the College of Anaesthetists of Ireland as a pilot site to trial competency-based training for anaesthetic trainees.

Academic

In addition to providing tertiary maternal-fetal, neonatal, gynaecology and anaesthetic services both at a network and national level, the Hospital has a very significant academic portfolio in terms of academic appointments, research grant income and publications. Medical students from UCD, TCD and RCSI attend the Hospital; the campus hosts the Centre for Midwifery Education for the Greater Dublin Area. The National Cytology Training Centre on our campus provides dedicated training and an MDT function for the National Cervical Screening Programme. The Hospital also supports research fellowships in Obstetrics, Peri-operative Medicine, Early Pregnancy Assessment, Perinatal Ultrasound and Pharmacology.

The Research Laboratory in the Hospital, under the leadership of Professor John O'Leary, has a grant portfolio in excess of €52.9m over the past 5 years. In 2017, the Laboratory hosted 10 postgraduate students pursuing PhD/MD/MSc degrees. The Molecular Pathology Group published 14 peer reviewed journal articles with 17 published abstracts. The Laboratory has an international reputation for cancer stem cell biology and pregnancy proteomics and transcriptiomics. It also hosts two EU research consortia as well as being the co-ordinator for the Irish Cervical Cancer Screening Research Consortium (Cerviva). This Laboratory hosts researchers from TCD, UCD, RCSI, DCU, DIT and from other national and international third level institutions and has collaborative relationships with many biotechnology partners.

As evidenced in this year's Annual Clinical Report, the other Academic Departments under the leadership of Professor Michael Turner (UCD Centre for Human Reproduction), Dr Mairead Kennelly (UCD Centre for Human Reproduction and Perinatal Ireland), Professor Deirdre Murphy (TCD), Professor Sean Daly (TCD and Perinatal Ireland), Prof Michael Carey (Peri-operative Medicine) and Dr Jan Miletin (Paediatrics and Newborn Medicine) together with departmental researchers, have significantly expanded the research portfolio of the Hospital. The leadership role of Ms Triona Cowman (CME Director) is also acknowledged in relation to the Centre for Midwifery Education for the Greater Dublin Area.

During 2017 the Hospital hosted/co-hosted a series of highly successful multidisciplinary conferences (see Introduction for details) including the 10th Annual Essence of Midwifery Care Conference, the 6th Annual Czech Lecture and Exhibition and the Guinness Lecture Symposium.

Dr Sharon Sheehan

Master/CEO

Members of the Board of Guardians and Directors – 2017

Board Members	Date of Election
John Gleeson	2013 (Chair from January 2014)
Carol Bolger	2013
Prof Michael Carey	2012
Anne Marie Curran	2016
Mary Donovan	2014
Prof Robbie Gillian	2016
Michael O'Neill	2014
Maura Quinn	2014
Prof Michael Turner	2013

Ex-Officio Members

THE LORD MAYOR OF DUBLIN

The Rt Hon Lord Mayor Cllr. Brendan Carr

(In office from June 2016 - June 2017)

Ardmhéara Mícheál Mac Donncha

(In office from June 2017)

MASTER / CHIEF EXECUTIVE OFFICER

Dr Sharon Sheehan, from January 2013

MEMBERS OF STAFF

CONSULTANT OBSTETRICIANS/ GYNAECOLOGISTS

Dr Sharon Sheehan, Master / CEO

Professor Chris Fitzpatrick

Professor Michael Turner

Dr Hugh O'Connor

Professor Sean Daly

Dr Noreen Gleeson

Dr Mary Anglim

Dr Bridgette Byrne

Dr Carmen Regan

Dr Thomas J D'Arcy

Professor Deirdre Murphy

Dr Michael O'Connell

Dr Gunther Von Bunau

Dr Mairead Kennelly

Dr Cliona Murphy

Dr Aisling Martin

Dr Caoimhe Lynch

Dr Aoife O'Neill

Dr Nadine Farah

Dr Shobha Singh

Dr Muhammad Waseem Kamran

Dr Aoife Mullally

Dr Niamh Maher

Dr Iram Basit*

CONSULTANT ANAESTHETISTS

Dr Terry Tan (Director of Perioperative Medicine)

Professor Michael Carey

Dr Niall Hughes

Dr Steven Froese

Dr Nikolay Nikolov

Dr Rebecca Fanning

Dr Sabrina Hoesni

Dr Siaghal Mac Colgáin*

Dr Michelle Walsh*

Dr Yassir Mohammed*

CONSULTANT NEONATOLOGISTS

Dr John Kelleher (Director of Paediatrics & Newborn Medicine)

Professor Jan Miletin

Professor Martin White

Dr Pamela O'Connor

Dr Jan Janota

Dr Anne Doolan

Dr Jana Semberova

Dr Hana Fucikova

Dr Jan Franta

Dr Muhammad Shahid Saleemi*

CONSULTANT PAEDIATRICIAN IN PALLIATIVE MEDICINE

Dr Mary Devins

CONSULTANT DEVELOPMENTAL PAEDIATRICIAN

Dr Suzanne Kelleher

CONSULTANT RADIOLOGIST (ADULT)

Professor Mary T. Keogan

CONSULTANT RADIOLOGIST (PAEDIATRIC)

Dr David Rea

DIRECTOR OF PATHOLOGY

Professor John James O'Leary

CONSULTANT HISTOPATHOLOGIST

Dr Colette Adida

CONSULTANT MICROBIOLOGIST

Dr Niamh O'Sullivan

CONSULTANT HAEMATOLOGIST

Dr Catherine Flynn

Dr Kevin Ryan

CONSULTANT DIABETOLOGIST

Professor Brendan Kinsley

CONSULTANT ENDOCRINOLOGIST

Dr Rachel Crowley

CONSULTANT NEPHROLOGIST

Dr Catherine Wall

CONSULTANT CARDIOLOGIST

Dr John Cosgrave

CONSULTANT PSYCHIATRIST

Dr Joanne Fenton

Dr Ann O'Grady-Walsh*

CONSULTANT ORTHOPAEDIC SURGEONS

Dr Paula Kelly

Dr Jacques Noel

CONSULTANT OPHTHALMIC SURGEON

Dr Kathryn McCreery

VISITING CONSULTANTS

Dr Orla Franklin

Dr Enda McDermott

Dr Katherine McCreery

Dr Donal Brosnahan

Dr Thomas Lynch

Dr John McHugh

Professor Andrew Greene

Dr Fiona Mulcahy

Dr Fiona Lyons

Dr Colm Bergin

NON-CONSULTANT HOSPITAL DOCTORS

SPECIALIST REGISTRARS IN OBSTETRICS/ GYNAECOLOGY

Dr Aoife Mc Sweeney

Dr Jennifer Hogan

Dr Niamh Joyce

Dr Brendan McDonnell

Dr Eimer O'Malley

Dr Azriny Khalid

Dr Alison DeMaio

Dr Carly Walsh

Dr Mark Dempsey

Dr Marie Rochford

Dr Catherine O'Gorman

Dr Aoife Freyne

Dr Laurentina Schaeler

Dr Fionan Donohoe

REGISTRARS IN OBSTETRICS/ GYNAECOLOGY

Dr Fionan Donohoe

Dr Zahrah Elsafty

Dr Tarranum Bano Mohd. Ibrahim

Dr Catherine McNestry

Dr Zulfiya Mamaeva

Dr Megat Kamaruzaman

Dr Aoife McTiernan

JUNIOR REGISTRARS IN OBSTETRICS/ GYNAECOLOGY

Dr Eimear McSharry

Dr Daniel Galvin

Dr Sarah McDonnell

Dr Teresa Treacy

Dr Amy Fogarty

Dr Syed Farah Nazir

Dr Laura O Byrne

Dr Mei Yee Ng

T.C.D. /COOMBE LECTURERS/ REGISTRARS IN OBSTETRICS / GYNAECOLOGY

Dr Oxana Hughes

Dr Nita Adnan

Dr Ciara Mc Cormick

UCD LECTURERS/REGISTRARS IN OBSTETRICS/GYNAECOLOGY

Dr Niamh Daly

Dr Eimer O'Malley

FELLOW IN MATERNAL MEDICINE

Dr Fatema Al Washahi

FELLOW IN UROGYNAECOLOGY

Dr Faiza Aldarmaki

CLINICAL RESEARCH FELLOW IN EARLY PREGNANCY ULTRASOUND

Dr Somaia Elsayed

Dr Mei Yee Ng

SENIOR HOUSE OFFICERS IN OBSTETRICS/GYNAECOLOGY

Dr Vigdan Marmous

Dr Sowmya Mayigaiah

Dr Humaira Tabassum

Dr Muna Rahma

Dr Aisling Heverin

Dr Aleksandra Soboto

Dr Catherine O'Regan

Dr Sarah McDonnell

Dr Darin Ahmed

Dr Ailbhe Duffy

Dr Ellen McMahon

Dr Bernard Kennedy

Dr Daire Nevin Maguire

Dr Gillian Corbett

SENIOR HOUSE OFFICERS IN GENERAL PRACTICE

Dr Simon Kelly

Dr Aoife Nic Shamhrain

Dr Jean Lowry

Dr Clodagh Quinn

Dr Muhammad Omar

Dr Shauna Fagan

Dr Niamh Fitzgerald

Dr Niamh Nic Cinneide

SPECIALIST REGISTRARS IN PAEDIATRICS

Dr Sarah Lewis

Dr Jane McMahon

Dr Niamh O'Catháin

Dr Eleanor Ryan

Dr Bryony Treston

Dr Graham King

Dr Jennifer Jones

Dr Peter Tormey

Dr Michaela Pentony

Dr David Staunton

REGISTRARS IN PAEDIATRICS

Dr Nusrati Ali

Dr Sanusha Govender

Dr Geza Sereny

Dr Katre Mahesh

Dr Saira Tabassum

Dr Lennie Falcone

Dr Zulfiquar Ali Sarani

Dr Gergana Semova

Dr Robert McGrath

SENIOR HOUSE OFFICERS IN PAEDIATRICS

Dr Erica Crothers

Dr Ahmed Daoud

Dr Hassan Ejaz

Dr Carla Peters

Dr Lucy Geraghty

Dr Laura Reaney
Dr Sophie Van Der Putten
Dr Rachel Mulally
Dr Aoife Branagan
Dr Abdullah Abu Haliga
Dr Robert Joyce
Dr Abirami Manian
Dr Doireann McMorrow
Dr Karolina Warciak
Dr Liudmila Kharoshankaya
Dr Elinor Jenkins
Dr AnneMarie Fenton
Dr Leah Halpenny
Dr Ulysses Mustaki
Dr Lesley Darcy

NEONATAL TUTOR IN PAEDIATRICS

Dr Murwan Omer
Dr Mary O'Dea

SPECIALIST REGISTRAR IN ANAESTHETICS

Dr Vandan Ward
Dr Craig Delavari
Dr Olawale Ajetunmobi
Dr James Close

SENIOR REGISTRAR IN ANAESTHETICS

Dr Ashley Fernandes
Dr Matthew Leonard
Dr Peter Popivanov
Dr Dilshod Khamdamov

REGISTRAR IN ANAESTHETICS

Dr Vinod Kumar Talreja
Dr Sabina Stanescu
Dr Darshana Maheshwari
Dr Chandar Maheshwari
Dr Pankaj Shende
Dr Medhat Eldereny
Dr Waqas Minhas

INTERNATIONAL REGISTRAR IN ANAESTHETICS

Dr Sharifa Al Rawahi

SENIOR HOUSE OFFICERS IN ANAESTHETICS

Dr Jennifer Kielty
Dr Sinead Farrell
Dr Deirdre Edgeworth
Dr Maeve McAllister
Dr Hafiz Muhammad Malik
Dr Hisham Saumtally
Dr Patrick Wiseman
Dr Gerard Kavanagh
Dr Claire Mc Sweeney

SPECIALIST REGISTRARS IN HISTOPATHOLOGY

Dr Erin McGrath
Dr Ruth Kilkenny

MIDWIFERY & NURSING

DIRECTOR OF MIDWIFERY & NURSING

Ann MacIntyre

DIRECTOR OF CENTRE FOR MIDWIFERY EDUCATION

Triona Cowman

ASSISTANT DIRECTORS OF MIDWIFERY & NURSING

Bridget Boyd, Assistant Director of Midwifery & Nursing with responsibility for Neonatal Centre and Ultrasound Department

Fidelma McSweeney, Assistant Director of Midwifery & Nursing with responsibility for Maternity Services including Community Midwifery

Frances Richardson, Assistant Director of Midwifery & Nursing with responsibility for Gynaecology, Theatre, OPD and Colposcopy Services

Shyla Jacob, Night Superintendent

Lucy More O'Ferrall, Night Superintendent

Ita Burke, Night Superintendent

ADVANCED NURSE PRACTITIONER – NEONATAL NURSING

Anne O'Sullivan

INFECTION PREVENTION & CONTROL NURSE

Rosena Hanniffy

CLINICAL MIDWIFE/NURSE MANAGERS 3

Ann Fergus, Delivery Suite & Birth Reflections Service

Nora Vallejo, Delivery Suite

Anitha Selvanayagam, Joanne Glover, Raji Dominic, Maternity Wards

Kate Johnson, Community

Bernadette Flannagan, Community Midwifery

Ann-Marie Sliney, Community Midwifery

Mary Ryan, NNC & Ann Kelly (Acting)

Elaine McGeady, Fetal Medicine & Perinatal Ultrasound

Anitha Selvanayagam, Mary McDonald, OPD

Alison Rothwell, Theatres

MIDWIFE MANAGER FOR PPGs, AUDIT, STATISTICS & PERSONNEL

Anne Jesudason

MIDWIFERY EDUCATION

Ann Bowers, CPC – Acting Practice Development Co-ordinator – Paula Barry on secondment as Research Midwife

Gwen Baker, CPC

Sarah Lodola, CPC

Natasha Joyce, CPC

Mary Rodgerson, CPC

Susan O'Callaghan & Arathi Noronha Post Registration Programme Facilitator

Denise Kiernan, Allocations Liaison Officer, 0.5 WTE

Patricia O'Hara, Co-ordinator Post Graduate Diploma in Intensive Neonatal Nursing Programme

Nora Vallejo, Clinical Skills Facilitator, Delivery Suite

CLINICAL MIDWIFE/NURSE MANAGERS 2

Sangeetha Nagarajan, St Gerard's Ward

Kathleen Lynch, Gynaecology Day Ward

Mercy Ninan, Gynae Day Ward

Fiona Gilsenan, Theatre

Patricia Ryan, Theatre

Sarah Ann Walsh, Theatre

Grainne Sullivan, Delivery Suite

Monica O'Shea, Delivery Suite

Noirín Farrelly, Delivery Suite

Fiona Noonan, Delivery Suite

Gráinne Sullivan, Delivery Suite

Gráinne McRory, Delivery Suite

Anne Moyne, Delivery Suite

Suzi McCarthy, Delivery Suite

Elizabeth Johnson (Acting), Delivery Suite

Deirdre Kavanagh, Delivery Suite

Louise O'Halloran, Delivery Suite

Helen Curley, Delivery Suite

Sinead Finn, Delivery Suite

Carmel Healy, Delivery Suite

Mary McMorrow, St Monica's Ward

Rhoda Billones, NNC

Niamh Buggy, NNC

Mary O'Connor, NNC

Mary Ryan, NNC (0.5 WTE)

Elaine Butler, NNU

Luisa Daguio – NNU

Ann Kelly, NNC (0.5 WTE)

Kelly Delaney, St Patrick's Ward

Raji Dominic, St Patrick's Ward & ACMM3

Joanna Iwanska, Our Lady's Ward

Susan Jagan, St Joseph's Ward

Vivienne Browning, Community Midwifery

Mary Holohan, Community Midwifery

Breege Joyce, Community Midwifery

Fiona Walsh, Community Midwifery

Elaine McGeady, Ultrasound

Nicole Mention, Ultrasound

Aoife Metcalfe, Ultrasound (CMS Designate)

Felicity Doddy, Perinatal Diagnosis Co-ordinator

Sinead Gavin, Ultrasound

Janice Gowran, Early Pregnancy Assessment Unit

Susanne Daly, Parent Education

Clare Smart, Gynaecology Services Co-Ordinator

Feba Paul, Colposcopy (CMS Designate)

Yvonne McCudden, Colposcopy (CMS Designate)

Aidin Roberts, Gynaecological Oncology Liaison

Sarah Gleeson, CMS Designate, Bereavement

HAEMOVIGILANCE OFFICER

Sonia Varadkar

MIDWIFE CO-ORDINATOR HIGH RISK MIDWIFERY TEAM

Catherine Manning

CLINICAL MIDWIFE OR NURSE SPECIALISTS (CMS/CNS)

Ethna Coleman, CMS Diabetes

Clíodhna Grady, CMS, Diabetes

Jane Durkan Leavy, CMS Ultrasound

Christine McLoughlin, CMS Designate, Ultrasound

Siobhán Ni Scannaill, CMS, Ultrasound

Feena Sheeran, CMS, Ultrasound

Olivia McCarthy, Colposcopy

Amy Loughlin, Colposcopy

Aoife Kelly, CMS, Colposcopy

Margaret Moynihan, CMS, Adult & Neonatal Resuscitation

Barbara Whelan, CMS, Neonatal Transition Home Service

Meena Purushothaman, CMS, Lactation

Mary Toole, CMS, Lactation

Orla Cunningham, CMS, Infectious Diseases

Brid Shine, CMS Bereavement

Elaine McGoldrick, CMS, Perinatal Mental Health

CLINICAL SKILLS FACILITATORS

Mary Ryan, Neonatal Nursing (0.5 WTE)

Pauline O'Connell, Neonatal Nursing (0.5 WTE)

Ann Kelly, Neonatal Nursing (0.5 WTE)

Ruth Banks, Delivery Suite

Nora Vallejo, Delivery Suite

CLINICAL MIDWIFE/NURSE MANAGERS 1

Violeto Basco, Neonatal

Alice O'Connor, Neonatal

Marion O'Shaughnessy, Neonatal

Manju Kuzhivelil, Neonatal

Nova Lacondola Quiapos, Neonatal

Jean Cousins, Neonatal Paediatric Clinic

Grace Cuthbert, St Gerard's Ward

Bridget Kirby, St Gerard's Ward

Geraldine Creamer Quinn, St Patrick's Ward

Minimol George, St Patrick's Ward

Helen Saldanha Castelino, St Patrick's Ward

Ann Leonard, St Joseph's Ward

Maureen Doherty, St Joseph's Ward

Deborah Duffy, St Monica's Ward

Marie Foudy, St Monica's Ward

Althea Noble, St Monica's Ward

ON SECONDMENT to HEALTH SERVICE EXECUTIVE

Maureen Revilles, Acting Director of Midwifery & Nursing, Portlaoise Hospital

Joan Malone, Quality and Patient Safety Directorate, Sept 2009 to 30th September 2012 & Maternity & Neonatal Clinical Management System (MN- CMS) in Maternity Units from 1st October 2012 resigned 1.01.18

Judith Fleming – on secondment to CME from Oct 15 to present

ON SECONDMENT to TRINITY COLLEGE DUBLIN

Karen Hill, Midwifery Tutor from 15th April 2013 until 22.1.17 – then resigned

Noeleen Cahill-Barry, from 05.06.2017

MIDWIFERY & NURSING SECRETARIAL SUPPORT

Sarah Bux

MEDICAL SOCIAL WORKERS

Rosemary Grant, Principal Medical Social Worker

Denise Shelly, Senior Social Work Practitioner

Tanya Franciosa, Medical Social Worker

Sarah Lopez, Medical Social Worker

Sorcha O'Reilly, Medical Social Worker

Kate Burke, Medical Social Worker

Gretchen Gaspari McGuirk, Medical Social Worker

Tara Lynch – Medical Social Worker*

PHYSIOTHERAPISTS

Margaret Mason, Physiotherapy Manager

Julia Hayes, Senior Chartered Physiotherapist

Anne Graham (McCloskey), Senior Chartered Physiotherapist

Clare Farrell, Senior Chartered Physiotherapist

Roisin Phipps Considine, Senior Chartered Physiotherapist

Sarah Bevan, Senior Chartered Physiotherapist

Anna Chrzan, Chartered Physiotherapist

Sara Birch, Physiotherapist*

Amanda Martins, Physiotherapist*

Velta Vuskane, Physiotherapist*

DIETICIAN/CLINICAL NUTRITIONIST

Fiona Dunlevy, Dietician Manager

Niamh Ryan, Senior Dietician (Diabetes)

PHARMACISTS

Mairead McGuire – Chief Pharmacist I

Peter Duddy, Chief Pharmacist II

Úna Rice, Senior Pharmacist Antimicrobial

Gayane Adibekova, Pharmacy Technician

Orla Fahy, Senior Pharmacist

Joanne Frawley, Basic Grade Pharmacist

CHIEF MEDICAL SCIENTISTS

Martina Ring, Laboratory Manager

Stephen Dempsey, Pathology Quality/IT

Fergus Guilfoyle, Haematology/Blood Transfusion

Jacqui Barry O'Crowley, Histopathology

Mary Sweeney, Cytology

Catherine Byrne, Microbiology

PRINCIPAL BIOCHEMIST

Ruth O'Kelly

CLINICAL SPECIALIST RADIOGRAPHER

Johannes Tsagae

SECRETARY & GENERAL MANAGER

Patrick Donohue

FINANCIAL CONTROLLER

John Robinson

HUMAN RESOURCES

AnneMarie Waldron, HR Manager

Bridie Horan, HR Business Partner

Gina Elliott

Sandra Plummer (to November 2017)

Stephen Dunne (to February 2017)

Theresa Dempsey

Niamh McGlade

Carthach McCarthy

Michael Curtis

Lisa Hynes (to October 2017)

Aisling Granahan (to September 2017)

GENERAL SERVICES MANAGER / HOUSEHOLD SUPERVISOR

Jonathan Roughneen

PATIENT SERVICES MANAGER

Ann Shannon

DEPUTY PATIENT SERVICES MANAGER/ HEALTHCARE RECORDS MANAGER

Niamh McNamara

DATA GOVERNANCE MANAGER

Siobhan Lyons

OPERATIONS MANAGER

Vivienne Gillen

ASSISTANT HOUSEHOLD SUPERVISOR

Arlene Kelly

Olive Lynch

Rita Greene

Colm Harte*

ENGINEERING OFFICER

Serge Panzu Nianga

CLINICAL ENGINEER

Karl Bergin

RESEARCH PROJECT MANAGERS

Lean McMahon*

Karen Power*

QUALITY MANAGER

Evelyn O'Shea

CLINICAL RISK MANAGER

Anna Deasy

SUPPLIES MANAGER

Robert O'Brien

CATERING MANAGER

Thomas Dowling

CHAPLAIN

Renee Dilworth

Phil Power (to July 2017)

COMMUNICATIONS OFFICER

Mary Holden

INFORMATION TECHNOLOGY MANAGER

Tadhg O'Sullivan

HEALTH & SAFETY OFFICER

Tom Madden

RECEPTION

Brid Mangan – Head Receptionist

P.A. TO MASTER/CEO AND TO SECRETARY & GENERAL MANAGER

Laura Forde

* Locum/Temporary position

Staff Retirements in 2017

Ann Prendergast
Grade IV Officer

Maureen Doherty
CMMI

Susan Kelly
Clinical Risk Manager

Cath Heffernan
Midwife

Jean Fitzgerald
Midwife

Bernadette Flanagan
CMM III

Mary Jacob
Senior Staff Nurse

Elizabeth Henderson
Telephonist Attendant

Phil Power
Chaplain

Marie Brown
Ward Domestic

Shirley Bowles
Grade IV Officer

Mary Jackman
Grade V Officer

Professor Michael Carey
Consultant Anaesthetist / Director of Perioperative Medicine

On behalf of the Board of Guardians and Directors and the Management Executive of the Hospital, I would like to sincerely thank the members of staff who have retired from the Hospital in 2017 for their enormous contribution during their years of dedicated professional service.

Dr Sharon Sheehan
Master/CEO

Director of Midwifery & Nursing- Corporate Report

Head of Department

Ms Ann MacIntyre, *Director of Midwifery & Nursing*

Title of Post	In Post on 31st December 2017 (WTE)	In post on 31st December 2016 (WTE)
Director of Midwifery & Nursing	1	1
Assistant Director of Midwifery & Nursing	6.55	6.55
Advanced Nurse Practitioner-Neonatal Nursing	1	1
Midwifery & Nursing Practice Development Co-ordinator	1	1
Postgraduate Neonatal Programme Co-ordinator	1	1
Clinical Midwife/Nurse Manager 3	9	9
Clinical Midwife/Nurse Manager 2	40.9	37.84
Clinical Midwife/Nurse Specialists	13.1	14.45
Clinical Skills Facilitators	3.13	4.11
Haemovigilance Officer	0.77	0.77
Clinical Placement Coordinators	3.62	4.1
Post Registration Programme Facilitator	1	1
Allocation Liaison Officer	0.5	0.5
Clinical Midwife/Nurse Manager 1	10.24	14.14
Midwives & Nurses	251.66	219.91
Midwifery Students	10	11.5
NMPDU Research Posts	1	1
Total	**355.5**	**328.8**

Staff Complement

Total Approved Complement for Midwives & Nurses as of 31st December 2017 was 382 WTE.

Key Performance Indicators

Quality of Midwifery & Nursing Care

- That every woman, baby and family experience high-quality, evidence-based person-centred care in accordance with our mission statement "Excellence in the Care of Women & Babies".

Midwifery & Nursing Workforce

- Continuous Professional Development in Midwifery & Nursing research, audit and education leading to a highly-skilled, educated and empowered team.
- Workforce planning and development with a strong focus on recruitment, retention and succession planning resulting in decreased agency usage and reduced staff turnover rates.

Leadership

- Leadership and direction to the Nursing and Midwifery staff working in partnership with the Multi-Disciplinary Team and Stakeholders especially the women and their families.
- Ensure that Midwifery & Nursing practice reflects and delivers the CWIUH Strategy, National Maternity Strategy 2016-2026, National Standards for Safer Better Maternity Services (HIQA) and NMBI Standards for Nurses and Midwives.

Overview of Activities in 2017

"Back to Basics" was our focus and guide for 2017, where we strove to ensure that every woman would be supported and guided at each step on her journey through the Coombe Women & Infants University Hospital, while also focusing on "One to One" care in the Delivery Suite. The passion, care and support given by the midwives, nurses and healthcare assistants is reflected throughout this annual report. Their eagerness and enthusiasm to give "Excellence in Care" was demonstrated throughout the year and the achievements of 2017 listed in the various clinical reports would not have been possible without the dedication and commitment of all the staff. A very sincere thanks to all the staff for their hard work and caring ethos and a very sincere thanks also to the Assistant Directors of Midwifery & Nursing and Night Superintendents for the support, guidance, help and kindness that they continually gave to all the staff throughout the year.

The Water Birth Reunion took place on April 1st in the Rita Kelly Conference Centre, to celebrate reaching 100 water births (WIS research study). One hundred and fifty families, visitors and staff attended. It was not just to celebrate water birth but to celebrate birth itself and the fact that we are offering women choice to assist them through labour and birth. Midterm analysis of the WIS study was presented in November, with 100 water births in total.

We were delighted to welcome our Italian and Spanish Midwives recruited in May, who commenced working in August, September and October with a very structured orientation programme supported by the Practice Development Team. They all acclimatized very quickly into our Coombe family. Once again very sincere thanks to all the staff midwives and nurses and HCAs that welcomed, supported and mentored all the 75 newly-recruited staff throughout the year.

Angela Dunne, Director of Midwifery for the National Women & Infants Health Programme (NWIHP), visited on the 3rd August and met with Staff Midwives and Nurses during her tour of the Coombe. Children First Implementation was presented to staff in August by the Training & Development Officer, DMHG. It is mandatory that all staff complete the e-learning programme.

The Birth Reflections Service under the guidance of Ann Fergus commenced in 2017. It is a listening service for women who have given birth, or are planning to give birth at the CWIUH. Birth Reflections aims to give women the chance to explore their birth experience and ask questions that they may not have previously asked. Women can contact the service through a designated phone line or email. Pathways following consultation have been organised for Medical Social Worker and Perinatal Mental Health referral.

Workforce Planning

Recruitment and retention of midwives and nurses continued to be a top priority in 2017, and the wonderful support and guidance by the Human Resource Team was appreciated. The CWIUH had a stand at the Health Sector Jobs Fair in Edinburgh, Scotland in March and the CWIUH staff also supported the HSE recruitment in Dr Steevens' Hospital in March.

Two ADoM&Ns travelled to Rome and recruited 22 Staff Midwives. A relocation package was finalised for overseas staff and a retention package for newly qualified and newly appointed midwives was developed with the Clinical Practice Development department. An additional Clinical Skills Facilitator (CSF) was recruited to help support the staff at ward level.

The Practice Development Team organised 3-hour information sessions in July, August and September for staff nurses with an interest in pursuing a career in Midwifery. Nineteen nurses attended. A poster was also placed at the front gates inviting and informing nurses to come join the Coombe team.

Midwifery/Nursing Education

Approval and funding from the Nursing & Midwifery Planning Development Unit (NMPDU) was secured for 32 midwives and nurses to continue and/or commence studies at Certificate/Diploma/Postgraduate Diploma/MSc level and High Dependency Maternity Care Module and IBLCLC. Four Midwives graduated with MSc and seven Neonatal Nurses graduated with PgDIP in Neonatal Intensive Care. Two Midwifery staff completed the Parent Education Facilitation Course in University College Cork and six Midwives completed hypnobirthing training. One Midwife commenced the "Examination of the Newborn" course in UCD. Workshops, toolbox education sessions and skills and drills on cord presentation, post-partum haemorrhage, water birth updates and shoulder dystocia continued throughout the year supported by the Clinical Skills Facilitators and Midwives.

The ACMM III in Delivery Suite attended the 3-day European conference on Intrapartum Care in Stockholm in May, the conference focused on human factors and midwifery & obstetric care. The CMM II in Urogynaecology attended the Urodynamic Conference in Bristol while the CMS in Infectious Diseases and Dr. Nikita Deegan had an e-poster accepted for presentation at the British Association of Sexual Health & HIV conference in Belfast. Six CMM IIs attended the Quality Open Day in Salford Royal NHS Foundation Trust, England. The CMMs found the visit inspiring, enlightening and very informative.

The Foundations in Family-Centred Developmental Care, 2-day course was run in July in the Centre for Midwifery Education in collaboration with Inga Warren, Mary O'Connor and Joanne Furaque our CWIUH NIDCAP pro-

fessionals and Team and Cork University Maternity Hospital.

Twenty German Student Nurses visited in April and 40 American Student Nurses with 4 Professors visited in May.

Quality Improvement/Risk Issues

A review of the 3rd and 4th degree tears was undertaken by Dr Mullally and Ann Fergus CMM III in Delivery Suite as the incidence of Obstetric Anal Sphincter Injuries (OASIs) had increased to a rate of 3.1%. A Quality Improvement Initiative was introduced with the support of our Quality Manager and CMMs and Midwives and Doctors in the Delivery Suite. A business case was submitted for the purchase of episcissors and tool box sessions on PEACHES commenced. A quality safety board with KPIs was presented on a weekly basis and debriefing sessions were organized for all staff. The initiative was hugely successful, reducing the rate to less than 2% and the initiative's success continues with frontline staff ownership. The team won 1st prize for their OASIs poster presentation at the State Claims Agency's Quality, Patient Safety and Clinical Risk Conference, they also presented the poster at the NMPDU conference and the INMO All Ireland Midwifery Conference in Armagh.

Six LEAN projects were presented by the staff in the Boardroom from St. Monica's, St Patrick's, St Joseph's, Our Lady's, Delivery Suite and the Neonatal Unit. Each project was presented by the Midwives, Nurses and CMMs, with such pride and joy in their work, their learning and the improvements each project will bring to their ward. 20 midwifery staff also attended the LEAN white belt training in May.

Quality improvement was at the heart of many initiatives: in the Delivery Suite a competency booklet was developed for newly qualified staff and newly appointed staff midwives to support and guide them. A review of Post-Partum Hemorrhage commenced with a view to identifying and reducing the incidence using the PDSA cycle in Quality Improvement. An Orientation pack and presentation was given to all staff midwives and nurses to eliminate the fear of rotation, give clarity and transparency but also to highlight the great learning and educational opportunities offered in each area. Introduction of an easy access to Q-pulse via the Intranet enabled the CMMs identify staff training records and requirements in each ward, in addition to facilitating easier access to policies and guidelines. Lisa Toland, Microsystems Facilitator, Quality Improvement Division of the HSE visited with a view to collaborating with the CWIUH on QI systems

The Ambulatory Gynaecology Clinic commenced in July, introducing Outpatient Hysteroscopy as an outpatient waiting list initiative with Dr. Iram Basit and the Nursing and Midwifery Teams from OPD and Colposcopy providing three clinics per week. Essential upgrades to Theatres 1 & 2 occurred with the great support and help from the CNM III and Theatre Department Team. The National Patient Experience survey took place in St Gerard's Ward in May and the overall feedback was very positive, two quality improvement initiatives were launched to improve discharge information leaflets and a review of nutrition services.

The DoM&N attended the National Perinatal Health Conference and "Mind Mothers" Project launch on the 5th September in Dublin and Best Practice Principles for Midwives, PHNs and Practice Nurses was launched. The DoM&N presented Care Pathway options available in the CWIUH at the *National Women & Infants Health Programme "Shared Learning"*- it was a day of networking and shared learning with a common aim to build leadership, management and governance in the Maternity Services in Ireland. The DoM&N also presented the CWIUH models of care at the *All Ireland Maternity Forum* in December and attended the Miscarriage Association November Service in St Teresa's Church, Donore Avenue.

Going forward into 2018 let our Values drive us to guide and support us to deliver holistic, quality and safe care to every woman, baby & family that we care for.

Let us:

Create a better future by embracing the National Maternity Strategy

Work in collaboration with Women & their families

Innovation & Integrity by providing evidence based care, abide by clinical governance and ensure a culture of open transparency

Unity, working together and respecting and supporting each other.

Holistic, compassionate care for women, babies & families & staff, treating each other with kindness.

Ms Ann McIntyre

Director of Midwifery & Nursing

Dublin Maternity Hospitals – Combined Clinical Data

Dr. Sharon Sheehan, Master

The following tables have been agreed to form the common elements of the Three Dublin Maternity Hospitals Report.

1. Total Mothers Attending

Mothers delivered ≥ 500 grams	7975
Mothers delivered < 500 grams and miscarriages	586*
Gestational Trophoblastic Disease	24
Ectopic pregnancies	104
Total mothers	**8689**

** Does not include all spontaneous miscarriages*

2. Maternal Deaths 0

3. Births ≥ 500g

Singletons	7786
Twins	365*
Triplets	15*
Quadruplets	0
Total	**8166**

** excludes babies <500g*

4. Obstetric Outcome (%)

Spontaneous vaginal delivery	53.3
Forceps	5.3
Ventouse	9.6
Caesarean Section	31.8
Induction	34.8

5. Perinatal Deaths ≥ 500g

Antepartum Deaths	25
Intrapartum Deaths	2*
Stillbirths	27
Early Neonatal Deaths	22
Late Neonatal Deaths	10
Congenital Anomalies	28**

** Known fetal abnormalities*

*** 11 SB, 14 END, 3 LND*

6. Perinatal Mortality Rates ≥ 500g

Overall perinatal mortality rate per 1000 births	6.00
Perinatal mortality rate corrected for lethal congenital anomalies	2.95
Perinatal mortality rate including late neonatal deaths	7.23
Perinatal mortality rate excluding unbooked cases	4.53
Corrected perinatal mortality rate excluding unbooked	2.58

7. Age

	Nulliparous* N	Parous* N	Totals N	Total %
< 20 yrs	119	13	132	1.7
20-24 yrs	436	253	689	8.6
25-29 yrs	719	757	1476	18.5
30-34 yrs	1143	1566	2709	34.0
35-39 yrs	680	1743	2423	30.4
40+ yrs	167	379	546	6.8
Total	**3264**	**4711**	**7975**	**100**

**nulliparous and parous refer to the maternal status at booking or at first presentation to the hospital;*

nulliparous = never having delivered an infant ≥ 500g; parous = having delivered at least one infant ≥ 500g

8. Parity

	Nulliparous N	Parous N	Totals N	Total %
Para 0	3264		3264	40.9
Para 1		2736	2736	34.3
Para 2-4		1870	1870	23.5
Para 5+		105	105	1.3
Total	**3264**	**4711**	**7975**	**100**

9. Country of Birth & Nationality

Country	N	%
Ireland	5614	70.4
Britain	223	2.8
EU	871	10.9
EU Accession Countries 2007	209	2.6
Rest of Europe (including Russia)	133	1.7
Middle East	47	0.6
Rest of Asia	422	5.3
Americas	152	1.9
Africa	292	3.6
Australasia	7	0.1
Uncoded	5	0.1
Total	**7975**	**100**

10. Socio-Economic Groups

Socio-Economic Group	N	%
Higher Profession	780	9.8
Lower Profession	2706	33.9
Clerical	1091	13.7
Skilled	750	9.4
Semi-Skilled	532	6.6
Unskilled	293	3.7
Unemployed	1715	21.5
Unsupported	50	0.6
Military	4	0.1
Not Classified	41	0.5
Not Answered	13	0.2
Total	**7975**	**100**

11. Birth Weight

	Nulliparous N	Parous N	Totals N	%
500 – 999 gms	32	22	54	0.7
1000 – 1499	45	35	80	1.0
1500 – 1999	54	62	116	1.4
2000 – 2499	159	193	352	4.3
2500 – 2999	491	555	1046	12.8
3000 – 3499	1140	1598	2738	33.5
3500 – 3999	1107	1670	2777	34.0
4000 – 4499	275	602	877	10.7
4500 - 4999	47	71	118	1.5
≥ 5000	0	8	8	0.1
Total	**3350**	**4816**	**8166**	**100**

12. Gestational Age

	Nulliparous N	Parous N	Total N	Total %
< 26 weeks	15	13	28	0.3
26 – 29 weeks + 6 days	34	29	63	0.8
30 – 33 weeks + 6 days	63	65	128	1.6
34 – 36 weeks + 6 days	197	277	474	5.8
37 – 41 weeks + 6 days	3003	4411	7414	90.8
42+ weeks	38	15	53	0.6
Not Answered	0	6	6	0.1
Total	**3350**	**4816**	**8166**	**100**

13. Perineal Trauma after Spontaneous Vaginal Delivery (SVD)

	Nulliparous		Parous		Total	
	N	%	N	%	**N**	**%**
Episiotomy	280	22.7	158	5.2	438	10.3
First degree tear	202	16.4	625	20.6	827	19.4
Second degree tear	490	39.7	923	30.5	1413	33.2
Third degree tear	39	3.2	32	1.1	71	1.7
Fourth degree tear	2	0.2	1	0.03	3	0.1
Other	660	53.5	1088	35.9	1748	41.0
Intact	125	10.1	929	30.7	1054	24.7
Total Spontaneous Vaginal Deliveries	1233		3029		4262	

14. Third Degree Tears (N = 110)

	Nulliparous	Parous	**Totals**	
	N	N	**N**	**%**
Occurring spontaneously	39	32	71	64.5
Associated with episiotomy	28	3	31	28.2
Associated with forceps	19	1	20	18.2
Associated with ventouse	10	3	13	11.8
Associated with ventouse + forceps	6	0	6	5.5
Associated with O.P. position	11	6	17	15.5
Total Third Degree Tears	74	36	110	

** % of all third degree tears; tears may be recorded in > one category*

15. Perinatal Mortality in Normally Formed Stillborn Infants (N = 16)

	Nulliparous	Parous	Total
Abruption	3	6	9
Abruption with cord accident	1	0	1
Fetal thrombotic vasculopathy	2	1	3
Infection	1	0	1
Unexplained	0	1	1
Illicit Drug Use	0	1	1
Total	**7**	**9**	**16**

16. Perinatal Deaths in Infants with Congenital Malformation (N = 25)*

	Nulliparous	Parous	Total
Chromosomal	6	5	11
Hydrops	0	1	1
Neural tube defects	1	2	3
Cloacal Dysgenesis Sequence	1	1	2
Arthrogryposis	0	2	2
Gastroschisis	1	0	1
Skeletal Dysplasia	1	0	1
Congenital Cardiac Disease	1	0	1
Congenital cerebrovascular malformation	0	1	1
Multiple congenital anomalies	1	1	2
Total	**12**	**13**	**25**

**11 SB, 14 END*

17. Neonatal Deaths (N = 32)

	Nulliparous	Parous	Total
Congenital	6	11	17
Extreme Prematurity	0	1	1
Extreme Prematurity / NEC	5	1	6
Extreme Prematurity / Pulmonary Hypertension	0	1	1
Sepsis	2	0	2
HIE	1	1	2
Coagulopathy with subgaleal haemorrhage	1	0	1
SIDS	0	1	1
Out of hospital cardiac arrest and NEC sepsis	1	0	1
Total	**16**	**16**	**32**

** 22 END, 10 LND*

18. Overall Autopsy Rate 52.5%

19. Hypoxic Ischaemic Encephalopathy - Inborn (Grade II and III) 10

20. Severe Maternal Morbidity (N = 57 mothers)*

	Nulliparous	**Parous**	**Totals**
Massive obstetric haemorrhage	15	15	**30**
Renal / Liver dysfunction	5	4	**9**
Pulmonary Embolus	2	3	**5**
Peripartum hysterectomy	0	3	**3**
Uterine Rupture	0	3	**3**
Pulmonary Oedema	2	1	**3**
CVA	0	1	**1**
ICU	0	2	**2**
Other	3	1	**4**

**Some patients are included in more than one category*

21. Financial Summary at 31st December 2017

Income	€, 000	€,000
Department of Health Allocation 2017	59,811,622	
Patient Income	10,946,851	
Other	4,619,209	
		75,377,682
Pay		
Medical	10,444,721	
Nursing	21,663,548	
Other	27,186,174	59,294,443
Non Pay		
Drugs & Medicines	2,265,507	
Medical & Surgical Appliances	4,892,148	
Insurances	108,679	
Laboratory	2,368,719	
Other	6,149,533	
		15,784,586
Net Surplus 2017		298,653
Taxes paid to Revenue Commissioners Year ended 31st December 2017		
PAYE & USC		9,917,935.11
PRSI EE		1,675,113.50
PRSI ER		4,341,909.90
Withholding Tax		163,325.49

Does not include any deficit balances carried forward from previous years

Statistical Summaries

Dr. Sharon Sheehan, Master

1. Mothers Attending Hospital

	2011	2012	2013	2014	2015	2016	**2017**
Mothers delivered ≥ 500 grams	8536	8419	7986	8632	8220	8233	**7975**
Mothers delivered < 500 grams and Miscarriages	638*	627*	563*	632*	649*	589*	**586***
Gestational Trophoblastic Disease	26	19	14	6	8	6	**24**
Ectopic Pregnancies	115	110	89**	124	124	113	**104**
Total Mothers	9315	9175	8610	9344	9001	8941	**8689**

** Does not include all spontaneous miscarriages*

*** method of collecting ectopic data changed in 2013*

2. Maternal Mortality

	2011	2012	2013	2014	2015	2016	**2017**
Maternal Deaths	1[1]	3[2]	1[3]	1[4]	1[5]	0	**0**

1 Sudden unexplained death in epilepsy (SUDEP)

2 Suicide, Sudden Adult Death Syndrome (SADS) and Amniotic Fluid Embolism

3 Cardiac arrest brought about by hyperkalaemia

4 Amniotic Fluid Embolism (cardiac collapse & disseminated intravascular coagulopathy following amniotic fluid escape into the maternal circulation)

5 Ruptured giant internal carotid artery aneurysm with systemic Fibromuscular Dysplasia

3. Births ≥ 500g

	2011	2012	2013	2014	2015	2016	**2017**
Singleton	8371	8258	7810	8463	8042	8048	**7786**
Twins	313*	309*	338*	336*	353*	350	**365***
Triplets	21	18	18	20*	9*	23*	**15**
Quadruplets	4	0	4	0	0	0	**0**
Total	8709	8585	8170	8819	8404	8421	**8166**

**excludes babies <500g*

4. Obstetric Outcomes

	2011	2012	2013	2014	2015	2016	**2017**
Induction of Labour	33.3%	35.3%	33.8%	30.9%	31.7%	33.9%	**34.8%**
Episiotomy	15.4%	14.0%	13.2%	13.2%	13.9%	15.5%	**17.9%**
Forceps Delivery	7.2%	6.4%	5.2%	5.2%	5.8%	5.3%	**5.3%**
Ventouse Delivery	7.8%	8.9%	8.5%	9.3%	9.0%	9.1%	**9.6%**
Caesarean Section	27.7%	27.1%	28.0%	27.8%	29.3%	31.3%	**31.8%**

5. Perinatal Deaths ≥ 500g

	2011	2012	2013	2014	2015	2016	**2017**
Stillbirths	33	33	31	41	29	21	**27**
Early Neonatal Deaths	17	20	29	13	19	18	**22**
Late Neonatal Deaths	8	8	6	2	7	6	**11**
Total	58	61	66	56	55	45	**60**

6. Perinatal Mortality Rates (PNMR) ≥ 500 g per 1000

	2011	2012	2013	2014	2015	2016	**2017**
Overall PNMR	5.7	6.2	7.3	6.1	5.7	4.5	**6.0**
PNMR corrected for lethal malformation	3.7	3.7	4.7	4.3	3.2	2.6	**2.95**
PNMR including late neonatal deaths	6.7	7.1	8.1	6.4	6.5	5.2	**7.2**
PNMR excluding unbooked cases	4.9	5.0	5.6	5.3	4.8	3.9	**4.5**
Corrected PNMR excluding unbooked	3.3	3.3	3.0	3.8	3.1	2.0	**2.6**

7. Statistical Analysis of Obstetric Population

7.1 Age

Age (Years)	Nulliparous* N	Parous* N	Total N	%
<20	119	13	132	1.7
20 – 39	2978	4319	7297	91.5
40+	167	379	546	6.8
Total	3264	4711	7975	100

*nulliparous and parous refer to the maternal status at booking or at first presentation to the hospital; nulliparous = never having delivered an infant ≥ 500g; parous = having delivered at least one infant ≥ 500g

7.2 Category

Patient Category	Nulliparous* N	Parous* N	Total N	%
Public	2528	3681	6209	77.9
Semi-Private	321	372	693	8.7
Private	415	658	1073	13.4
Total	3264	4711	7975	100

7.3 Birthplace

Mother's Country of Birth	N	%
Republic of Ireland	5614	70.4
EU	1303	16.3
Non EU	1053	13.2
Uncoded	5	0.1
Total	7975	100

7.4 Parity

	Nulliparous* N	Parous* N	Total	
			N	%
Para 0	3264		3264	40.9
Para 1		2736	2736	34.3
Para 2-4		1870	1870	23.5
Para 5+		105	105	1.3
Total	**3264**	**4711**	**7975**	**100**

7.5 Birth Weight

	Nulliparous* N	Parous* N	Total	
			N	%
500 – 999	32	22	54	0.7
1000 – 1499	45	35	80	1.0
1500 – 1999	54	62	116	1.4
2000 – 2499	159	193	352	4.3
2500 – 2999	491	555	1046	12.8
3000 – 3499	1140	1598	2738	33.5
3500 – 3999	1107	1670	2777	34.0
4000 – 4499	275	602	877	10.7
4500 – 4999	47	71	118	1.5
> 5000	0	8	8	0.1
Total	3350	4816	8166	100

7.6 Gestational Age

	Nulliparous* N	Parous* N	Total	
			N	%
< 26 weeks	15	13	28	0.3
26-29 weeks + 6 days	34	29	63	0.8
30-33 weeks + 6 days	63	65	128	1.6
34-36 weeks + 6 days	197	277	474	5.8
37-41 weeks + 6 days	3003	4411	7414	90.8
42+ weeks	38	15	53	0.6
Not Answered	0	6	6	0.1
Total	3350	4816	8166	100

8. Statistical Analysis of Hospital Population, 2011 – 2017

8.1 Age, 2011 – 2017

Age at Delivery (Years)	2011 (n=8536)	2012 (n=8419)	2013 (n=7986)	2014 (n=8632)	2015 (n=8220)	2016 (n=8233)	**2017 (n=7975)**
<20	3.9%	2.6%	2.1%	1.9%	1.9%	2.1%	**1.7%**
20 – 24	12.2%	11.7%	10.6%	9.3%	8.5%	8.6%	**8.6%**
25 – 29	24.8%	23.3%	22.7%	20.2%	19.9%	18.5%	**18.5%**
30 – 34	32.7%	34.4%	35.6%	36.1%	36.3%	36.4%	**34.0%**
35 – 39	22.2%	23.0%	23.4%	26.2%	27.3%	27.8%	**30.4%**
>40	4.1%	5.0%	5.6%	6.3%	6.1%	6.6%	**6.8%**

8.2 Parity, 2011 – 2017

Parity	2011 (n=8536)	2012 (n=8419)	2013 (n=7986)	2014 (n=8632)	2015 (n=8220)	2016 (n=8233)	**2017 (n=7975)**
0	40.6%	40.2%	38.7%	39.1%	38.5%	40.0%	**40.9%**
1,2,3	56.0%	56.5%	57.7%	57.7%	58.6%	57.0%	**56.3%**
4+	3.4%	3.3%	3.6%	3.2%	2.9%	3.0%	**2.8%**

8.3 Birth Weight, 2011 – 2017

Birth Weight (grams)	2011 (n=8709)	2012 (n=8419)	2013 (n=8170)	2014 (n=8819)	2015 (n=8404)	2016 (n=8421)	**2017 (n=7975)**
500 - 999	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	**0.7%**
1000 – 1499	1.0%	0.8%	1.0%	0.7%	0.6%	0.6%	**1.0%**
1500 – 1999	1.4%	1.4%	1.7%	1.5%	1.5%	1.5%	**1.4%**
2000– 2499	3.6%	4.3%	4.6%	4.3%	4.2%	4.0%	**4.3%**
2500– 2999	13.4%	13.8%	12.9%	13.9%	13.4%	13.9%	**12.8%**
3000– 3499	34.0%	33.4%	33.4%	34.0%	34.3%	33.9%	**33.5%**
3500– 3999	32.6%	33.0%	32.8%	32.9%	33.1%	33.0%	**34.0%**
4000– 4499	11.6%	10.7%	11.3%	10.4%	10.7%	10.8%	**10.7%**
>4500	1.7%	1.9%	1.6%	1.7%	1.6%	1.5%	**1.5%**
Unknown	0%	0.7%	0.0%	0.0%	0.0%	0.2%	**0.1%**

8.4 Gestation, 2011 – 2017

Gestation (weeks)	2011 (n=8536)	2012 (n=8419)	2013 (n=8170)	2014 (n=8819)	2015 (n=8220)	2016 (n=8233)	**2017 (n=7975)**
<28 weeks	0.7%	0.5%	0.6%	0.5%	0.5%	0.5%	**0.5%**
28 – 36	6.1%	6.0%	6.7%	6.2%	6.2%	6.0%	**6.5%**
37 – 41	92.6%	93.2%	92.3%	92.7%	92.8%	92.9%	**92.2%**
42+	0.5%	0.3%	0.4%	0.6%	0.4%	0.6%	**0.7%**
Unknown	0.1%	0.0%	0.0%	0.04%	0.1%	0.0%	**0.1%**

9. In-patient Surgery, 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
Obstetrical	3300	3239	3308	3630	3590	3663	**3544**
Cervical	1190	1034	838	882	752	828	**844**
Uterine	2553	2668	2897	2696	2704	2761	**2543**
Tubal & Ovarian	936	1051	1032	916	844	847	**812**
Vulval & Vaginal	400	367	522	408	361	423	**360**
Urogynaecology	226	224	336	328	329	365	**410**
Other	47	60	47	31	38	31	**43**
Total	8652	8650	8980	8891	8618	8918	**8556**

10. Outpatient Attendances, 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
Paediatric	9075	9378	8690	8587	6829	6572	**5545**
Obstetrical/Gynaecological	99228*	101448*	111204*	110985*	109201*	105521*	**112074***

**excludes Colposcopy and Perinatal Centre*

11. In-patient Admissions*, 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
Obstetrics	17342	17185	16746	17637	16398	17006	**16514**
Gynaecology	1015	1082	1182	1028	966	943	**812**
Paediatrics	1023	1057	1124	1106	1052	1424	**1105**

**Figure based on discharges*

12. Bed Days (Overnight admissions), 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
Infants	12497	12653	12200	11765	12673	14206	**14503**
Adults	46492	45626	43530	41198	40695	42329	**39691**

13. Day Case Admissions, 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
Obstetrical	12222	12741	10092	12268	12453	12841	**13160**
Gynaecological	8148	8045	11997	9850	8510	8495	**8185**
Total	20370	20786	22089	22136	20963	21336	**21345**

14. Adult Emergency Room (ER) & Early Pregnancy Assessment Unit (EPAU), 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
ER	7346	7802	8,136	9,457	9,573	9026	**9351**
EPAU	2381	4293	4,368	4654	5,106	4460	**4213**

15. Perinatal Day Centre Attendances (PNDC) & Perinatal Ultrasound (PNU)*, 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
PNU	27781*	28701*	27732*	26039*	28161*	28913	**28858**
PNDC	11841**	12372**	11534**	12217**	13012**	12471	**12196**

** refers only to scans performed in the Perinatal Ultrasound Dept.*

*** excludes all telephone consultations with Diabetic patients.*

16. Laboratory Tests, 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
Microbiology	44535	44672	44672	44514	42573	41639	**44387**
Biochemistry	203818*	172734*	162045 *	205475*	218565*	216849*	**207686***
Haematology	45546	45718	46877	50717	53961	55111	**54298**
Transfusion	22011	22076	22866	25273	26537	26328	**29464**
Cytopathology	12409	10428	16774	27355	25589	26161	**26185**
Histopathology	5036	5606	5696	5877	6001	6331	**6380**
Post mortems	34	40	41	50	35	33	**32**
Phlebotomy	18732	19394	19931	21084	23641	25250	**37870**

** includes POCT tests*

Perinatal Mortality and Morbidity

Dr Sharon Sheehan, Master

Dr John Kelleher, Director of Paediatrics and Newborn Medicine

Mrs Julie Sloan, Research Midwife

Overall Statistics

1. Perinatal Deaths ≥ 500g

Antepartum Deaths	25
Intrapartum Deaths	2*
Stillbirths	27
Early Neonatal Deaths	22
Late Neonatal Deaths	10
Congenital Anomalies	28**

** Known fetal anomalies*

*** 11 SB, 14 END, 3 LND*

2. Perinatal Mortality Rates ≥ 500g

Overall perinatal mortality rate per 1000 births	6.00
Perinatal mortality rate corrected for lethal congenital anomalies	2.95
Perinatal mortality rate including late neonatal deaths	7.23
Perinatal mortality rate excluding unbooked cases	4.53
Corrected perinatal mortality rate excluding unbooked	2.46

3. Perinatal Mortality by Mother's Age

Mother's age at Delivery	Perinatal deaths N	Perinatal deaths %	PMR	Total Births N
<20 years	3	6.1	22.7	132
20-24 years	11	22.4	16.0	689
25-29 years	6	12.2	4.1	1476
30-34 years	14	28.6	5.2	2709
35-39 years	13	26.5	5.4	2423
≥40 years	2	4.1	3.7	546
Total	49	100	6.00	8166

4. Perinatal Mortality by Mother's Parity

Mother's Parity at booking	Perinatal deaths N	Perinatal deaths %	PMR	Total Births N
Para 0	25	51.0	7.7	3264
Para 1	11	22.4	4.0	2736
Para 2-4	11	22.4	5.9	1870
Para 5+	2	4.1	19.0	105
Total	49	100	6.00	8166

5. Perinatal Mortality by Birthweight

Birthweight	Perinatal deaths N	Perinatal deaths %	PMR	Total Births N
500-999g	11	22.4	203.7	54
1000-1499g	13	26.5	162.5	80
1500-1999g	10	20.4	86.2	116
2000-2499g	5	10.2	14.2	352
2500-2999g	5	10.2	4.8	1046
3000-3499g	0	0	0	2738
3500-3999g	5	10.2	1.8	2777
4000-4499g	0	0	0	877
4500-4999g	0	0	0	118
5000g +	0	0	0	8
Total	49	100	6.00	8166

6. Perinatal Mortality by Gestational Age

Gestation	Perinatal deaths N	Perinatal deaths %	PMR	Total Births N
<26 weeks	9	18.4	360.0	25
26-29+6 weeks	8	16.3	160.0	50
30-33+6 weeks	10	20.4	94.4	106
34-36+6 weeks	12	24.5	31.5	381
37-41+6 weeks	10	20.4	1.4	7354
42 + weeks	0	0	0	53
Not Answered	0	0	0	6
Total	49	100	6.00	8166

7. Perinatal Mortality in normally formed babies ≥34 weeks and ≥2.5kg

Normally formed babies ≥34 weeks and ≥2.5kg	7559
Perinatal Deaths	6
PMR	0.79

8. Perinatal Mortality in Normally Formed Stillborn Infants (N=16)

	Nulliparous	Parous	**Total**
Abruption	3	6	**9**
Abruption with cord accident	1	0	**1**
Fetal thrombotic vasculopathy	2	1	**3**
Infection	1	0	**1**
Unexplained	0	1	**1**
Illicit Drug Use	0	1	**1**
Total	7	9	**16**

9. Intrapartum Deaths ≥500g 2

Known Anencephaly (1)
Known Massive Cystic Hygroma and Fetal Hydrops (1)

10. Perinatal Deaths in Infants with Congenital Malformation (N = 25)*

	Nulliparous	Parous	**Total**
Chromosomal	6	5	**11**
Hydrops	0	1	**1**
Neural tube defects	1	2	**3**
Cloacal Dysgenesis Sequence	1	1	**2**
Arthrogryposis	0	2	**2**
Gastroschisis	1	0	**1**
Skeletal Dysplasia	1	0	**1**
Congenital Cardiac Disease	1	0	**1**
Congenital cerebrovascular malformation	0	1	**1**
Multiple congenital anomalies	1	1	**2**
Total	12	13	**25**

** 11 SB, 14 END*

11. Neonatal Deaths ≥500g (N= 32)*

	Nulliparous	Parous	**Total**
Congenital	6	11	**17**
Extreme Prematurity	0	1	**1**
Extreme Prematurity / NEC	5	1	**6**
Extreme Prematurity / Pulmonary Hypertension	0	1	**1**
Sepsis	2	0	**2**
HIE	1	1	**2**
Coagulopathy with subgaleal haemorrhage	1	0	**1**
SIDS	0	1	**1**
Out of hospital cardiac arrest and NEC sepsis	1	0	**1**
Total	16	16	**32**

** 22 END, 10 LND*

12. Overall Autopsy Rate 52.5%

13. Hypoxic Ischaemic Encephalopathy - Inborn (Grade II and III) 10

General Obstetric Report – Medical Report

Head of Division

Dr Sharon Sheehan, *Master*

1. Maternal Statistics

	2011	2012	2013	2014	2015	2016	**2017**
Mothers booking	9113	8761	8554	9333	8933	8647	**8653**
Mothers delivered ≥ 500g	8536	8419	7986	8632	8220	8233	**7975**

2.1 Maternal Profile at Booking – general demographic factors (%)

	2011	2012	2013	2014	2015	2016	**2017**	**N=8653**
Born in RoI	68.4	69.2	69.9	71.6	69.6	68.9	**70.1**	**6066**
Born in rest of EU	17.0	16.8	16.9	15.9	17.7	17.6	**15.6**	**1350**
Born outside EU	14.3	13.8	13.2	12.5	12.6	13.3	**14.2**	**1227**
Country not known	0.3	0.2	0.01	0.0	0.1	0.2	**0.1**	**10**
Resident in Dublin	67.2	65.9	65.7	64.6	63.7	63.3	**62.6**	**5416**
< 18 years	0.7	0.6	0.5	0.5	0.5	0.6	**0.3**	**26**
≥ 40 years	4.8	5.7	5.7	6.3	6.4	6.9	**7.2**	**626**
Unemployed	26.0	25.5	21.5	23.0	24.3	21.5	**20.5**	**1742**
Communication difficulties reported at booking	6.0	7.1	7.8	6.4	6.9	5.7	**6.1**	**526**

2.2 Maternal Profile at booking – general history (%)

	2011	2012	2013	2014	2015	2016	2017	N=8653
BMI Underweight: <18.5	1.6	1.8	2.1	2.0	2.0	1.6	**1.7**	**148**
BMI Healthy: 18.5 – 24.9	52.1	53.3	51.6	52.5	51.6	50.7	**49.3**	**4263**
BMI Overweight: 25-29.9	29.1	28.2	28.9	26.8	29.2	29.3	**29.7**	**2573**
BMI Obese class 1: 30-34.9	11.3	11.1	11.0	9.9	10.8	11.9	**12.3**	**1069**
BMI Obese class 2: 35 – 39.9	4.0	3.7	4.3	3.9	4.2	4.4	**4.5**	**386**
BMI Obese class 3: ≥ 40	1.8	1.6	1.8	1.5	1.7	1.8	**2.3**	**196**
Unrecorded	0.1	0.3	0.3	3.5	0.4	0.2	**0.2**	**18**
Para 0	40.8	39.4	39.1	38.6	38.9	40.7	**41.1**	**3556**
Para 1-4	57.9	59.1	59.3	60.0	59.9	57.8	**57.9**	**5007**
Para 5 +	1.3	1.5	1.6	1.4	1.2	1.4	**1.0**	**90**
Unplanned pregnancy	30.9	30.5	31.2	27.7	28.9	27.6	**26.6**	**2300**
No pre-conceptual folic acid	56.6	56.5	56.6	52.6	54.1	52.9	**49.6**	**4292**
Current Smoker	14.2	13.5	12.8	10.5	11.1	10.0	**9.4**	**814**
Current Alcohol Consumption	2.6	1.5	1.4	1.5	1.1	1.0	**0.7**	**60**
Taking illicit drugs / methadone	0.7	0.8	0.7	0.5	0.3	0.2	**0.3**	**27**
Illicit drugs/Methadone ever	7.8	7.9	8.7	8.3	8.2	8.0	**7.5**	**653**
Giving history of domestic violence	1.1	1.0	0.9	1.0	1.0	0.9	**0.9**	**75**
Cervical smear never performed	22.4	20.7	21.7	18.7	19.9	19.1	**19.2**	**1659**
History of psychiatric / psychological illness /disorder	13.0	15.4	18.0	16.6	15.5	16.7	**18.5**	**1598**
History of postnatal depression	4.0	4.7	4.0	4.7	4.5	4.4	**4.6**	**395**
Previous perinatal death	1.5	2.1	1.7	2.3	1.6	1.5	**1.7**	**144**
Previous infant < 2500g	5.1	5.5	5.5	6.5	5.2	4.7	**5.9**	**507**
Previous infant < 34 weeks	2.3	1.3	2.7	2.7	2.4	2.1	**2.6**	**229**
One previous Caesarean section	11.7	12.2	12.6	13.8	12.9	12.7	**12.7**	**1100**
Two or more previous Caesarean sections	3.4	3.7	3.4	4.0	4.0	4.0	**4.2**	**363**

2.3 Maternal Profile in index pregnancy (Mothers delivered ≥ 500g) (%)

	2011	2012	2013	2014	2015	2016	**2017**	**N=7975**
Pregnancy Induced Hypertension	8.5	7.5	7.7	7.5	6.7	7.3	**6.8**	**540**
Pre-eclampsia	4.1	3.8	2.8	3.3	2.9	2.8	**2.7**	**214**
Eclampsia	0.0	0.01	0.06	0.00	0.02	0.05	**0.00**	**0**
Pregestational Type 1 DM	0.5	0.5	0.38	0.3	0.35	0.3	**0.4**	**32**
Pregestational Type 2 DM	0.4	0.2	0.23	0.17	0.32	0.2	**0.3**	**25**
Gestational DM	4.7	6.6	4.4	7.8	7.8	8.4	**9.7**	**775**
Placenta praevia	0.4	0.4	0.4	0.4	0.5	0.4	**0.4**	**34**
Abruptio placentae	0.1	0.2	0.3	0.2	0.4	0.2	**0.1**	**11**
Antepartum haemorrhage	1.3	4.4	5.6	6.6	5.3	5.7	**5.3**	**425**
Haemolytic antibodies	0.3	0.5	0.5	0.5	0.5	0.6	**0.4**	**34**
Hep C +	0.9	0.8	0.6	0.5	0.5	0.4	**0.3**	**23**
Hep B +	0.7	0.5	0.6	0.4	0.5	0.4	**0.2**	**17**
HIV +	0.3	0.2	0.3	0.2	0.3	0.2	**0.2**	**15**
Sickle cell trait	0.4	0.4	0.4	0.3	0.3	0.4	**0.2**	**15**
Sickle cell anaemia	0.01	0.1	0.02	0.1	0.02	0.05	**0.03**	**2**
Thalassaemia trait	0.7	0.6	0.4	0.3	0.5	0.3	**0.4**	**33**
Delivery < 28 weeks	0.7	0.6	0.6	0.5	0.5	0.5	**0.5**	**43**
Delivery < 34 weeks	2.5	1.3	2.7	2.2	2.2	2.1	**2.2**	**181**
Delivery < 38 weeks	13.5	14.3	13.9	13.6	14.3	13.9	**14.5**	**1155**
Delivery < 1500g	1.5	1.5	1.4	1.2	1.3	1.3	**1.4**	**115**
Delivery < 2500g	6.1	6.5	6.9	6.4	7.2	6.1	**6.6**	**528**
Unbooked mothers	1.8	1.7	1.3	1.6	0.9	0.7	**1.0**	**80**
LSCS	27.7	27.1	28.0	28.7	29.3	31.3	**31.8**	**2540**
Admissions to HDU	1.9	1.5	2.1	2.0	2.6	2.0	**2.2**	**172**
Severe Maternal Morbidity	0.5	0.5	0.5	0.5	0.4	0.8	**0.7**	**57**
Maternal Deaths (N)	1[1]	3[2]	1[3]	1[4]	1[5]	0	**0**	**0**

1 Sudden unexplained death in epilepsy (SUDEP)

2 Suicide, Sudden Adult Death Syndrome (SADS) and Amniotic Fluid Embolism

3 Cardiac arrest brought about by hyperkalaemia

4 Amniotic Fluid Embolism (cardiac collapse and disseminated intravascular coagulopathy following amniotic fluid escape into the maternal circulation)

5 Ruptured internal carotid artery aneurysm with Systemic Fibromuscular Dysplasia

3.1 Induction of Labour 2017

	Nulliparous		Multiparous		Total	
	N	%	N	%	N	%
Inductions	1394	42.7	1383	29.4	**2777**	**34.8**

3.2 Induction of Labour 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	2846	2969	2696	2664	2608	2789	**2777**
%	33.3	35.3	33.8	30.9	31.7	33.9	**34.8**

4.1 Epidural Analgesia in Labour 2017

	Nulliparous		Multiparous		Total	
	N	%	N	%	N	%
Epidural Analgesia	1855	56.8	1310	27.8	**3165**	**39.7**

4.2 Epidural Analgesia in Labour 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	3855	3744	3357	3530	3491	3112	**3165**
%	45.2	44.5	42.0	40.9	42.5	37.8	**39.7**

5.1 Fetal Blood Sampling in Labour 2017

	N
< 7.20	52
> 7.20	650
Total	702

5.2 Fetal Blood Sampling in Labour 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	986	758	689	756	783	892	**702**
%	11.5	9.0	8.6	8.8	9.5	10.8	**8.8**

6.1 Prolonged Labour 2017

	Nulliparous		Multiparous		Total	
	N	%	N	%	N	%
Prolonged Labour	237	7.3	38	0.8	275	3.4

6.2 Prolonged Labour 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	266	287	277	316	320	284	**275**
%	3.1	3.4	3.5	3.7	3.9	3.4	**3.4**

7.1 Mode of delivery (%) – Nulliparae 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
SVD	41.8	41.1	43.2	41.1	40.8	38.9	**37.8**
Vacuum	14.4	16.2	16.1	18.2	17.7	16.9	**17.6**
Forceps	15.0	13.6	11.4	11.2	13.0	11.5	**11.0**
LSCS	29.3	29.5	29.6	29.7	28.4	33.2	**34.0**

7.2 Mode of delivery (%) - Parous 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
SVD	68.5	69.4	68.1	67.1	65.9	64.9	**64.3**
Vacuum	3.3	3.9	3.6	3.6	3.2	3.9	**4.1**
Forceps	1.8	1.7	1.4	1.3	1.4	1.2	**1.4**
LSCS	26.6	25.5	26.9	28.1	29.8	30.0	**30.3**

7.3 Mode of delivery (%) – all mothers 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
SVD	57.7	58.0	58.5	57.0	56.2	54.5	**53.4**
Vacuum	7.8	8.9	8.5	9.3	9.0	9.1	**9.6**
Forceps	7.2	6.4	5.2	5.2	5.8	5.3	**5.3**
LSCS	27.7	27.1	28.0	28.7	29.3	31.3	**31.8**

8. Episiotomy (%) 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
Nulliparae	30.0	28.1	27.7	27.8	29.6	32.0	**34.5**
Parous	5.5	4.5	4.0	3.9	4.0	4.4	**6.4**
Overall	15.4	14.0	13.2	13.2	13.9	15.5	**17.9**

9.1 Shoulder Dystocia (SD) 2017

	Nulliparous		Multiparous		Total	
	N	%	N	%	N	%
Shoulder Dystocia	15	0.5	36	0.8	51	0.6

9.2 Shoulder Dystocia (SD) & Birth Weight

	Mothers of babies < 4kg		Mothers of babies ≥ 4kg	
	N	%	N	%
Shoulder Dystocia	24	0.3	27	2.7

9.3 Shoulder Dystocia 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	66	87	64	53	56	53	**51**
%	0.8	1.0	0.8	0.6	0.7	0.6	**0.6**

10.1 Third Degree Tears

	Nulliparous		Multiparous		Total	
	N	%	N	%	N	%
Third Degree Tears (overall)	74	2.3	36	0.8	110	1.4
Third Degree Tears (vaginal deliveries)	74	3.4	36	1.1	110	2.0

10.2 Third Degree Tears 2011 - 2017 (Mothers delivered vaginally)

	2011	2012	2013	2014	2015	2016	**2017**
N	160	130	145	160	166	147	**110**
%	2.6	2.1	2.5	2.6	2.9	2.6	**2.0**

11.1 Fourth Degree Tears 2017

	Nulliparous		Multiparous		Total	
	N	%	N	%	N	%
Fourth Degree Tears (overall)	2	0.06	1	0.02	**3**	**0.04**
Fourth Degree Tears (vaginal deliveries)	2	0.1	1	0.03	**3**	**0.06**

11.2 Fourth Degree Tears 2011 - 2017 (Mothers delivered vaginally)

	2011	2012	2013	2014	2015	2016	**2017**
N	10	6	7	8	9	11	**3**
%	0.2	0.1	0.1	0.1	0.1	0.2	**0.1**

12.0 Primary Post Partum Haemorrhage (1˚ PPH) 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	850	1160	1256	1256	1127	1483	**1743**
%	10.0	13.8	15.7	14.6	13.7	18.0	**21.9**

12.1 1˚ PPH – Spontaneous Labour

	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Nulliparae	9.4	11.4	11.6	12.0	12.0	15.1	**18.2**	**1445**
Parous	5.4	6.2	8.3	7.4	8.3	8.4	**8.8**	**2107**
Overall	7.0	8.2	9.6	9.1	9.6	11.0	**12.6**	**3552**

12.2 1˚ PPH – Induced Labour

	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Nulliparae	16.4	19.1	26.2	22.5	20.1	25.3	**30.8**	**1394**
Parous	7.3	8.9	10.8	9.6	10.9	10.9	**12.1**	**1383**
Overall	11.8	13.8	18.1	16.0	15.3	18.2	**21.5**	**2777**

12.3 1˚ PPH – SVD

	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Nulliparae	5.5	6.7	7.6	7.9	7.5	10.2	**11.5**	**1233**
Parous	4.3	5.0	6.2	5.7	6.9	6.3	**7.4**	**3029**
Overall	4.7	5.5	6.6	6.3	7.1	7.4	**8.6**	**4262**

12.4 1° PPH – Ventouse

	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Nulliparae	12.6	10.2	9.4	10.9	8.3	13.3	**16.7**	**573**
Parous	5.9	6.0	9.5	5.3	8.7	8.7	**10.4**	**192**
Overall	10.9	9.1	9.4	9.6	8.4	12.1	**15.2**	**765**

12.5 1° PPH – Forceps

	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Nulliparae	16.7	17.6	21.9	18.6	18.2	19.4	**29.6**	**358**
Parous	5.3	11.9	19.1	17.6	22.9	21.3	**16.4**	**67**
Overall	14.9	16.8	21.5	18.4	18.9	19.6	**27.5**	**425**

12.6 1° PPH – Caesarean Section by parity

	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Nulliparae	21.0	33.2	44.0	38.2	33.4	43.2	**50.0**	**1111**
Parous	18.1	23.8	30.2	27.7	23.1	34.1	**41.8**	**1429**
Overall	19.4	28.0	35.8	31.9	26.9	38.0	**45.3**	**2540**

12.7 1° PPH – with Caesarean Sections (by priority status)

	2011 %	2012* %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Elective	13.3	21.3	27.0	26.5	19.6	32.7	**40.9**	**1308**
Emergency	24.6	34.5	43.7	36.9	35.4	43.7	**50.1**	**1232**
Overall	19.4	28.0	35.8	31.9	26.9	38.0	**45.3**	**2540**

12.8 1° PPH – Twin Pregnancy

	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Nulliparae	31.2	35.3	59.1	50.0	46.0	50.6	**60.5**	**81**
Parous	13.6	24.1	25.3	43.6	23.5	43.3	**39.8**	**103**
Overall	22.1	29.0	39.4	56.4	33.1	46.9	**48.9**	**184**

13.0 Manual Removal of Placenta (%) 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	106	102	135	94	108	95	**77**
%	1.2	1.2	1.7	1.1	1.3	1.2	**1.0**

13.1 1° PPH in Manual Removal of Placenta 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	64	63	82	59	58	64	**48**
%	60.4	61.8	60.7	62.8	53.7	67.4	**62.3**

14.0 Mothers Transfused 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	176	148	181	169	155	200	**220**
%	2.1	1.7	2.3	2.0	1.9	2.4	**2.8**

14.1 Mothers who received Massive Transfusions (> 5units RCC) 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	15	15	7	4	4	5	**10**
%	0.2	0.2	0.1	0.05	0.05	0.06	**0.1**

15. Singleton Breech Presentation 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
Number of breech in nulliparae	165	174	150	151	144	180	**166**
% LSCS for breech in nulliparae	94.5	96.0	96.0	98.7	97.9	93.9	**94.6**
Number of breech in parous	151	159	171	167	174	167	**157**
% LSCS for breech in parous	96.0	93.1	93.0	95.2	91.9	91.0	**93.0**
Total number of breech	316	333	321	318	318	347	**323**
Total % LSCS	96.5	94.6	94.4	96.8	94.6	92.5	**93.8**

16. Twin Pregnancy 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
Number of Twin pregnancies in Nulliparae	77	68	71	76	76	87	**81**
% LSCS in Nulliparae	53.2	66.2	78.9	77.6	68.4	69.0	**67.9**
Number of Twin pregnancies in Parous	81	87	99	94	102	90	**103**
% LSCS in Parous	50.6	49.4	51.5	60.6	52.9	62.2	**58.2**
Total number of Twin pregnancies	158	155	170	169	178	177	**184**
Total % LSCS in Twin pregnancy	51.9	56.8	62.9	68.2	59.6	65.5	**62.5**

17. Operative Vaginal Delivery in Theatre 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
Operative Vaginal Delivery in Theatre	103	111	88	89	83	91	**80**

18. Classical Caesarean Section, Ruptured Uterus, Hysterectomy in Pregnancy 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
Classical Caesarean Section	7	2	4	3	6	2	**6**
Ruptured Uterus	3	1	0	2	0	0	**3**
Hysterectomy in pregnancy	6	2	2	0	2	5	**3**

19.1 Categories of Caesarean Section (Robson)

	Groups	Number of CS	Number in group	Contribution to total population	% CS
1	Nulliparous, single, cephalic, ≥ 37 wks, in Spontaneous Labour	162	1332	16.7%	12.2%
2	Nulliparous, single, cephalic, ≥=37 wks, induced and CS before labour	671	1529	19.2%	43.9%
A.	Nulliparous, single, cephalic, ≥=37 wks, induced	473	1331	16.7%	35.5%
B.	Nulliparous, single, cephalic, ≥ =37 wks, CS before labour	198	198	2.5%	100.0%
3	Multiparous (excl. prevCS) single, cephalic, ≥ =37wks, in Spontaneous Labour	31	1740	21.8%	1.8%
4	Multiparous (excl. prevCS) single, cephalic, ≥ =37 wks, induced and CS before labour	183	1363	17.1%	13.4%
A.	Multiparous (excl. prevCS), single, cephalic, ≥ =37 wks, induced	46	1226	15.4%	3.8%
B.	Multiparous (excl. prevCS), single, cephalic, ≥=37 wks, CS before labour	136	136	1.7%	100.0%
5	Previous CS, single, cephalic, ≥= 37wks	896	1128	14.1%	79.4%
6	Nulliparous, single, breech	157	166	2.1%	94.6%
7	Multiparous, single, breech (incl. prevCS)	146	157	2.0%	93.0%
8	Multiple pregnancies (incl. prevCS)	119	190	2.4%	62.6%
9	Abnormal Lies, single (incl. prevCS)	9	9	0.1%	100.0%
10	Preterm, single, cephalic (incl. prevCS)	166	355	4.5%	46.8%
	Gestation Not Answered	0	6	0.1%	0.0%
N	Total CS/Total Mothers Delivered	2420	7975	100%	31.8%

19.2 Vaginal Birth (%) after a single Previous Lower Segment Caesarean Section (VBAC) 2017

	Para 1	Para 1+	**Total**
VBAC	14.9	51.9	**25.0**
Elective LSCS	65.9	34.4	**57.3**
Emergency LSCS	19.2	13.7	**17.7**

19.3 Vaginal Birth (%) after a single Previous Lower Segment Caesarean Section (VBAC) 2011 – 2017

	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	**2017 %**	**2017 N**
Para 1	23.0	21.6	24.1	19.9	19.8	19.7	**14.9**	**106**
Para 1+	55.1	60.3	58.6	58.5	51.5	49.0	**51.9**	**140**
Overall	33.3	32.5	34.1	29.7	27.7	27.6	**25.0**	**246**

19.4 Caesarean Sections (%) 2011 – 2017

	2011	2012	2013	2014	2015	2016	**2017**
Nulliparae	29.3%	29.5%	29.6%	29.7%	28.4%	33.2%	**34.0%**
Parous	26.6%	25.5%	26.9%	28.1%	29.8%	30.0%	**30.3%**
Total	27.7%	27.1%	28.0%	28.7%	29.3%	31.3%	**31.8%**

20. Apgar score < 7 at 5 mins 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	82	98	97	74	70	67	**70**
%	1.0	1.2	1.2	0.9	0.8	0.8	**0.9**

21. Arterial Cord pH < 7 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	36	21	37	41	35	45	**40**
%	0.4	0.3	0.5	0.5	0.4	0.5	**0.5**

22. Admission to SCBU/NICU at 38 weeks+ 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	412	454	454	474	423	551	**403**
%	4.8	5.4	5.7	5.5	5.0	6.7	**5.1**

23. Born Before Arrival 2011 - 2017

	2011	2012	2013	2014	2015	2016	**2017**
N	22	22	31	36	29	28	**32**
%	0.3	0.3	0.3	0.3	0.3	0.3	**0.4**

24. Antepartum Haemorrhage (APH)*

	N=	PPROM	Preterm Labour	Preterm Delivery	Perinatal Deaths
Placental Abruption	5	0	0	3	0
Placenta Praevia	8	1	0	7	0
Other	412	16	33	70	3
Total**	**425**	**17**	**33**	**80**	**3**

** Table only includes women who presented with an APH*

*** Patients may be included in one or more group*

Addiction & Communicable / Infectious Diseases

Head of Department

Dr Michael O'Connell, *Consultant Obstetrician & Gynaecologist*

Staff Complement

Orla Cunningham, *CMS Infectious Diseases & Clinic Manager (0.77 WTE)*

Deirdre Carmody, *CMS, Drug Liaison Midwife, HSE Mid Leinster*

Dr Catherine Mc Nestry, *Registrar (Jan-Jul 2017)*

Dr Marie Rochford, *Registrar (Jul-Dec 2017)*

Dr Fatima Al-Washi, *International Fellow Maternal Medicine, RCPI (Jan - Jul 2017)*

Tanya Franciosa, *SMSW*

Louise Byrne, *Clinic Administrative Support*

Genitourinary Medicine (St James's Hospital)

Prof Fiona Mulcahy

Dr Fiona Lyons

Sinead Murphy (HIV Liaison nurse)

Dept. Of Hepatology (St James's Hospital)

Prof Suzanne Norris & Team

Rainbow Team (Our Lady's Children's Hospital)

Prof. Karina Butler & Team

Total Attendees in 2017: 291 women attended Team A Dr O'Connell, the majority of whom were provided with full antenatal care & postnatal follow up. In addition a number of both antenatal and gynae patients attended for consultation and follow up regarding positive STI screening.

Key Performance Indicators

Infectious Diseases (Hepatitis B & C, HIV, Genital HSV & Treponema pallidum)

- 20 women booked for antenatal care in 2017 tested positive for Hepatitis B, of whom 4 were newly diagnosed on antenatal screening. 11 women had a birth place in Eastern Europe, 5 were from Asia, 2 from Africa & 1 South America.
- 24 antenatal women tested positive for Hepatitis C, of whom 2 were newly diagnosed on antenatal screening. Of the 24, 8 were PCR positive and 16 were PCR negative. 16 women were born in Ireland, 6 originated in Eastern Europe & 1 was born in Asia. Of the 2 new diagnoses, both women originated from Eastern Europe.
- 19 antenatal women tested HIV positive, none of whom were newly diagnosed. 16 women originated from Africa, 1 from Eastern Europe, 1 from South America and 1 from Ireland. 1 woman was co-infected with syphilis.
- 78 antenatal women attended clinic with a history or outbreak in pregnancy of genital herpes virus. 43 women had positive PCR/antibody for HSV 1, 34 women had positive PCR/antibody for HSV 2, and 1 woman had a sample that could not be typed.
- 8 women confirmed positive for Treponema pallidum. 2 women required treatment in pregnancy, as new diagnoses & both originated from Eastern Europe. The remaining women had been appropriately treated previously.
- 74 antenatal women required follow up +/- repeat testing due to indeterminate serology attributed to cross-reactivity in pregnancy.
- No recorded incidence of mother to child transmission in 2017*.

Diagnosis and management of an Infectious disease in pregnancy challenges the healthcare provider with a myriad of complexities in the provision of antenatal and follow up care. The clinic is specifically designed to ensure individualised education & care-planning, specialised counselling as well as disclosure and support services. Women are provided with a specific pathway into specialist on-going care, ensuring treatment and monitoring thereby often preventing disease progression, mother to child transmission and significantly reducing future healthcare costs in this high risk patient cohort.

Addiction

- 50 women linked with the DLM and attended the ancillary clinic in the CWIUH in 2017.
- 28 women delivered live babies in the CWIUH who were linked with the DLM and an additional 4 women who had antenatal care at CWIUH were discharged back to other maternity hospitals for their births.
- 29.7% born preterm (less than 37 weeks gestation).

- 20 babies admitted to ICU/HDU/SCBU and of these, 7 babies needed pharmacological treatment for neonatal abstinence syndrome (NAS).
- The mean stay in the baby unit was 19.5 days ranging from 1 to 66 days. The mean length of stay in the baby unit for babies who received pharmacological treatment for NAS was 37 days, ranging from 26 to 53 days.
- Ageing heroin population with more complex needs and an increase in cocaine use among this cohort group.

The Medical Social Worker meets with all patients who attend the hospital with current drug or alcohol addictions. This allows for an individualised, focused, specialist service for these patients.

Additional KPIs

- Specialist service was also provided for additional women with high-risk pregnancies e.g. loss in pregnancy, sero-discordant couples, current STI.
- Couples continue to be seen in our Conception Clinic, which provides fertility investigations for both seropositive & sero-discordant couples attempting to optimise conception, while safeguarding risk of transmission of HIV.
- The team continue to be actively involved in undergraduate & postgraduate education, providing speciality conferences at hospital level and national level.

Achievements in 2017

- Multi-disciplinary team meeting advocating care pathways for women with addiction in pregnancy with Minister Catherine Byrne TD (Junior Minister for Communities and the National Drugs Strategy).
- CMS ID represented Irish maternity services in the development & launch of the National Clinical Guideline on Hepatitis C Screening.
- Tertiary antenatal care provided for a number of women to facilitate the in-patient stabilisation programme provided by Cuan Dara, Cherry Orchard Hospital.
- Development of a discharge pathway with Ashleigh House, Coolmine (In-patient drug stabilisation programme).
- Appointment of our team Medical Social Worker (MSW) into a senior MSW role.
- The MSW developed a discharge pathway for babies discharged to alternative care from the Neonatal Units. This pathway has been implemented by the Neonatal Unit staff.
- 2 posters regarding Audit & Management of Genital Herpes in Pregnancy at CWIUH, presented at BASSH International Conference, Belfast.
- CMS ID was accredited with a Lean White Belt, demonstrated in an A3 poster on the 'Triaging of Laboratory Results by Midwives in OPD'.
- The MSW conducted an audit with a paediatric colleague; "Audit of Reporting: Infants of Drug Dependent Women attending the Coombe". The outcome of this audit was presented to the Paediatric team.

Opportunities for 2018

- Shared care approach for a number of our high risk women, under the collaborative clinical network so they can attend Portlaoise Hospital / GP services for part of their care.
- To highlight and pursue the need for a dedicated Medical Social Worker to work with patients with infectious diseases.
- Client-led changes to service provision.

**Babies born to mothers who booked late in 2017 will not have testing completed at time of report.*

Community Midwife Service

Head of Department

F McSweeney, *Assistant Director of Midwifery*

B Flannagan, *CMM III until April 2017*

K Johnson, *Acting CMM III from April until July 2017*

A Sliney, *CMM III from July 2017*

Staff Complement

1 WTE CMM III

2.19 WTE CMM II

14.13 WTE Staff Midwifes

2 WTE Clerical Staff

Key Performance Indicators

- 16 antenatal clinics each week.
- 3 antenatal classes each month which were attended by 391 women.
- 1719 women were booked in community-based midwife led antenatal clinics
- 6510 follow up appointments were seen in community-based midwife-led antenatal clinics.
- 1832 women availed of Early Transfer Home (E.T.H.).
- 4455 postnatal visits were carried out in women's homes.
- 285 women booked for DOMINO care.
- 46.8% of DOMINO/E.T.H. women were breastfeeding on day 5.
- The LSCS rate for women who opted for DOMINO care at booking was 14.28%.
- The assisted delivery rate for women who opted for DOMINO care at booking was 19.64%.
- The community midwifery service also staff Professor Fitzpatrick's Naas antenatal clinic where:
  - 316 women booked for antenatal care
  - 1787 women attended for follow up visits

Activity in 2017

- In 2017 our main focus was maintaining our current antenatal and early transfer home service while encouraging eligible women to avail of the DOMINO service.
- We now provide 24/7 DOMINO midwifery care in the hospital for women who have opted for the DOMINO model of care.
- We continue to provide community-based antenatal birth preparation classes and assist in the provision of the hospital's hypnobirthing service.
- The Community Midwifery team are actively engaging with our community partners (GPs, PHNs, Support services) with the assistance of the Antenatal to Three initiative (ATTI).
- The Community Midwifery team is committed to assisting in the birthing pool study which is ongoing within the hospital (Water Immersion Study – WIS).

Challenges for 2018

- We are delighted to be part of the wider hospital team supporting the implementation of the National Maternity Strategy at the Coombe Women and Infants University Hospital, and will continue to support this vital work.
- We are working hard to improve awareness and uptake of our DOMINO service.
- We are working towards the introduction of a DOMINO birth preparation class.
- We will continue to encourage, support and facilitate breastfeeding with all women in our care.

Delivery Suite

Head of Department

Ms Ann Fergus, *CMM3 Delivery Suite (until April 2017)*

Ms Nora Vallejo, *Acting CMM3 Delivery Suite (from April 2017)*

Dr Aoife Mullally, *Lead Obstetrician*

Ms Fidelma McSweeney, *Assistant Director of Midwifery and Nursing*

Staff Complement

1 WTE CMM III

12.1 WTE CMM II

1 WTE Clinical Skills Facilitator

35.03 WTE Staff Midwives

6 WTE HCAs

1 WTE Auxiliary staff

Clerical Staff

Key Performance Indicators

- Spontaneous vaginal birth rate 54.3%.
- Rates of instrumental delivery 14.9%.
- Episiotomy rate with spontaneous vaginal births 10.2%.
- Overall epidural rate 39.7%.
- Rate of Obstetric Anal Sphincter Injury (OASI) in vaginal deliveries 2.0% (compared to 2.6% in 2016).
- Primary Post-Partum Haemorrhage (PPH) rate of 11% with vaginal deliveries.

Achievements in 2017

- 210 obstetric-related HDU admissions.
- Continued focus on reducing the rate of OASIS with the implementation of a number of interventions with the acronym PEACHES. Our objective was to reduce the overall rate by one third and sustain the improvement in the long-term. A dedicated multidisciplinary approach to quality improvement has seen the DS team sustain this over 2017 despite challenges in staffing and the difficulties associated with introducing change.
- Initiation of a white belt LEAN quality improvement projects on the DS was undertaken in 2017. A team including Ann Fergus, Kelly Delaney, Noirin Farrelly, Joanne Donnelly and Nora Vallejo undertook a project to standardise and improve the efficiency of stocking and de-cluttering the DS rooms.
- Integration of a number of new midwives from diverse backgrounds and experience levels.
- Quality improvement notice board has been initiated to monitor 'How are we doing?' to give an instant visual overview of our quality improvement initiatives.

Challenges for 2018

- In respect to staffing, the recruitment and retention of midwives remains the focus of the DS management team.
- Facilitating continuous support in labour for women with one-to-one midwifery care.
- Modifying the induction of labour pathway to make the journey smoother and more streamlined for women and staff.
- Rates of PPH and women requiring blood transfusion have been identified as our challenge going forward. A similar method to our OASIS project will be implemented using a multidisciplinary approach, with an emphasis on short cycles of Plan-Do-Study-Act.

Diabetic Service - Combined Medical & Midwifery Report

Head of Department

Professor S. Daly, *Consultant Obstetrician & Gynaecologist*

Professor B. Kinsley, *Consultant Endocrinologist*

Staff Complement

E. Coleman, C. Grady, *2 WTE Clinical Midwife Specialists*

G. Cannon, *WTE staff midwife*

C. Honohan, *WTE Dietitian (until May)*

F. Dunlevy, *WTE Dietitian (May - Oct)*

A.M. Keogh, WTE Dietitian (Oct - Dec)

Phlebotomy, *Laboratory and Administrative Staff*

Key Performance Indicators

- 2017 was another busy and challenging year for the Diabetes service. There was a significant rise in the number of women diagnosed with Gestational Diabetes Mellitus compared to previous years.

Achievements in 2017

- Continued to provide lifestyle education programme to women diagnosed with Gestational Diabetes Mellitus.
- The midwife-managed Diabetes Clinic continued.
- The Diabetes CMS continued to facilitate the tri-hospital Diabetes study days, providing lectures and workshops on Diabetes to nurses and midwives from the three Dublin maternity hospitals, and from outside the Dublin area.
- Continued to commence women on insulin therapy as outpatients where possible, decreasing the numbers of women admitted to the hospital for overnight stays.
- Continued to provide advice and support by phone to patients, and to colleagues in other hospitals, and to take referrals from other hospitals, G.P.s and self-referrals.
- Continued to work with, and provide education and support to midwife colleagues, as well as those from other disciplines.
- Worked on the Diabetes patient database and statistics for the department.
- The Diabetes multi-disciplinary team continued to have regular team meetings to review progress and plan developments in patient management.
- C. Grady CMS completed Certificate in Advanced Nursing Practice in U.C.D.
- C. Grady CMS and E. Coleman CMS attended LEAN White Belt training.

Challenges in 2017

- Due to the increase in numbers of women testing positive for GDM, the size of the groups attending the lifestyle education programme increased, creating an additional challenge in trying to find a suitable location to accommodate the group.
- There were a significant number of non-attenders to clinic/lifestyle education/post-natal clinic visits. There was a significant amount of time and effort spent following up these women. This resulted in delays in women re-booking for post-natal OGTTs.
- Many clients with BMI ≥ 40.0 requiring bariatric and anaesthetic clinic referrals.
- Increased need for Interpreter Services for women during education sessions.
- Withdrawal of the Long Term Illness and Disability Scheme cover for women with Gestational Diabetes continued to cause a lot of hardship and distress for women, some of whom could not afford to cover the cost of blood glucose test strips, etc.
- Despite the management of thyroid disease in pregnancy guideline, there were still a number of unnecessary referrals to the Diabetes service.
- Staffing challenges within the Department due to leave.

Plans for 2018

- To update PPPGs.
- Progress to LEAN green belt to enhance the Diabetes service.
- To develop an online system for GDM women to submit their blood sugar readings for review to improve efficiencies in the Department.
- The government's plans to introduce a "sugar tax" is impacting on the manufacture of sugary drinks, most of which are reducing their sugar content. Therefore, we will need to update our hypoglycaemia patient information leaflet and policy.
- To develop systems that would reduce time spent on phone calls to newly diagnosed GDM women.
- Continue attendances at study days/conferences to continue professional development.

Numbers attending the service in 2017 who delivered in the CWIUH

	N
Type 1 DM	32
Type 2 DM	25
GDM	775
Total	**832**

Parity

Parity	N	%
P0	277	33.2
P1-4	523	62.8
P5+	32	4.0

Type of Pregnancy

	N =	%
Singleton Pregnancies	780	93.4
Twin Pregnancies	48	5.9
Triplet Pregnancies	4	0.7

Treatment

	Type 1	Type 2	GDM
Diet	0	0	311
Diet + Metformin	0	3	254
Diet + Metformin + Insulin	0	0	85
Diet + Insulin	32	25	125

Diagnosis

	Type 1 DM	Type 2 DM
N =	32	25
Delivered CWIUH	27	19
Delivered Elsewhere	1	0
Miscarriage	4	5
Undelivered 2016	0	0

Diagnosis N (%)	Type 1 DM	Type 2 DM	GDM
Preterm Delivery	5 (18.5)	3 (15.7)	83 (10.7)

Mode of Delivery Total Group

	N	%
SVD	102	69.4
Operative Vaginal Delivery	18	12.2
Breech Delivery	5	3.4
Emergency CS	22	15.0
Total	**147**	**100**

Mode of Delivery of GDM Group

	N	%
Emergency CS	76	21.8
SVD	215	61.8
Operative Vaginal Delivery	57	16.4
Total	**348**	**100**

	SVD	Breech	OVD	El CS	Em CS
Type 1	3	0	3	6	15
Type 2	6	0	1	4	8
GDM	320	6	78	228	143

Hypertensive Disease

Diagnosis	Normotension	PET	PIH	Total
GDM	720	26	29	775
Type 1	22	2	3	27
Type 2	15	1	3	17

Birthweight (g)	Mean (sd)
Type 1	3543 (501)
Type 2	3290 (461)
GDM	3337 (624)

Diagnosis	Baby <4kg	Baby >4kg	Total
GDM	699	76	775
Type 1	22	5	27
Type 2	17	2	19

Early Pregnancy Assessment Unit

Head of Department

Dr Mary Anglim, *Consultant Obstetrician/Gynaecologist*

Consultant Staff

Dr Nadine Farah, *Consultant Obstetrician/Gynaecologist*

Dr Sowmya Elsayed, *Clinical Research Fellow (until July)*

Dr Mei Yee Ng, *Clinical Research Fellow (until July)*

Janice Gowran, *CMM II*

Nicole Mention, *Midwife Sonographer*

Carol Devlin, *Secretary*

- The unit provided training for NCHDs in transvaginal and early pregnancy ultrasound and facilitated training for 2 midwives doing the UCD EPAU module and 1 midwife completing Masters in Ultrasound.
- 2 poster presentations were submitted and accepted for the 4th ICOGPM meeting 2017.

Key Performance Indicators

Achievements in 2017

	TOTAL		NEW		RETURN	
EPAU visits*	4213	(100%)	2535	(60.2%)	1678	(39.8%)
Ongoing pregnancy	1174	(27.9%)	844	(33.3%)	330	(19.7%)
Pregnancy of uncertain viability	597	(14.2%)	491	(19.4%)	106	(6.3%)
Miscarriages	1639	(38.9%)	573	(22.6%)	1066	(63.5%)
Pregnancy of unknown location	606	(14.4%)	516	(20.4%)	90	(5.4%)
Ectopic pregnancy**	69	(1.6%)	36	(1.4%)	33	(2.0%)
Molar pregnancy***	38	(0.9%)	3	(0.1%)	35	(2.1%)
Gynaecological scans	88	(2.1%)	70	(2.8%)	18	(1.1%)

**This number includes patients who had more than one visit to EPAU.*

***This reflects number of patients with ectopic pregnancy irrespective of number of visits by that patient and excludes patients who were admitted directly to theatre from the emergency room or who were diagnosed with an ectopic pregnancy outside normal working hours.*

****This number includes patients who had consultations for query molar pregnancy (awaiting SISH).*

Management of Miscarriage**	
Conservative Management	332 (31.6%)
Medical Management	297 (28.3%)
ERPC	420 (40.1%)
Total	1049

*** Excluding complete miscarriages*

Management of Ectopic pregnancy	
Laparoscopy	42 (60.9%)
Medical Management (Methotrexate)	9 (13.0%)
Conservative Management	18 (26.1%)
Total	69

Fetal Medicine and Perinatal Ultrasound Department

Including Fetal Cardiology, Multiple Births, Hemolytic Disease of the Newborn

Members of Staff

Professor Sean Daly, *Director of Fetal Medicine*

Professor Aisling Martin, *Fetal Medicine Specialist*

Professor Mairead Kennelly, *Fetal Medicine Specialist*

Dr Caoimhe Lynch, *Fetal Medicine Specialist*

Dr Carmen Regan, *Fetal Medicine Specialist*

Dr Orla Franklin, *Visiting Paediatric Cardiologist (OLCHC)*

Dr Siobhan Corcoran, *Subspecialist Fellow in MFM (Rotunda/Coombe/Columbia)*

Elaine McGeady, *Clinical Midwife Manager III*

Felicity Doddy, *Prenatal Diagnosis Coordinator (CMM II)*

Catherine Manning, *Screening Service with Felicity Doddy*

Christina McLoughlin, *Clinical Midwife Specialist in Ultrasound*

Jane Durkin, *Clinical Midwife Specialist in Ultrasound*

Siobhan Ni Scanaill, *Clinical Midwife Specialist in Ultrasound*

Ciara Caldwell, *Clinical Midwife Specialist in Ultrasound*

Edwina Quinlan, *Radiographer*

Aoife Metcalfe, *Midwife Sonographer*

Sinead Gavin, *Midwife Sonographer*

Nicole Menton, *Midwife Sonographer*

Louise Rafferty, *Midwife Sonographer*

Emma Doolan, *Midwife Sonographer*

Aisling Clynch, *Midwife Sonographer*

Eileen Kenny, *Midwife Sonographer*

Niamh Barry, *Midwife Sonographer*

Michele O'Connor, *Midwife Sonographer*

Contact Details

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Clinical Activity and Service Expansion

In 2017 as in the previous few years all patients attending the Coombe were offered a routine dating scan and a routine 20-22 week structural anatomy scan. In addition, scans were performed as indicated by clinical protocols. This year the perinatal ultrasound/fetal medicine service performed 28,017 scans. In addition there were 841 scans performed in Naas by Ms Jane Durkin, these consisted of 353 anomaly scans and 488 scans for growth and dating. There were 2,655 scans performed by Fetal Medicine Specialists within the department. A new policy was implemented of measuring the cervical length at the time of the anomaly scan in women who have undergone a single LLETZ procedure.

Table 1. Indications for Ultrasound 2017

First trimester/Dating scans (excludes scans in EPAU)	6123
Structural Anatomy Scans	8315
Fetal growth/assessment/ Doppler/BPP	8274
Cervical Length	447
Screening Fetal Echos	252
Total Scans in Ultrasound Department in CWIUH	**28017**

Table 2. Invasive Procedures

CVS	51
Amniocentesis	71
Total	**122**

In 2017 NIPS (non-invasive prenatal screening) in the form of Harmony was introduced. We performed 375 Harmony tests in 2017.

There were 9 positive screen results:

Screen Positive	True Positives	Outcome
T13	1	Live Birth
T18	2	Early Loss (1) & Live Birth (1)
T21	6	TOP (2) Live Birth (4)

Table 3. Chromosomal abnormalities detected antenatally (N = 49)

Chromosome;	N=
Trisomy 21	24
Trisomy 18	7
Trisomy 13	7
Monosomy X	5
Triploidy	4
Trisomy 9	1
Klinefelters syndrome 47XXY	1

Declined Invasive testing - postnatal diagnosis: T21=2 T13=1

Table 4. Structural Fetal Abnormalities Detected (N = 152)

CNS (excluding NTD'S)	16
Neural Tube Defects:	15
Anencephaly	12
Spina Bifida	3
Sacrel Teratoma	2
Cystic Hygroma	35
Facial Clefts	8
Thoraic (CCAM, Broncogenic Cysts)	6
Abdominal Wall Defects:	5
Gastroschisis	1
Omphalocele	4
Renal	46
Skeletal	4
Multiple Anomalies	3
Talipes	12

Research & Training

Dr Maria Farren (Bernard Stuart Fellow) completed her research project towards her MD, investigating the role of a food supplement inositol in preventing the development of Gestational Diabetes among women with a positive family history of diabetes. The paper was published in Diabetes Care (Impact Factor 13.39). Dr Siobhan Corcoran was attached to the Perinatal Ultrasound Department as the Rotunda/Coombe/Columbia Subspecialist Fellow and attended the Medical clinic and the Fetal Cardiology Clinic in the Coombe on a weekly basis.

MDT Meetings

During 2017, Felicity Doddy (Prenatal Diagnosis Coordinator) continued to organize quarterly multidisciplinary meetings with fetal medicine, neonatology, palliative care, bereavement, social work, radiology from OLCHC and physiotherapy departments. At these meetings all ongoing fetal medicine cases were reviewed and an individualized care plan for the pregnancy, delivery and the postnatal period was agreed. The monthly tri-hospital Fetal Medicine meetings continued rotating between the three Dublin Maternity Hospitals. A quarterly MRI MDT was held in conjunction with the Radiology Department in OLCHC and was attended by Fetal Medicine, Neonatology and Radiology.

Service

- Ongoing routine offering of a booking scan to women on their first visit.
- Ongoing routine offering of a fetal anatomy scan at 18-22 weeks to all women.
- The on-going provision of an outreach ultrasound service in Naas, provided by CMS Jane Durkan.
- Increase in number of referrals nationally – the highest number from Portlaoise (High Risk Referrals) and Rotunda (Cardiac referrals for Dr Orla Franklin).
- Tri-hospital Fetal medicine meeting is attended by all ultrasound staff on a monthly basis. This rotates between the 3 Dublin Maternity Hospitals. These meetings ensure there is specialist in-put on high risk cases.

Staffing / Professional Development

- Provision of ongoing further education to enhance the service to women.
- 1 Midwife commenced the Masters Programme in Ultrasound, Sept 2017.
- 2 Midwife Sonographers completed Grad Cert Ultrasound, July 2017.
- New rotational post developed with one staff midwife post commenced Dec 2017 – due for rotation to OPD Dec 2018.
- Staff Midwife post up-graded to CMS April 2017
- CNS post appointed
- On-going development of guideline documents based on best practice, agreed and implemented at department level and available for viewing on Q pulse.
- On-going training for first trimester screening.

- Continued support and Ultrasound training for staff Midwife Portlaoise.

Achievements in 2017

- Maintaining service provision to full capacity despite the reduced staffing numbers.
- Clinical Manager completed Masters in Healthcare Management (RCSI) June 2017.
- Midwife Sonographer attended Fetal Cardiac Course, Brompton Hospital, London, UK.
- New Ultrasound Machine E8 purchased through CFM

Challenges for 2018

- Staff retention
- Recruitment.
- Maintaining ongoing routine dating and anatomy scan service with reduced staff numbers.
- Increase number of sonographers who obtain license to perform first trimester screening scans (FTS).
- Facilitate the staff members undergoing the Masters in Ultrasound.
- Training of midwife sonographers with view to commencing the Grad Cert in Ultrasound (UCD)
- Upgrading of Ultrasound Machines to maintain recommended standards for ultrasound.

Acknowledgements

This was another challenging year in the perinatal ultrasound department with a huge workload but the staff shortages were not so acute as there had been ongoing recruitment and training of new sonographers. This initiative was the result of Elaine McGeady, with the support of Bridget Boyd, and senior nursing/midwifery management. I would like to sincerely thank all of the staff – the midwife sonographers, radiographers, the fetal medicine consultants and Dr Orla Franklin for their hard work and dedication, ensuring that we provided the highest quality of care to the women and their babies. I would like to welcome our newly recruited midwife sonographers and wish them well in their new roles. We are delighted to have them.

I would like to specially thank Felicity Doddy our Prenatal Diagnosis Coordinator for all her hard work caring for the parents who have received distressing diagnoses and coordinating prenatal consults for them both in the Coombe and in OLCHC. Felicity, with the help of Catherine Manning got the NIPS service started and it is has been a considerable extra service in terms of the fetal medicine offering of our department. I would like to specifically acknowledge Elaine McGeady (CMM3) our clinical midwife manager who is responsible for the running of the ultrasound department. Elaine is not only a superb sonographer but possesses the people skills to manage change and implement new services.

Professor Sean Daly

Head of Fetal Medicine and the Perinatal Ultrasound Department

Fetal Cardiology

Heads of Department

Dr Orla Franklin, *Consultant Fetal and Paediatric Cardiologist*

Dr Caoimhe Lynch, *Consultant Obstetrician and Fetal Medicine Specialist*

Midwifery Lead

Felicity Doddy, *CMMII Prenatal Diagnosis Coordinator*

The Department of Fetal Cardiology continued to provide rapid access, expert opinion to women whose pregnancy was complicated by congenital heart disease. In total 256 women were scanned in the clinic with structural cardiac anomalies detected in 116 (45%) pregnancies. As in previous years, the service continued to attract referrals from fetal-maternal medicine colleagues in 16 sites across Ireland with further expansion of the cross-border referral group from Northern Ireland. 43 anomalies were detected in women who were originally booked to deliver outside of the Coombe. Site of delivery was dictated by the likely need for urgent cardiac surgical or catheter intervention in the immediate postnatal period. An abnormality of cardiac rhythm was detected in a further 13 pregnancies. A prenatal diagnosis of a chromosomal anomaly was detected in 18 pregnancies.

Table 1 – Lesions Detected

Cardiac Diagnosis	N=
Hypoplastic Left Heart Disease	10
Hypoplastic Right Heart disease	5
Complete Atrioventricular Septal Defect	8
Ventricular Septal Defect	37
Tetralogy of Fallot	8
Transpostion +/- VSD	8
Coarctation +/- Arch hypoplasia	6
Isolated Dextrocardia	1
Rhabdomyomata	1
Cardiomegaly/Cardiomyopathy	2
Ebstein's Anomaly of the Tricuspid Valve	2
Tricuspid Stenosis	1
Mitral & Aortic Stenosis	1

Table 2 – Arrhythmias Detected

Arrhythmia	
Supraventricular Tachycardia (Inclu Atrial Flutter)	1
Congenital Complete Heart Block	3
Atrial Ectopics	9

This is a diagnostic clinic that serves to define a diagnosis of congenital heart disease that has typically originally been made in one of our many referring units. As such we would like to acknowledge the contribution of the fetal medicine specialists and obstetric sonographers from all over Ireland who contribute to the ongoing success of this department.

Multiple Birth Clinic

Head of Department

Dr Aisling Martin, *Consultant Obstetrician and Fetal Medicine Specialist*

There were 202 multiple pregnancies delivered at the Coombe in 2017. There were 195 sets of twins of which 151 were dichorionic diamniotic (DCDA) and 44 monochorionic diamniotic (MCDA).

We had seven sets of Triplets in 2017, three IVF with the patients' own eggs, two spontaneous, one IUI and one following treatment with clomiphene citrate. Four sets were TCTA and three DCTA.

Gestational Age at Delivery for all Multiples

Overall five sets of twins were lost to follow-up four DCDA and one MCDA. Two of these we were aware had gone home to their home countries to deliver, one MCDA, leaving at 25 weeks to return to her home country and the second, DCDA, leaving at 30 weeks to deliver in her home country. That leaves 198 multiple pregnancies for whom we have outcome details. Overall 33% of twins delivered at or beyond 37 weeks gestation, 40% DCDA and 11% MCDA. The vast majority of twins (81.6%) delivered at or beyond 34 weeks, 83.8% DCDA and 74.4% of MCDA twins. Overall 13.2% delivered between 28 and 31^{+6} weeks and 4.2% between 23 and 28 weeks gestation. All triplets were delivered electively if they reached 33-34 weeks gestation.

GA at Delivery(wks)	All Twins N=190	DCDA N=147	MCDA N=43	MCMA N=0	Triplets N=7
≥37	63 (33%)	58 (40%)	5 (11%)		0
34 – 36^{+6}	92 (48%)	65 (44%)	27 (63%)		1 (14%)
32 - 33^{+6}	7 (4%)	5 (3%)	2 (5%)		2 (29%)
28 – 31^{+6}	18 (10%)	15 (10%)	3 (7%)		2 (29%)
23 – 27^{+6}	8 (4%)	4 (3%)	4 (9%)		1 (14%)
<23	2 (1%)	0	2 (5%)		1 (14%)

Mode of Delivery >23 weeks gestation:

Mode of Delivery	All Twins N=188	DCDA	MCDA	MCMA	Triplets
SVD/SVD	39	28	11	0	0
SVD/Breech	12	7	5	0	
Breech/SVD	0				
Breech/Breech	0				
Instrumental	21	17	4	0	0
Vaginal delivery of both babies	72 (38.3%)	52	20	0	2
El LSCS	58	48	10	0	1
Em LSCS	57	46	11	0	3
Forceps/ Em LSCS	1	1	0	0	0
CS for one or both babies	116 (61.7%)	95	21	0	4

Monochrionic Twins

There were 44 sets of monochorionic diamniotic twins in 2017. We had no monochorionic monoamniotic twins. There were 2 miscarriages in this group, one at 14^{+5} weeks and the other at 20 weeks when found to have double demise when the patient attended for anatomy scan. There were 3 cases of Twin to Twin Transfusion Syndrome (TTTS) in this group. Two had laser ablation of placental anastomoses in the Rotunda and the third was kept under close surveillance and did not then require laser.

Triplets

We had 7 sets of triplets. One of the mothers returned to her home country at 18 weeks and stayed and delivered there.

One set came in with ruptured membranes at 22^{+2} weeks gestation and sadly went on to spontaneously deliver all three babies at 22^{+4} weeks gestation.
In a third set of triplets there was an IUD of one baby at 22^{+5}, likely due to acute TTTS in an MCDA pair, this baby being the Donor. The pregnancy continued to 27^{+3} weeks gestation when preterm labour ensued and there was a spontaneous vaginal delivery of the surviving triplets. Both babies went to NICU but did well.

One set of spontaneously conceived TCTA triplets was delivered by Caesarean section with steroids and MgSO4 at 28^{+3} weeks due to IUGR and REDF in T3. All three babies had an uneventful neonatal course and were discharged home well.

Another set had PPROM and preterm labour at 30^{+5} and were delivered by LSCS with steroids and MgSO4. The babies did well and were discharged home however one of the babies subsequently had an abnormal MRI and has ongoing follow up but so far is doing well.

The other two cases were electively delivered one at 33^{+3} weeks and the other at 34 weeks and all babies did well and were discharged home after very short stays in the NICU.

Hemolytic Disease of Fetus and Newborn

Staff complement

Dr Carmen Regan, *Consultant Obstetrician and Gynaecologist*

Ms Catherine Manning, *CMM II, Maternal Medicine*

The management of patients with red cell antibodies (RCA) that may cause haemolysis in pregnancy involves paternal genotyping and fetal DNA typing when indicated. At risk pregnancies are followed with antibody levels and when appropriate MCA Dopplers. In 2017 using the new Iso-immunisation guideline many women with low risk antibodies were monitored using serial antibody levels in their team clinics and reviewed at the Rhesus Clinic if levels reached the threshold for developing significant fetal anaemia. Previously affected and at risk mothers were managed in the clinic.

34 patients were referred to the Rhesus Clinic in 2017. Of these, 22 were diagnosed with red cell antibodies for the first time. 4 patients were diagnosed with multiple red cell antibodies.

Outcome of pregnancies with RCA

Table 1 – Neonatal Outcomes

Affected neonates (DCT positive at birth)	12
SCBU admissions	5
Phototherapy only	2
Phototherapy, IVIG and RCC transfusion	1
Phototherapy and IVIG	2

Table 2 – Red Cell Antibodies (N=34)

Antibody	Number of Patients affected	DCT positive	DCT negative
Anti D	2	2	
Anti c	3	3	
Anti K	2	1	1
Anti Fya	1		1
Anti Fyb	1	1	
Anti Cw	3		3
Anti S	1		1
Anti s	1		1
Anti E	5	3	2
Anti M	7		7
Anti C	4		4
Multiple antibodies	4		
Cw&E	1	1	
c&E	1	1	
Fya&Cw	1		1
D&K	1		1

Infant Feeding

Head of Department

Ms Ann MacIntyre, *Director of Midwifery & Nursing*

Staff Complement

Mary Toole, *WTE Clinical Midwife Specialist*
Meena Purushothaman, *WTE Clinical Midwife Specialist*

Key Performance Indicators

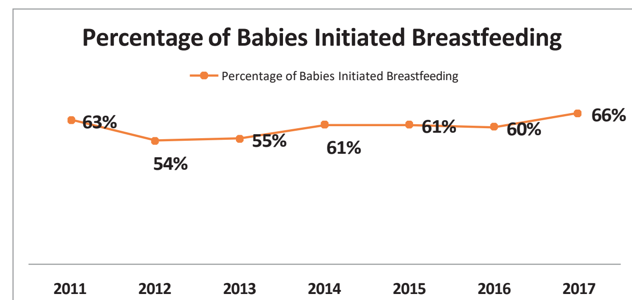
- Implementing and sustaining an environment that routinely provides breastfeeding supportive practices towards lifelong health and wellbeing, through compliance with the standards of the Baby Friendly Health Initiative (BFHI).
- Maximizing the provision of human milk to all babies.
- Empowering staff through planned education & clinical support to deliver optimum care in Baby Friendly Practices.
- Prenatal screening & counselling of women with potential lactation impairment & individualized preparation and planning.
- Introducing Pre-Lactation Self Assessment approach to facilitate early identification of potential lactation impairment and improvement of infant feeding outcomes through structured pathway.
- Critical analysis of indications for readmission with breastfeeding challenges and corrective measures for prevention of recurrence of same.

Achievements in 2017

- Sustained & supported evidence-based practice in Infant feeding in line with WHO & HSE/National Infant Feeding Policy through continued multidisciplinary staff education.
- Developed a structured pathway for antenatal identification and follow up of women with high risk of impaired lactation.
- Facilitated skills workshops and inter-departmental education sessions for all staff including doctors, midwives, health care assistants and non-clinical staff.
- Supported inter-departmental collaboration to maximize the availability of human milk for high risk babies.
- Provision of structured & impromptu education sessions in CWIUH & Trinity College Dublin to facilitate staff & student development to improve infant feeding outcomes.
- Implemented strategies for effective use of the National Antenatal Infant Feeding Checklist, promoting the capacity of pregnant women to obtain, process, and understand information and services needed to make appropriate infant feeding decisions.
- Collaborated with the three Dublin maternity hospitals on the joint Infant feeding management programmes under the auspices of Centre for Midwifery Education.
- Formalised pathway for referral of babies for assessment and division of anterior ankyloglossia.
- Prevention of violations to the code of marketing through provision of scientific information sessions on breast milk substitutes in collaboration with the dieticians.

Table 1: Infant feeding Statistics 2011 - 2017
(see next page)

Figure 1: Percentage of babies Initiated breastfeeding



** NB: The figures during 2012, 2013, 2014, 2015, 2016 & 2017 are calculated from computerised discharges whereas 2011 data is based on intention to breastfeed as oppose to breastfeeding initiated.*

Figure 2: Breastfeeding Rates

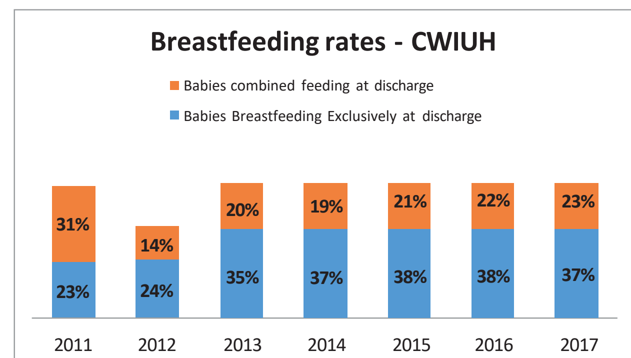
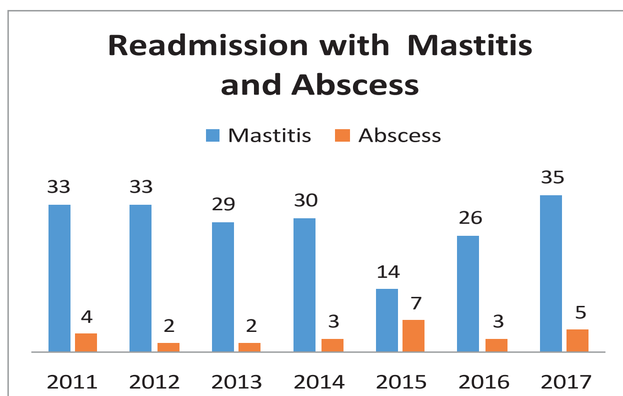


Figure 3: Readmission Rates



Challenges in 2018

- Sustaining of WHO Baby friendly standards in the absence of national BFHI accreditation system.
- Increase in the demand for review and support of infants with suspected ankyloglossia and subsequent patient dissatisfaction.
- Meeting the increased demand for individualized counselling since the implementation of Prenatal Lactation Self Assessment.

Table 1: Infant feeding Statistics 2011-2017

	2011	2012	2013	2014	2015	2016	2017
Total number of live births	8668	8599	8150	8781	8230	8244	**8156**
Number of babies initiated breastfeeding	5498 (63%)	4610 (54%)	4489 (55%)	5379 (61%)	5094 (61%)	5253 (60%)	**5369 (66%)**
Number of babies breastfeeding exclusively at discharge	1978 (23%)	2097 (24%)	2873 (35%)	3211 (37%)	3145 (38%)	3206 (38%)	**3000 (37%)**
Number of babies feeding partially/combined feeding at discharge	2719 (31%)	1192 (14%)	1616 (20%)	1679 (19%)	1706 (21%)	1834 (22%)	**1914 (23%)**

Maternal Mortality 2000-2017

Year	No of Maternal Deaths	Total Number of Mothers
2000	0	7958
2001	0	8132
2002	1	7982
2003	0	8409
2004	0	8523
2005	0	8546
2006	0	8633
2007	1	9088
2008	1	9110
2009	0	9421
2010	1	9539
2011	1	9315
2012	3	9175
2013	1	8610
2014	1	9344
2015	1	9001
2016	0	8941
2017	0	8689
Total	11	158,416
Maternal Mortality Rate		0.0069%

2002 Steven Johnson Syndrome and Liver Failure secondary to Nevirapine (HIV+)

2007 RTA

2008 Metastatic Carcinoma of the Colon

2010 AIDS-related Lymphoma

2011 Sudden Unexplained Death in Epilepsy (SUDEP)

2012 Suicide, Sudden Adult Death Syndrome, Amniotic Fluid Embolism

2013 Cardiac Arrest

2014 Amniotic Fluid Embolism

2015 Ruptured Giant Internal Carotid Artery Aneurysm, Systemic Fibromuscular Dysplasia

Maternity Wards

Head of Department

Ms F Mc Sweeney, *Assistant Director of Midwifery and Nursing (Author)*

Staff Complement

1 WTE CMM3
3.87 WTE CMM2
4.48 WTE CMM1
2 WTE Clinical Skills Facilitators
66.13 WTE Staff Midwives
Additionally 11. 36 WTE HCAs / 3.5 WTE Clerical Staff

Student Midwives

BSc Midwifery 4th year Intern students and Higher Diploma Midwifery students are included in the staffing levels, which varies throughout the year depending on college/clinical commitments.

Key Performance Indicators

- Leading, developing and managing midwifery staff, who are qualified in the delivery of safe effective and evidence-based care, to women and babies that we as an organisation care for.
- Providing services that encompass and are mindful of our multicultural patient population.
- Close partnership with Community Midwife Service for the uptake of Early Transfer Home (ETH) by women living in the catchment areas of the Community Midwifery Service. Under this service the average length of stay for women that had a SVD/Instrumental delivery was 1.5 days, and 3.1 days for women that had a caesarean delivery.

Major Achievements in 2017

Recruitment

The Maternity Floors along with the Delivery Suite and Community Services underwent significant changes in 2017 at CMM3, CMM2 and staff midwifery level. There was and continues to be a huge drive on recruitment and retention of staff. It is well documented that there is a local and national shortage of midwives. Recruitment overseas in 2017, in particular, in Italy, brought us great success in recruitment. This team of midwives have settled in very well into the hospital in all departments along with other newly appointed staff.

Lean Healthcare

Lean Healthcare methodology is rapidly becoming a widely used tool throughout healthcare. In the Coombe, our Lean Healthcare journey started with the Productive Ward, and we have continued to extend this methodology to a number of services. At present, 1 staff member is trained at the level of Black Belt, 12 staff are trained at White Belt Level, with a plan to extend the training to Green Belt Level. This training has encouraged and supported Quality Improvements Projects (QIPs) in various departments. Lean methodology embraces leadership at all levels across the organisation and has been instrumental in bringing together staff across multiple domains. Collectively, the teams have identified issues in practice that require improvement. Together these teams have used the tools and philosophy of Lean Healthcare to solve problems at the frontline while eliminating waste to improve quality and standards of care for women and babies. Those involved in Lean Projects have expressed huge satisfaction in their participation in QIPs, an experience which has helped them take ownership of their respective domains, taking pride in watching their work make a difference.

Challenges for 2018

- Midwifery staffing retention and recruitment will continue to be a significant challenge for 2018, with ongoing recruitment. Our midwifery & HCA staff play a pivotal role in the provision of high quality care to mothers and babies.
- The maternity floor staff are committed to the implementation of the National Maternity Strategy 2016-2026, and working in collaboration with other MDT groups within the organisation towards its success.
- To continue the Lean Healthcare training across all domains within the organisation. This training will continue to contribute to high standards of QIPs.
- To facilitate clinical audits and reflective practice to improve the provision of safe high quality care/improvement of KPIs.
- Staff Retention: Encouraging, facilitating and supporting Continuous Professional Development of all staff.
- The continuous expansion and support of higher education for breastfeeding under the umbrella of International Board Certified Lactation Consultant (IBCLC), the development and training of staff.
- The development of the Parent Education Department ensuring access and comprehensive antenatal education to all women and partners attending for care.

- To support the shared multi-departmental culture of patient safety through continuously reviewing clinical incident reports and disseminating the learning points.
- Place a high emphasis on the promotion of good team work and leadership at all levels.
- Promote and facilitate expansion of role of the midwife to include the administration of Propess pessary by midwives.
- Review the IOL process within the hospital.
- Sustain Achievements.
- Continued support from Senior Management.

I would like to take this opportunity to thank all members of staff for their hard work, dedication and commitment to mothers. Additionally, the support shown by staff in mentoring the newly appointed staff has been invaluable. Despite multiple challenges the care and compassion shown by all has been very much appreciated.

Medical Clinic

Head of Department

Dr Bridgette Byrne

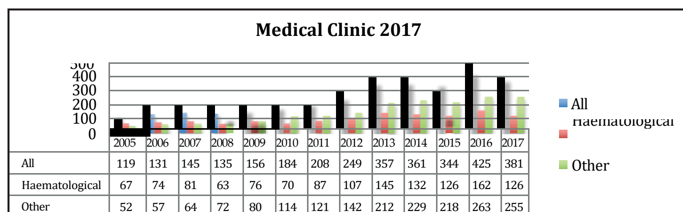
Dr Caoimhe Lynch

Dr Carmen Regan (Author)

Staff Complement

Dr Carmen Regan, *Consultant Obstetrician and Gynaecologist*
Dr Bridgette Byrne, *Consultant Obstetrician and Gynaecologist*
Dr Caoimhe Lynch, *Consultant Obstetrician and Gynaecologist*
Ms Catherine Manning, *CMMII, High Risk Service Liaison Midwife*
Dr Hala Abu *(to July 2017)*
Dr Siobhan Corcoran *(from July 2017) Fellow in Maternal Fetal Medicine, Rotunda Hospital and CWIUH/Columbia University NYC*
Dr Fatima Al Washahi *(to February 2017) RCPI International Clinical Fellow in Maternal Medicine*
Dr Catherine Wall, *Consultant in Renal Medicine*
Dr Kevin Ryan, *Consultant Haematologist (Thrombosis/Haemostasis)*
Dr Catherine Flynn, *Consultant Haematologist (General Haematology)*
Dr Emma Tuohy, *Consultant Haematologist (General Haematology/Sickle Cell/ Thalassaemia)*
Dr John Cosgrave, *Consultant Cardiologist, St James's Hospital*
Dr Terry Tan, *Consultant in Perioperative Medicine*
Mr Fergus Guilfoyle, *Chief Medical Scientist, Blood Transfusion*
Ms Orla Fahy, *Pharmacy*

Medical Clinic Attendees (Haematology and others) by year of referral



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
All	119	131	145	135	156	184	208	249	357	361	344	425	381
Haematological	67	74	81	63	76	70	87	107	145	132	126	162	126
Other	52	57	64	72	80	114	121	142	212	229	218	263	255

Key Performance Indicators

- 381 new referrals.
- Ongoing audit of care.
- Evidence-based practice.
- Weekly team meetings.
- Quarterly MDTs.
- Quarterly tri-hospital meetings.
- Multidisciplinary input.
- Structured training for MFM Fellowship/RCPI International Clinical Fellow in Maternal Medicine.
- National referral centre for patients with coagulation or bleeding disorders through NCC (National Centre for Coagulation, St James's Hospital).

Achievements in 2017

- Referral centre for high risk pregnancy.
- Consultant-led care.
- Increased pre-conceptual care referrals.
- National referral centre for management of sickle cell disease in pregnancy.
- RCPI International Clinical Fellow in Maternal Medicine.

Challenges for 2018

- Continued development of care pathways between the Coombe Hospital and St James's Hospital for optimization of care of high risk patients and sick mothers.
- Continued provision of optimal care to high risk pregnant women throughout pregnancy.

Diagnoses of new patients referred to the Medical Clinic

In 2017 there were 381 new referrals to the medical clinic

HAEMATOLOGICAL DISORDERS:

THROMBOSIS/THROMBOPROPHYLAXIS	**53**
PULMONARY EMBOLISM (CURRENT PREGNANCY)	2
IVC FILTER INSITU	1
HISTORY OF VTE'S	38
FAMILY HISTORY VENOUS THROMBOSIS/ EMBOLISM	7
DEEP VENOUS THROMBOSIS IN PREGNANCY	5

CLOTTING FACTOR DEFICIENCIES	**34**
BLEEDING DISORDER UNKNOWN AETIOLOGY	10
FACTOR VII DEFICIENCY	2
FACTOR X DEFICIENCY	1
FACTOR XII DEFICIENCY	1
FACTOR XI DEFICIENCY	1
VON WILLEBRANDS DISEASE	8
SEVERE HAEMOPHILIA CARRIER	5
FAMILY HISTORY HAEMOPHILIA	2
PARTNER WITH FACTOR IX DEFICIENCY	2
FAMILY HISTORY OF VON WILLEBRAND DISEASE	2

THROMBOPHILIA	**16**
APLS	5
THROMBOPHILIA	5
FACTOR V LEIDEN HETEROZYGOUS	3
CADASIL	1
FAMILY HISTORY OF THROMBOPHILIA	2

PLATELET DISORDERS	**12**
ITP	9
PLATELET FUNCTION DEFECT	1
FAMILY HISTORY OF PLATELET FUNCTION DEFECT	1
PARTNER PLATELET FUNCTION DEFECT	1

RED CELL DISORDERS	**4**
THALASSEMIA	1
SICKLE CELL DISEASE	2
NEUTROPENIA/LEUKOPENIA	1

WHITE CELL DISORDERS	**7**
HISTORY OF LEUKAEMIA	1
HISTORY OF NON-HODGKIN'S LYMPHOMA	1
HISTORY OF HODGKIN'S LYMPHOMA	4
HISTORY OF LEUKAEMIA	1

OTHER DISORDERS

HYPERTENSIVE DISEASE	**42**
ESSENTIAL HYPERTENSION	39
SEVERE PET	3

CARDIAC DISEASE	**43**
ARRHYTHMIAS/PALPITATIONS	12
ARRHYTHMIA WITH IMPLANTABLE DEFIBRILLATOR	1
ALAGILLE SYNDROME	1
HEART TRANSPLANT	1
WOLF PARKINSON WHITE SYNDROME	5
CONGENITAL HEART DISEASE	7
HEART MURMUR	7
MITRAL VALVE PROLAPSE	7
METALLIC MITRAL VALVE	1
PULMONARY VALVE STENOSIS	1

RENAL DISORDERS	**16**
CHRONIC RENAL DISEASE	3
CONGENITAL RENAL ABNORMALITY	1
HISTORY OF HYDRONEPHROSIS	1
IGA NEPHROPATHY	1
SEVERE PROTEINURIA	2
RENAL TRANSPLANT	2
FOWLERS SYNDROME	1
HX RENAL REFLUX	1
POLYCYSTIC KIDNEY	1
HENOCH SCHONLEIN PURPURA	1
PERSISTENTLY RAISED CREATININE	2

RESPIRATORY	**10**
SARCOIDOSIS	4
SEVERE ASTHMA	3
MATERNAL CONGENITAL DIAPHRAGMATIC HERNIA	1
CYSTIC FIBROSIS	1
ALPHA-1 ANTITRYPSIN DEFICIENCY	1

CONNECTIVE TISSUE DISEASE	**36**
SYSTEMIC LUPUS ERYTHEMATOUS	12
MARFANS SYNDROME	1
ELDER DANLOS SYNDROME	3
RHEUMATOID ARTHRITIS	11
PSORIATIC ARTHRITIS	2

ANKYLOSING SPONDYLITIS	3
SPONDYLOARTHROPATHY	1
SJOGREN'S SYNDROME	1
BEHCETS	1
FIBROMYALGIA	1

DERMATOLOGY	**1**
MORPHEA /SCLERODERMA	1

CEREBROVASCULAR DISEASE/NEUROLOGICAL	**31**
HISTORY OF SUBARACHNOID HAEMORRAGE	1
ARTERIOVENOUS MALFORMATION	2
BENIGN INTRACRANIAL HYPERTENSION	1
NEUROSARCOIDOSIS	1
CVA IN PREGNANCY	1
HISTORY OF CVA	7
MULTIPLE SCLEROSIS	12
MENINGIOMA	1
MYASTHENIA GRAVIS	2
INFLAMMATION OF THE BRAIN	1
CAVERNOUS ANGIOMA	1
CHARCOT MARIE TOOTH	1

LIVER/GI	**41**
ULCERATIVE COLITIS	14
CROHNS DISEASE	23
GILBERTS SYNDROME	2
AUTO IMMUNE HEPATITIS	1
WILSON'S DISEASE	1

PRECONCEPTUAL CARE	**25**

GENETIC DISORDERS	**7**
NOONAN'S SYNDROME	1
CONNS SYNDROME	1
CARRIER OF MITOCHONDRIAL DISORDER	1
HEREDITARY ANGIOEDEMA	2
OSTEOGENESIS IMPERFECTA	2

OTHER	**3**
BREAST CANCER	1
HISTORY OF A FRACTURED PELVIS	1
LOW PHOSPHATE LEVEL	1

Adult Outpatients Clinics (Excluding Colposcopy & External Clinics)

Head of Department

Dr Sharon Sheehan, *Master*
Ann MacIntyre, *Director of Midwifery/Nursing*
Francis Richardson, *Assistant Director of Midwifery/ Nursing*
Anitha Selvanayagam, *Clinical Midwife Manager III (until June 2017)*
Mary Mc Donald, *Acting Midwife Manager III (from June 2017)*

Staff Complement

1 WTE CMM III
12.6 WTE Midwifes June 2017
16.41 WTE Midwives December 2017
3.5 Health Care Assistants

The Adult Outpatients Department facilitates public and semi-private antenatal clinics and public gynaecology clinics excluding Colposcopy. It houses the Emergency Room and the Early Pregnancy Assessment Unit. The specialist outpatient services and clinics are reported separately for the purpose of the annual report.

Achievements in 2017

- Establishment of a new gynaecology clinic to help reduce the outpatient waiting list.
- Improvements in the management of the Routine Anti-D Prophylaxis Clinic.
- Two midwives successfully completed the Midwife Prescribers Course.
- Expansion of the role of the Healthcare Assistant in the gynaecology services.
- Improved the organisation of the consulting rooms using Lean Principles.
- Introduced a new midwifery management system for Laboratory results to improve patient care.

Challenges for 2018

- Ongoing retention of staff.
- Expansion of the Midwifery Led Clinics in line with the Maternity Strategy.
- Continue the improvement in clinic management/organisation using Lean Principles.
- Improve the services of the Emergency Room.

Key Performance Indicators

Table 1 Activity Levels in Adult Outpatients Clinics 2017

Type of Appointment	Number of attendances	% increase from 2016
Antenatal Booking History Appointments Public/Semi-Private (Appointments made minus Did Not Attends)	5,925	-0.42%
Public/Semi-private Consultant-Led Antenatal Appointment	30,156	-3%
Hospital Based Midwife Appointments	4,766	15%
Total Gynaecology Appointments	9,693	14%
New Gynaecology Appointments	2,809	5%
Emergency Room Attendance	9,351	4%

Parent Education & Antenatal Classes

Head of Department

Ms Ann MacIntyre, *Director of Midwifery & Nursing*

Staff Complement

Susanne Daly, *1 WTE Clinical Midwifery Manager II*
Kathy Cleere, *0.23 WTE Staff Midwife*
0.5 WTE Secretary

Key Performance Indicators

- Provision of a comprehensive, parent-focussed antenatal education service for women and their partners.
- Provision of an easily-accessible, family-friendly service that reflects parents' needs.
- Individualized education and support where need is identified.
- Resource and support to all clinical staff.
- Education and support for Higher Diploma and BSc Midwifery Students in both hospital and university. The department provides two Parent Education lectures annually in Trinity College and participates in the clinical assessment of students.
- Provision of a Midwives Clinic every Monday in the Outpatient Department.

Achievements in 2017

Increase in attendance of parent education classes within existing resources.

Service	Attendances 2017
Hospital Tour	316
Saturday Class	427
Refresher Class	161
Evening Class	802
Introductory Classes	396
Day Classes (a.m.)	2117
Afternoon Classes	1231
Multiple Birth Classes	71
VBAC Workshop	66
Hypnobirthing Workshop	148
Birthing Workshop	102
1:1 Classes	50
Total	**5887**

Challenges and Outlook for 2018

Training new staff members and meeting the huge demand for weekend workshops and hypnobirthing workshops will prove a challenge for 2018.

Perinatal Day Centre

Head of Department

Fidelma Mc Sweeney, *ADOM*, *Maternity Floors*

Staff Complement

Staff Midwife WTE 1.81
Phlebotomist WTE 1 (GTT Only)

Key Performance Indicators

Indicator	N=	% Change from 2016
Oral Glucose Tolerance Tests	4498	-0.08
Fasting/Post Prandial Blood Tests	480	-4.5
Diabetic Blood Sugar Results "phone –ins"	532	+1.5
Other Blood Tests	1092	-0.39
CTG Fetal Monitoring	2586	+0.5
Antenatal Steroid Administration	652	13
External Cephalic Version	53	-28
Blood Pressure Series	1561	-17
Wound Review/Dressings	528	+40
Antenatal Visits/Other Visits	610	-44
Referral from Clinics	1471	-
Referral from ER	28	-
Referral from GP	300	-
Other Referrals	359	-
24 Urine collection + BP Series	186	-
Postnatal reviews	1039	-
Total Attendance Figures	**12196**	**-2**

Achievements in 2017

- Provided quality and safe care for women throughout the year.
- Regular phlebotomy service integrated and retained for Glucose Tolerance Test in the centre.
- Dedicated NCHD to the Centre has reduced patient waiting times.

Challenges for 2018

- To improve midwifery staffing levels.
- To achieve regular assignment/roster of obstetrician service in the centre.
- To streamline the process for OGTTs.

Preterm Birth Prevention Clinic

Head of Department

Professor Sean Daly

In 2017 the service changed to become less of a consultation service and more of a service to manage women for the whole of their pregnancy. In addition Dr Alison De Maio joined the service and therefore there was no interruption to the weekly clinic throughout the year, despite annual leave.

Overall there were 414 clinic appointments and the DNA numbers were 36 giving a DNA rate of 8.7%. As reported in prior years this is very low and emphasizes the importance of the clinic to the women who attend it.

In 2017 there were a total of 162 women seen at the clinic. The referral criteria remained the same: prior preterm birth, prior premature rupture of the membranes, prior mid trimester loss and either a cone biopsy or two LLETZ procedures in order to manage cervical dysplasia.

The management was primarily by serial cervical lengths +/- fetal fibronectin and the interventions used were either cervical cerclage or cyclogest.

Interventions

Cervical Cerclage	9 Women	5.6%
Cyclogest	5 Women	3.0%

Outcomes

Mean Gestational Age at Delivery	37.3 weeks	SD 3.4
Preterm Birth Rate	23.9%	N = 39
Mean Birth Weight	2998g	SD 847

Preterm birth < 34 weeks occurred in 23 women (14.1%).

There were two mid trimester losses, one at 20 weeks and the other at 22 weeks gestation.

The Perinatal Mortality Rate was 0.0.

Severe Maternal Morbidity & High Dependency Unit

Head of Department

Ms Nora Vallejo, *CMM III Delivery Suite*

Dr Bridgette Byrne *Consultant Obstetrician/ Gynaecologist*

Ms Julie Sloan *(Research Midwife)*

Severe maternal morbidity (SMM) has been defined using the NPEC national audit criteria. 57 women were identified out of 8166 women who delivered babies weighing 500 grams or more at the CWIUH in 2017, yielding a rate of 7/1,000. This rate is equivalent to last year. Major Obstetric Haemorrhage (MOH) remains the predominant cause of severe maternal morbidity. There were 3 cases of peripartum hysterectomy and three of uterine rupture. Of interest two of the cases of rupture did not have a previous caesarean section. There were no cases of eclampsia and the rate of pumlonary embolus has more than halved compared to last year.

Table 1: Table 1: Number of cases of severe maternal morbidity cared for at the CWIUH in 2017

Maternal Morbidity Categories	
Major Obstetric haemorrhage	30
Pulmonary Embolus	5
Peripartum hysterectomy	3 (3)
Eclampsia	0
Renal or liver dysfunction	9
Uterine rupture	3 (1)
Pulmonary oedema	3
Cardiac arrest	0
Cerebrovascular event	1
Septicaemic shock	0
Other	4
ICU/CCU admission	5 (3)
Total	57

** Some patients are included in more than one category*

The cases are categorised according to the primary organ dysfunction. The brackets indicate cases that are included under another category also. Five women required transfer to ICU/CCU. These included a first trimester severe pneumonia, a case of protracted seizures with no underlying cause identified, a pulmonary embolus, severe pulmonary oedema and a postnatal CVA.

High Dependency Unit

There were 210 obstetric-related admissions to HDU in 2017. The leading indications for admission are as usual haemorrhage and hypertension/PET. The data for the year are shown in Table 2.

Table 2: Obstetric Related HDU Admissions 2017

Indication for admission	N=	%
Haemorrhage	76	36
Hypertension/PET	68	32
Infection/Sepsis	6	3
Eclampsia	0	0
Medical	25	12
MgSO4 for fetal neuro protection	15	7
PE	4	2
Other	16	8
Total	210	100

Key Performance Indicators

- Three women were transferred to ICU: unbooked and presented at 11 weeks with pneumonia (1), CVA 3 weeks post normal delivery (1) and seizures at 30 weeks (1).
- Two women were transferred to CCU: postnatal collapse with pulmonary oedema and cardiomyopathy (1), DVT and bilateral PEs at 28 weeks (1).

Achievements in 2017

- The appointment of Julie Sloan (Research Midwife) in January 2017 has resulted in improved capture of the severe maternal morbidity data. Julie began prospectively accruing data in 2017 and completing NPEC forms.
- Four midwives have completed the HDU course.
- Multidisciplinary maternal morbidity meetings have been established two monthly to discuss complicated cases.

Challenges for 2018

- PPH rates and blood transfusion rates are increasing. A group has been established to study the factors contributing to this with the aim of implementing change that will improve quality of care in the prevention and management of PPH.
- Care pathways for women requiring transfer between the CWIUH and SJH are being developed.
- Training and maintaining skill in central line management and care of the critically ill pregnant or recently pregnant women.
- Appropriate midwifery staffing of the Labour Ward and HDU and access to imaging and medical and surgical specialists that are off site remains challenging.
- Our research has shown that only one third of those admitted to HDU require Level 2 care. The challenge is to develop a facility that provides a greater level of care than on the wards but less than HDU care.

Ann Fergus
Bridgette Byrne
Julie Sloan

General Gynaecology Report

Table 1: Inpatient Surgery

	2011	2012	2013	2014	2015	2016	**2017**
Patients	6362	6202	6212	6374	6158	6330	**6031**
Operations	8652	8650	8980	8891	8618	8918	**8556**

Table 2: Operation Categories

	2011	2012	2013	2014	2015	2016	**2017**
Obstetrical	3300	3239	3308	3630	3590	3663	**3544**
Cervical	1190	1034	838	882	752	828	**844**
Uterine	2553	2668	2897	2696	2704	2761	**2543**
Tubal & Ovarian	936	1051	1032	916	844	847	**812**
Vulval & Vaginal	400	367	522	408	361	423	**360**
Urogynaecology	226	224	336	328	329	365	**410**
Other	47	60	47	31	38	31	**43**
Total	8652	8650	8980	8891	8618	8918	**8556**

Table 3: Obstetrical Operations

	2011	2012	2013	2014	2015	2016	**2017**
Lower Segment Caesarean Section (including those with Tubal Ligation)	2358	2280	2229	2476	2400	2571	**2534**
Classical Caesarean Section (including those with Tubal Ligation)	7	2	4	3	6	5	**6**
Hysterectomy in Pregnancy	6	2	2	0	2	4	**1**
ERPC	460	433	494	586	596	544	**538**
ERPC Postpartum	13	11	13	19	23	19	**14**
Laparotomy for Ectopic *	3	4	0	1	5	2	**1**
Laparoscopy for Ectopic *	48	75	47	73	78	57	**62**
Cervical Cerclage	48	59	61	61	60	36	**41**
Perineal Repair Postpartum in theatre	137	123	194	196	215	211	**166**
Manual Removal of Placenta	81	79	123	94	90	90	**68**
Operative Vaginal Delivery in theatre	103	111	88	89	83	91	**80**
Other	36	60	53	32	32	33	**33**
Total	3300	3239	3308	3630	3590	3363	**3544**

**method of collecting ectopic data changed in 2013*

Table 4: Cervical Operations

	2011	2012	2013	2014	2015	2016	**2017**
LLETZ/NETZ/SWETZ/LEEP (in theatre)	196	176	127	99	86	87	**82**
LLETZ/NETZ/SWETZ/LEEP (in clinic)*	777	677	538	617	531	563	**604**
Cone Biopsy	10	1	4	7	8	5	**2**
Punch & Wedge Biopsy of Cervix	13	14	16	17	16	17	**14**
Cervical Polypectomy	47	42	47	22	21	56	**36**
Diathermy to Cervix	11	3	8	16	3	4	**3**
Other	136	121	98	104	87	96	**103**
Total	1190	1034	838	882	752	828	**844**

* *Previously only recorded in Colposcopy Clinic Statistics*

Table 5: Uterine Operations

	2011	2012	2013	2014	2015	2016	**2017**
Hysteroscopy:							
– Diagnostic	804	918	955	867	885	939	**856**
– Operative							
– Myomectomy	11	11	9	2	4	10	**6**
– Resection of uterine septum	2	12	1	5	2	3	**7**
– Resection of uterine adhesions	3	2	2	1	2	1	**3**
– Endometrial polyp	61	73	46	73	88	49	**59**
– Other	3	2	0	8	5	5	**0**
Laparoscopy:							
– Laparoscopic assisted Vaginal Hysterectomy	41	39	38	36	44	45	**34**
– TAH	7	19	35	88	73	60	**52**
– SAH	0	0	6	9	13	7	**5**
– Radical Hysterectomy	0	0	0	0	0	0	**1**
– Myomectomy	18	5	18	22	27	8	**8**
Laparotomy:							
– TAH	102	82	67	15	12	29	**34**
– SAH	1	7	4	1	1	1	**3**
– Radical Hysterectomy	1	0	0	0	0	0	**0**
– Myomectomy	19	15	16	20	21	16	**10**
Other:							
– Vaginal Hysterectomy	92	60	79	68	44	47	**70**
– D&C	606	735	759	742	779	827	**737**
– TCRE	58	25	23	23	13	24	**26**

Table 5: Uterine Operations continued

	2011	2012	2013	2014	2015	2016	**2017**
– Endometrial Ablation	0	2	44	43	47	71	**69**
– Mirena Coil insertion	347	342	374	341	335	317	**279**
– Mirena Coil removal	133	119	143	147	155	148	**121**
– Examination under Anaesthesia	208	150	214	122	91	97	**114**
– Omentectomy	12	15	11	9	7	2	**4**
– Other	24	32	53	54	56	55	**45**
Total	2553	2668	2897	2696	2704	2761	**2543**

Table 6: Tubal and Ovarian Operations

	2011	2012	2013	2014	2015	2016	**2017**
Laparoscopy:							
– Diagnostic	281	379	340	278	235	234	**249**
– Sterilisation	61	68	88	42	40	44	**58**
– Dye Test	110	131	125	106	78	101	**85**
– Tubal Reconstructive Surgery	1	1	2	0	1	0	**0**
– Unilateral Salpingectomy	14	9	10	16	17	20	**12**
– Bilateral Salpingectomy	6	10	20	35	42	42	**26**
– Unilateral Oopherectomy	12	4	5	13	7	12	**4**
– Bilateral Oopherectomy	2	1	5	1	2	4	**1**
– Unilateral Salpingo-oopherectomy	10	19	14	19	30	19	**17**
– Bilateral Salpingo-oopherectomy	85	93	95	72	69	74	**75**
– Unilateral Ovarian Cystectomy	83	69	49	73	70	51	**75**
– Bilateral Ovarian Cystectomy	16	9	29	15	5	8	**7**
– Aspiration of Ovarian cyst(s)	10	9	15	11	9	15	**6**
– Adhesiolysis	81	69	69	67	77	74	**58**
– Ablation/Diathermy	110	111	105	131	121	110	**98**
– Other	4	13	11	13	11	15	**14**
Laparotomy:							
– Sterilisation	0	1	1	0	3	1	**0**
– Tubal Reconstructive Surgery	2	4	1	2	0	0	**0**
– Unilateral Salpingectomy	4	4	3	2	1	1	**1**
– Bilateral Salpingectomy	9	8	11	1	4	3	**4**
– Unilateral Oopherectomy	6	2	4	3	2	0	**0**
– Bilateral Oopherectomy	0	1	1	0	1	0	**0**
– Unilateral Salpingo-oopherectomy	15	16	11	6	4	7	**5**

Table 6: Tubal and Ovarian Operations continued

	2011	2012	2013	2014	2015	2016	**2017**
– Bilateral Salpingo-oopherectomy	0	0	0	0	0	0	**5**
– Unilateral Overian Cystectomy	10	13	0	8	11	10	**6**
– Bilateral Ovarian Cystectomy	2	0	2	1	2	1	**1**
– Adhesiolysis	0	6	6	0	2	0	**2**
– Ablation/Diathermy	2	1	1	1	0	1	**0**
– Other	0	0	2	0	0	0	**3**
Total	936	1051	1032	916	844	847	**812**

Table 7: Vulval and Vaginal Operations*

	2011	2012	2013	2014	2015	2016	**2017**
Simple Vulvectomy	0	3	2	4	1	4	**0**
Vaginal Repair for Dyspareunia/ Vaginoplasty	8	5	7	5	2	0	**0**
Posterior Repair	103	81	130	91	67	87	**76**
Anterior Repair	112	109	150	105	85	87	**105**
Suturing of Vaginal Vault	0	2	3	0	1	0	**0**
Hymenectomy/Hymenotomy	0	1	1	1	2	3	**5**
Excision of Vulval/Vaginal Cysts/Biopsy	77	78	110	73	86	93	**55**
Bartholin's Cyst/Abcess	25	23	24	35	30	42	**24**
HPV	4	3	3	4	4	2	**2**
Labial Reduction	8	8	9	6	9	5	**4**
Fenton's Procedure	15	5	8	9	4	4	**7**
Other cyst/abscess/lesions	6	10	8	5	14	12	**14**
Other	42	56	67	70	56	84	**68**
Total	400	367	522	408	361	423	**360**

**excludes Urogynaecology operations and operations for vault prolapse*

Table 8: Urogynaecology*

	2011	2012	2013	2014	2015	2016	**2017**
Laparoscopic Burch/paravaginal repair	0	6	10	4	2	0	**1**
TVT/TOT/TVTO	79	70	96	77	84	71	**85**
Bulking Injection	5	21	17	12	10	16	**16**
Botox injection	0	12	11	35	22	39	**30**
Vault Suspension							
SSLS	3	11	20	19	15	17	**22**
LSCP	3	5	10	14	26	24	**16**
Other	13	13	26	6	4	12	**18**
Cystoscopy	114	86	131	135	147	147	**200**
Other	9	6	15	26	19	39	**22**
Total	226	224	336	328	329	365	**410**

**includes prolapse operations only for vault prolapse*
SSLS = sacrospinous ligament suspension LSCP = Laparoscopic sacrocolpopexy

Table 9: Other Operations

	2011	2012	2013	2014	2015	2016	**2017**
Abdominal Wound Dehiscence	1	0	0	0	1	0	**1**
Appendicectomy	15	15	12	9	7	4	**8**
Laparotomy for other indication	6	18	8	1	2	2	**3**
Blood Patch	8	14	12	10	8	12	**9**
Other	17	13	15	11	20	13	**22**
Total	47	60	47	31	38	31	**43**

Table 10: Total Gynaecological Outpatient Attendance

	2011	2012	2013	2014	2015	2016	**2017**
Adolescent	252	256	143	144	170	203	***
Colposcopy	6732	6322	6166	7009	6473	6029	**5938**
Endocrine/Infertility	582	737	627	464	504	449	**483**
General	3903	3392	4328	4728	4469	4981	**6155**
Urogynaecology	1323	1283	1249	1436	1565	1564	**1736**
Anaesthetic	548	725	905	913	1102	2706	**2768**
Oncology*	20	3	-	-	-	-	-
Cervical Screening**	-	-	-	-	-	-	-
Total	13360	12708	13418	14694	14283	15932	**17080**

** Oncology consultant sessions transferred to St. James's Hospital, however oncology patients are seen in the Colposcopy Clinic.*

*** Cervical Screening figures are listed as part of the Colposcopy figures.*

****This clinic was merged in 2017 with a General Gynaecology clinic*

Table 11. Gynaecology Complications & Transfer to HDU/ITU

Complication	N
Bladder Injury	2
Bowel Injury	2
Uterine Perforation	6
Transfer to HDU	5
Transfer to ITU	0
Blood Transfusion > 5 units	1
Other Organ Injury	0
Wound Dehiscence	0
Total	**16**

Coombe Continence Promotion Unit

Head of Department

Prof Chris Fitzpatrick, *Director (Author)*

Staff Complement

Dr Mary Anglim, *Consultant*

Dr Gunther Von Bunau, *Consultant*

Dr Aoife O'Neill, *Consultant*

Dr Faiza Aldarmaki, *RCPI International Fellow*

Ms Eva Fitzsimons, *Specialist Urodynamic Midwife (Co-Author)*

Dr Tarannum Mahedvi, *Registrar*

Margaret Mason, *Physiotherapy Manager*

Anna Chrzan, *MISCP, Senior Grade 0.5 WTE*

Anne McCloskey, *BSc MISCP, Senior Grade 0.5 WTE*

Clare Farrell, *BSc MISCP, Senior Grade 1 WTE*

Julia Hayes, *BSc MISCP, Senior Grade 0.6 WTE*

Roisin Phipps, *BSc DPT MISCP, Senior Grade 1 WTE*

Sarah Bevan, *MISCP, Senior Grade 0.75 WTE*

Deirdre Kenny, *BSc MISCP, Junior Grade 1 WTE*

Ciara Black, *BSc MISCP, Junior Grade 0.75 WTE*

Sara Birch, *BSc MISCP, Junior Grade 1 WTE*

Amanda Drumond Martins, *MISCP 0.75 WTE*

Description of Unit

The Coombe Continence Promotion Unit was established in 1998 to provide a comprehensive multidisciplinary service to women with continence – related problems/ pelvic floor dysfunction. The Unit has three specialist subdivisions: Urogynaecology (established in 1993), Specialist Nursing Services and Physiotherapy.

Special Interests

- Post-hysterectomy and recurrent prolapse
- Refractory DO
- Stress Incontinence after previous surgery
- Painful Bladder Syndrome

Key Performance Indicators

- 591 first visits and 1144 return visits to Urogynaecology Clinic* (520 and 1044 in 2016); 353 urodynamic evaluations; 410 operative procedures; 217 Day Ward hyaluronic acid bladder instillations; 25 CISC instruction (pre-Botox mainly).
- Diagnostic rate of 94% in patients undergoing urodynamic evaluation.

**includes only patients attending Urogynaecology Clinic (CF); does not include Urogynaecology patients attending other Gynaecology OPD Clinics.*

Achievements in 2017

- Continuing expansion of treatment options for women with complex pelvic floor dysfunction - with both vaginal and advanced laparascopic interventions.
- Increase in urodynamics evaluations (272 in 2016; 353 in 2017) and operations performed (365 in 2016; 410 in 2017).
- Continuation of Day Ward intravesical hyaluronic acid bladder instillations (217 in 2017).
- Appointment of RCPI International Fellow in Urogynaecology.
- Same day admission policy for >96% major cases.
- Fast-tracking triage of GP referrals directly to Physiotherapy.
- Urogynaecology MDT meetings.

Challenges for 2018

- Expansion of urodynamic sessions.
- Expansion of the role of the Urodynamic Specialist Midwife and training of second Urodynamic midwife/ nurse.
- Expansion of Physiotherapy services.
- Capital development.
- Development of National Guidelines.

Acknowledgments

I would like to acknowledge the support of the Division of Gynaecology, Department of Peri-Operative Medicine, Theatre & Recovery, OPD, Day Ward, St Gerard's Ward, Radiology, Laboratory, Admissions and the Master in 2017. A special word of thanks to Clare Smart, Aaron Gracey and Emma O'Neill for their invaluable support.

Table 1 Urodynamic Diagnosis (N = 353)

Diagnosis	%
USI	37
USI + DO	24
USI + HRVD	2
DO	25
DO + HRVD	3
HRVD	3
No diagnosis	6
Total	**100**

USI = urodynamic stress incontinence
DO = detrusor overactivity
HRVD = high residual voiding dysfunction

Table 2 Urogynaecology Operations (2010 - 2017)

	2010	2011	2012	2013	2014	2015	2016	**2017**
Laparoscopic Burch/ paravaginal repair	0	0	6	10	4	2	0	**1**
TVT/TOT/TVTO	98	79	70	96	77	84	71	**85**
Bulking Injection	3	5	21	17	12	10	16	**16**
Botox injection	0	0	12	11	35	22	39	**30**
Vault suspension:								
– SSLS	6	3	11	20	19	15	17	**22**
– LSCP	0	3	5	10	14	26	24	**16**
– Other	46	13	13	26	6	4	12	**18**
Cystoscopy	98	114	86	131	135	147	147	**200**
Other	10	9	6	15	26	19	39	**22**
Total	261	226	224	336	328	329	365	**410**

**Includes prolapse operations only for vault prolapse*
SSLS = sacrospinous ligament suspension
LSCP = laparoscopic sacrocolpopexy

Colposcopy Service – Medical Report

Head of Department

Dr Tom D'Arcy, *Divisional Lead for Gynaecology Department*

Staff Complement

Consultant Colposcopists
Dr Tom D'Arcy
Dr Nadine Farah
Dr Mary Anglim
Dr Waseem Kamran

Nurse Colposcopists
Aoife Kelly

Trainee Nurse Colposcopists
Feba Paul
Yvonne McCudden

Clinical Nurse Manager II
Olivia McCarthy

Gynaecology Oncology Liaison Nurse
Aidin Roberts *(0.5WTE)*

Registered General Nurses
Rani Hilarose (0.36WTE)

Healthcare Assistants
Amanda Kennedy
Maria White
Hayley Mitchell

Failsafe Officer/Office Manager
Bernie Cummins

Office Administrators
Frances Cunningham
Helen Conlon
Joan McNeaney

Specialist Registrars
As per rotation

The CWIUH Colposcopy Service is consultant-led and currently includes one Nurse Colposcopist, Aoife Kelly. At the beginning of 2017 the previous post-holder and our trainee Nurse Colposcopist transferred to another service. Two trainee Nurse Colposcopists Feba Paul and Yvonne McCudden commenced their posts in early 2017.

Clinic Attendances

In 2017, 1985 women were referred for colposcopy, a 7% decrease on 2016 figures.

1863 patients attended for a first visit. This represented a 10% decrease on 2016 figures.

However there was a 3% increase in return visit attendances to the clinic. 4046 patients in 2017 compared to 3942 patients in 2016.

It would appear from our data that more women required treatment owing to persistence of CIN or progression of CIN and this may have contributed to an increase in return visits.

In addition we saw a reduction in the DNA rates for patients attending the clinic for the first time, 8.4% in 2017 Vs 10% in 2016.

Pleasingly, for the third year in a row, the overall DNA rate has decreased from 18.9% in 2016 to 17.5% for all patient groups.

Owing to staff changes in early 2017, there was some impact on our ability to offer patients an appointment within recommended Cervical Check guidelines; however by the summer months and once the new trainees were more established in their roles, waiting times returned to within recommended levels.

Within this time, all urgent patients were prioritized and the 2 week waiting time was not affected.

These figures are summarised in Table 1 and illustrated in figure 1.

Table 1 Colposcopy attendance figures over 5 years

	2013	2014	2015	2016	**2017**
First Visits	1847	2169	1993	2064	**1863**
Follow-up Visits	4355	4801	4428	3942	**4046**
TOTAL	6202	6970	6421	6006	**5909**
DNA (N)	1286	1420	1280	1137	**871**
DNA (%)	20.7	20.3	19.9	18.93	**17.5**

Figure 1 Attendance at the Colposcopy Clinic at the CWIUH over 5 years

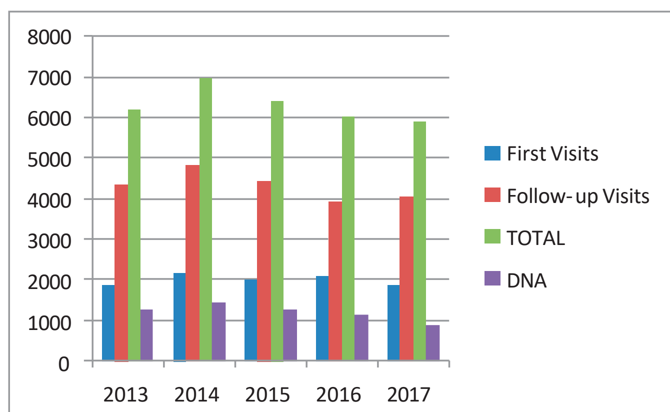


Table 2 Histological breakdown of the transformation zones which were removed by LLETZ in the clinics and in theatre in 2017

LLETZ	N=
Adenocarcinoma in-situ / CGIN	14
Cancer (including micro-invasive)	15
CIN1	216
CIN2	164
CIN3	214
Inadequate / Unsatisfactory	0
No CIN / No HPV (normal)	63
Total	**686**

Treatment and Histology

Evidence of disease are treated within the Colposcopy Clinic by LLETZ (Large Loop Excision of the Transformation Zone).

For those patients who require treatment in a theatre setting, this is usually down to clinical need - extent of disease for example, larger area requiring excision and not suitable for clinic excision, for a glandular abnormality or a repeat treatment requiring a NETZ. On occasion patient preference alone may be the indication.

Fewer patients went through theatre for treatment in 2017; 82 patients versus 87 in 2016.

This included:

- 60 LLETZ
- 22 NETZ

We remain within the Target Clinical Standards set out by BSCCP and Cervical Check for outpatient vs. inpatient treatment setting.

Quality Assurance and MDTs

In 2017 we maintained monthly CPC/MDT meetings to discuss challenging cases. We remain grateful to all staff for the significant commitment required to organise and attend these meetings.

Colposcopy service provision is based upon Quality Standards set out by the National Screening Service (NSS), highlighting organisational standards such as facilities, system management, clinical staffing, and administrative management alongside governance structures. Within the CWIUH Colposcopy Department we continually review our practice against these standards and maintain a high level of compliance within these Quality Standards criteria.

Future plans

Within our own Colposcopy service, we will continue to review management pathways to ensure optimal use and allocation of colposcopy appointments.

We have strongly adhered to the recommended pathways developed by Cervical Check which support the continuous movement of patients through colposcopy efficiently.

In 2018, screening will see the introduction of primary HPV screening. It will be interesting to see how this impacts on the Colposcopy service in coming months and years.

Olivia McCarthy
CNM II
Colposcopy

Dr Tom D'Arcy
Director of Colposcopy

Colposcopy Service – Nurse Colposcopists Report

Head of Department

Dr Tom D'Arcy, *Divisional Lead for Gynaecology Department*

Staff Complement

1 WTE Nurse Colposcopist, Ms Aoife Kelly (Author)

1 WTE Trainee Nurse Colposcopist, Ms Feba Paul (from February 2017)

0.96 WTE Trainee Nurse Colposcopist, Ms Yvonne Mc Cudden (from March 2017)

Key Performance Indicators

- The Nurse Colposcopist is responsible for the management of a caseload of patients in the Colposcopy Outpatient setting, as directed by the Lead Consultant for Colposcopy.
- In the absence of Consultants, the Nurse Colposcopist, along with the Trainee Nurse Colposcopists, sustain and maintain full clinical support.
- Support the Clinical Lead and Nurse Manager in the ongoing review and development of the service.
- Provide a positive learning environment for trainee Nurse Colposcopists, Registrars and cervical screening course students. This includes teaching colposcopy and providing support.
- Implement evidence-based policies and protocols, which are developed in conjunction with the Nurse Manager and the Clinical Lead, in line with BSCCP and NCSS guidelines.
- Nurse Colposcopists are responsible for the coordination and facilitation of the CINCPC/MDT meetings. These meetings require significant input and planning, with each CPC/MDT meeting having an average of 12 cases for discussion. The co-ordinator is responsible for the listing of cases, the requesting of slides, and presentation of cases for each meeting and reconciling outcomes and follow-up management plans afterwards.

Achievements in 2017

Workload of Nurse Colposcopist

Patients Seen	1331 Patients (total number) 797 follow-up patients 534 first visit patients
Performed	292 LLETZ treatments (42.5% of the total number of excisional treatments performed in 2017) 505 diagnostic biopsies
Diagnosed cancers/cGIN	8- Micro invasive cancers 2- Invasive squamous cell carcinomas 0- Invasive adenocarcinoma 3- Adenocarcinoma-in-situ of cervix
Prescriptions as a registered nurse prescriber	125 prescriptions
MDT	Co-ordinated and facilitated 7 meetings
Conference	NICCIA annual meeting March 2017 Cervical Check Colposcopy Forum November 2017
Personal development	Gave a health promotion lecture to H.Dip midwifery students on cervical screening. Supported several smear taker trainees on placement.

Challenges for 2018

- Continue to provide the highest standard of Colposcopy Service to an increasingly complex patient caseload.
- Endeavour to perform further audits and presentations in 2018 and attend study days relevant to our clinical field.
- Endeavour to support the Trainee Nurse Colposcopists in their training, clinical and managerial development.

Hysterosalpingocontrastsonography (HyCoSy) Service

Consultant

Dr Nadine Farah

Clinical Research Fellow

Dr Mei Yee Ng

Secretary

Ms Aideen O'Connor

Key Performance Indicators

Procedures	**No.**	**%**
Procedures scheduled	198	
Procedures completed	195	(98.5)
Procedures abandoned	3	(1.5)
Procedures inconclusive	4	(2.0)

Tubal Patency	**No.**	**%**
Bilateral patency	153	(78.5)
Bilateral Occlusion	7	(3.6)
Unilateral patency:		
Other tube occluded	24	(12.3)
Other tube not visualised	1	(0.5)
Other tube previous salpingectomy	6	(3.1)

Uterine Findings	**No.**	**%**
Submucosal fibroids/endometrial polyps	3	(1.5)

Operating Theatre Department

Heads of Department

Dr Tom D'Arcy, *Director of Gynaecology Division*

Dr Terry Tan, *Director of Perioperative Medicine/ Anaesthesia*

Ms Frances Richardson, *Asst. Director of Midwifery & Nursing, Gynaecology*

Ms Alison Rothwell, *CNM III, Theatre Manager, Gynaecology Wards and Anaesthetic Clinic*

Staff Complement

Approved posts – 29 WTE

CNM 3 x 1 WTE

CMM 2 x 1.5 WTE

CNM 2 (Anaesthetics) x 1 WTE

Staff Midwives x 6.75 WTE

RGN 22.75 WTE

Total as of Dec 2017 was 33 WTE

Key Performance Indicators

- Information sheets for women, which cover procedures most commonly undertaken at CWIUH, are now gone to print.
- Significant internal refurbishment work was completed in Theatre by the end of January 2017.
- CSSD Autoclave replacement programme was protracted, and significantly challenged the delivery of surgical services in Theatre during the first quarter 2017.

Achievements in 2017

- Much improved air handling and fire rating standards, improved and more appropriate use of space and storage solutions have been achieved as a result of the refurbishment project.
- Staff numbers grew to facilitate surgical sessions for consultants requiring same.

Challenges for 2018

- To gain funding approval to go to design and tender for the building of new theatres, to reach best practice standards for Operating Theatre Departments.
- To continue the work of developing information sheets.
- To undertake a review of the consent form following publication of information sheets, to reflect current best practice standards.
- To manage the increased obstetric workload in Theatre, as caesarean section rates continue to rise.

Division of Paediatrics & Newborn Medicine – Medical Report

Section 1: Admissions

Table 1.1: Admissions – Coombe Women & Infants University Hospital Neonatal Centre

	N
Total No. of Admissions to Neonatal Centre	1020
No. of Infants > 1.5kg	845

** including readmissions*

Section 2: VLBW Infants

Table 2.1: Number of cases reported to the VON 2017 (n = 140)

	All cases	Number of cases excluding congenital anomalies
Infants < 401g but ≥22 wks gestation	0	0
Infants 401-500g	10	9
Infants 501-1500g	128	120
Infants > 1500g but ≤29 wks gestation	2	0
Total	N = 140*	N = 126*

**N = 140 represents total number of VON infants managed by the CWIUH. This reflects both 127 inborn and 13 outborn VON infants. There was a total of 9 newborns with VON defined major congenital anomalies.*

Table 2.2: Gestational age breakdown and survival to discharge of all infants reported to the VON (including those with congenital anomalies) in 2017 (n = 137*)

Gestational Age	Inborn Infants	Survival to 28 days	Survival to Discharge	Outborn Infants	Survival to 28 days	Survival to Discharge	Total Survival to Discharge
21 wks	2	0	0	0	0	0	0
22 wks	6	0	0	0	0	0	0
23 wks	2	1	1	0	0	0	1 (50%)
24 wks	9	5	5	1	1	1	6 (60%)
25 wks	12	7	5	3	2	2	7 (46.7%)
26 wks	3	3	3	1	1	1	4 (100%)
27 wks	17	16	16	2	2	2	18 (94.7%)
28 wks	19	18	18	2	2	2	20 (95.2%)
29 wks	19	17	17	1	1	1	18 (90%)
30 wks	19	19	19	1	1	1	20 (100%)
31 wks	11	11	11	1	1	1	12 (100%)
32 wks	2	2	2	0	0	0	2 (100%)
> 32 wks	4	4	4	0	0	0	4 (100%)
Total	125	103	101	12	11	11	112 (81.7%)

**Total N = 125 inborn infants and 12 outborn infants for whom survival data available.*

Table 2.3

Table 2.3: Birth weight and survival to discharge of all infants reported to the VON (including those with congenital anomalies) 2017 (n = 137*)

Birth Wt	Inborn Infants	Survival to 28 days	Survival to Discharge	Outborn Infants	Survival to 28 days	Survival to Discharge	Total Survival to Discharge
<501g	11	3	2	0	0	0	2 (18.2%)
501-600g	8	4	4	1	1	1	5 (55.5%)
601-700g	9	8	8	0	0	0	8 (88.9%)
701-800g	6	2	2	2	2	2	4 (50%)
801-900g	9	9	8	1	1	1	9 (90%)
901-1000g	10	10	10	0	0	0	10 (100%)
1001-1100g	14	12	12	4	3	3	15 (83.3%)
1101-1200g	10	9	9	3	3	3	12 (92.3%)
1201-1300g	16	16	16	0	0	0	16 (100%)
1301-1400g	20	19	19	0	0	0	19 (95%)
>1400g	11	10	10	1	1	1	11 (91.6%)
Total	124	102	100	12	11	11	111 (81.6%)

**Total N = 125 inborn and 12 outborn infants for whom survival data available.*

VON Definitions

Nosocomial Infection: defined as any late bacterial infection or coagulase negative staphylococcus infection.

Any Late Infection: defined as any late bacterial infection, coagulase negative staphylococcus infection or fungal infection after D3.

Mortality: defined as death at any time prior to discharge home or first birthday. It is applicable to all infants for whom survival status is known. In this table, it only includes infants 501-1500g and it includes infants with major congenital anomalies.

Mortality Excluding Early Deaths: excludes infants who die within the first 12 hours of birth.

Survival: indicates whether the infant survived to discharge home or first birthday.

Survival without Specified Morbidities: indicates whether the infant survived with none of the following key morbidities: severe IVH, CLD, NEC, pneumothorax, any late infection or PVL.

Source: Vermont Oxford Network Annual Report and Nightingale, the Vermont Oxford Network Internet Reporting Tool.

Table 2.4: Morbidity & Mortality figures for infants 501-1500g admitted to the NICU in the CWIUH (congenital anomalies included) compared to the Vermont Oxford Network and Republic of Ireland (n = 126)

	CWIUH 2017 Infants 501-1500g (n=126)	VON 2017 Infants 501-1500g (%)	ROI 2017 Infants 501-1500g (%)
Inborn	113 (89.7%)	87.7%	90.9%
Male	63 (50%)	50.2%	47.2%
Antenatal Steroids (partial or complete)	121 (96%)	85.4%	92.6%
C/S	88 (69.8%)	73.1%	68.9%
Antenatal Magnesium Sulphate	110 (87.3%)	59.6%	74.3%
Multiple Gestation	44 (34.9%)	26.6%	33.8%
Any major birth defect	8 (6.3%)	5.2%	8.2%
Small for gestational age	18 (14.3%)	25.2%	20%
Surfactant in DR	37 (29.4%)	21.9%	29.4%
Conventional Ventilation	64/125 (51.2%)	53.7%	48.3%
High Frequency Ventilation	8/125 (6.4%)	19.7%	9.1%
Any Ventilation	64/125 (51.2%)	55.8%	48.7%
High Flow Nasal Cannula	33/125 (26.4%)	54.1%	45.7%
Nasal CPAP	112/125 (89.6%)	79.9%	83.9%
Nasal CPAP before ETT Ventilation	82/115 (71.3%)	63.7%	67.1%
Ventilation after Early CPAP	25/82 (30.5%)	37.1%	32.1%
Surfactant at any time	74/126 (58.7%)	55.6%	57.1%
Steroids for CLD	7/125 (5.6%)	10%	7.4%
Inhaled Nitric Oxide	9/125 (7.2%)	5%	7.2%
RDS	105/125 (84%)	71.7%	76.8%
Pneumothorax	6/125 (4.8%)	4%	5.7%
Chronic Lung Disease (at 36 wks)	20/105 (19%)	24.8%	23.6%
Early Bacterial Infection	3/125 (2.4%)	2.4%	2.7%
Late Bacterial Infection	6/122 (4.9%)	7.5%	6.5%
CONS Infection	6/122 (4.9%)	4.6%	4.9%
Nosocomial Bacterial Infection	12/122 (9.8%)	10.7%	10.8%
Fungal Infection	2/122 (1.6%)	0.8%	0.8%
Any Late Infection (Bacterial or Fungal)	12/122 (9.8%)	11.1%	11%
NEC	12/125 (9.6%)	4.4%	6.1%
NEC Surgery	4/125 (3.2%)	3.4%	2.6%
GI perforation	6/125 (4.8%)	1.7%	1.3%
PDA ligation	1/125 (0.8%)	3.2%	2.3%
Surgery for ROP	1/125 (0.8%)	2.1%	4.2%
Any Grade of IVH (Grade I-IV)	25/124 (20.2%)	25.7%	24.2%
Severe IVH (Grade III-IV)	4/124 (3.2%)	7.9%	6.9%

Table 2.4 (*continued*): Morbidity & Mortality figures for infants 501-1500g admitted to the NICU in the CWIUH (congenital anomalies included) compared to the Vermont Oxford Network and Republic of Ireland (n = 126)

Cystic PVL	1/124 (0.8%)	2.9%	2%
Retinopathy of Prematurity	24/96 (25%)	30%	18.3%
Severe ROP (Stage 3 or more)	5/96 (5.2%)	5.8%	4.3%
Anti-VEGF Drug	3/125 (2.4%)	1.5%	1.9%
Indomethacin	0	11%	0
PDA	4/125 (3.2%)	25.9%	24.6%
Ibuprofen for PDA	1/125 (0.8%)	6.4%	6.3%
Probiotics	113/125 (90.4%)	15.6%	44.8%
Mortality	15/123 (12.2%)	12%	15.7%
Mortality excluding Early Deaths	13/121 (10.7%)	9.3%	11.2%
Survival	108/123 (87.8%)	88%	84.3%
Survival without Specified Morbidities	80/123 (65%)	58.9%	57.8%

Table 2.5 Shrunken Standardized Mortality and Morbidity (SMR) Rates

	SMR (95% confidence interval) For Year 2017	SMR (95% confidence interval) For 3 Years 2015-2017
Mortality	1.1 (0.7 – 1.6)	1.0 (0.8 – 1.4)
Death or Morbidity	0.9 (0.7 – 1.1)	0.9 (0.8 – 1.1)
Chronic Lung Disease (at 36 wks)	0.9 (0.6 – 1.3)	0.8 (0.6 – 1)
NEC	1.6 (0.9 – 2.5)	1.5 (1.1 – 2.1)
Late Bacterial Infection	0.7 (0.3 – 1.2)	1.1 (0.7 – 1.4)
Coagulase Negative Infection	1 (0.4 – 1.8)	1 (0.6 – 1.5)
Nosocomial Infection	0.9 (0.5 – 1.3)	1.1 (0.8 – 1.5)
Fungal Infection	1.5 (0.2 – 4.1)	1 (0.2 – 2.2)
Any Late Infection	0.8 (0.5 – 1.3)	1.1 (0.8 – 1.4)
Any IVH	0.9 (0.6 – 1.2)	0.9 (0.7 – 1.1)
Severe IVH	0.7 (0.4 – 1.1)	0.9 (0.6 – 1.2)
Pneumothorax	1.1 (0.6 – 1.8)	1.2 (0.8 – 1.6)
Cystic PVL	0.5 (0.1 – 1.3)	0.5 (0.2 – 0.9)
Any ROP	1 (0.6 – 1.3)	0.8 (0.6 – 1)
Severe ROP	1.1 (0.4 – 2.2)	0.8 (0.4 – 1.2)

Section 3: Hypoxic Ischaemic Encephalopathy & Mortality Tables

Table 3.1: Hypoxic Ischaemic Encephalopathy

	Inborn	Outborn
Hypoxic Ischaemic Encephalopathy (HIE)	20	5
Mild HIE (Stage 1)	10	0
Moderate HIE (Stage 2)	8	5
Severe HIE (Stage 3)	2	0
Therapeutic Hypothermia	12*	6**

**2 cases of inborn encephalopathic newborns treated with therapeutic hypothermia. 1 with GBS meningitis and the other with GBS sepsis.*

***1 case of outborn encephalopathic newborn with postnatal diagnosis of Noonan's syndrome who was treated with therapeutic hypothermia.*

Table 3.2 Mortality - Inborn Infants with Congenital Anomalies (n = 16)

Birthweight (g)	Gestational Age	Apgar Scores	Age at Death (day of life)	Place of Death	Abnormality (leading to death)
500	24 +0	7, 9	9	CWIUH	Extreme Prematurity, NEC, Pulmonary Atresia AND
950	28+5	0, 1	1	CWIUH	Potters sequence, Bilateral Renal Cystic disease, Congenital hydrocephalus, Extreme Prematurity AND
1060	35 + 2	4, 4	1	CWIUH	Trisomy 18 AND
1130	27 + 5	3, 3	3	CWIUH	Arthrogryposis Multiplex Congenita, Extreme Prematurity*
1510	35 + 2	2, 3	1	CWIUH	Trisomy 13, Complex Congenital Heart Disease AND
1670	32 + 3	2, 7	4	OLCHC (PICU)	Treacher Collins syndrome, Esophageal Atresia, Intrauterine growth restriction
1757	32 + 6	0, 2	1	CWIUH	Multiple Pterygium/Escobar syndrome*
1760	37 + 4	3, 1	1	CWIUH	Arthrogryposis Multiplex Congenita AND
1820	29 + 1	3, 6	22	CWIUH	Extreme Prematurity, Transposition of Great Arteries
2420	36 + 5	4, 2	2	CWIUH	Trisomy 13 AND
2590	40+6	**	20	CWIUH	Trisomy 18 AND
2360	38 + 5	9, 10	5	CWIUH	Anencephaly AND
2480	38 + 4	1, 1	1	CWIUH	Trisomy 13 AND
2530	34 + 2	4, 2	1	CWIUH	Pseudo-Trisomy 13 AND
3700	40 + 3	1, 3	2	OLCHC (PICU)	Large Cerebral Vascular Malformation, Extra-Hepatic Biliary Atresia*
3840	40	5, 7	5	CWIUH	Complex Congenital Heart disease AND

AND - *Antenatally diagnosed malformation*

* - *Infant death*

** *Apgar scores not available as born at unplanned delivery and without healthcare professionals*

Table 3.3 Mortality - Inborn Infants Normally Formed ≤ 1500g (n = 19)

(7 infants - intensive care not started for extreme prematurity)

Birthweight (g)	Gestational Age	Apgar Scores	Age at Death (day of life)	Place of Death	Cause of Death
400	22 + 1	2, 2	1	CWIUH (DS)	Extreme Prematurity, Not resuscitated
407	22 + 4	3, 1	1	CWIUH (DS)	Extreme Prematurity, Not resuscitated
430	21 + 5	1, 1	1	CWIUH (DS)	Extreme Prematurity, Not resuscitated
440	22 + 3	2, 2	1	CWIUH (DS)	Extreme Prematurity, Not resuscitated
452	21 + 6	5, 4	1	CWIUH (DS)	Extreme Prematurity, Not resuscitated
453	22 + 2	1, 1	1	CWIUH (DS)	Extreme Prematurity, Not resuscitated
470*	25 + 4	8, 9	48*	OLCHC (PICU)	Extreme Prematurity, NEC totalis
482	22 + 2	1, 1	1	CWIUH (NICU)	Extreme Prematurity, Not resuscitated
510	24 + 4	2, 5	22	OLCHC (PICU)	Extreme Prematurity, NEC with intestinal perforation, Bilateral Renal vein thrombosis
520	23 + 4	3, 6	16	CWIUH (NICU)	Extreme Prematurity, NEC
540	22 + 3	0, 6	7	CWIUH (NICU)	Extreme Prematurity, NEC, Unilateral Grade IV IVH
600	24 + 6	1, 2	3	CWIUH (NICU)	Extreme Prematurity, RDS, Pulmonary Hypertension
660	25	3, 6	12	CWIUH (NICU)	Extreme Prematurity, NEC
760	25 + 3	6, 7	7	CWIUH (NICU)	Extreme Prematurity, NEC with Intestinal Perforation
780	25 + 1	3, 3	1	CWIUH (NICU)	Extreme Prematurity, Pulmonary Hypertension
780	25 + 3	4, 7	27	CWIUH (NICU)	Extreme Prematurity, NEC with Intestinal Perforation
800	24 + 2	5, 7	15	CWIUH (NICU)	Extreme Prematurity, NEC
800*	25 + 4	3, 3	72*	CWIUH (NICU)	Extreme Prematurity, NEC, Candida sepsis
1100	25 + 5	1, 1	1	CWIUH (NICU)	Extreme Prematurity, Intraventricular Hemorrhage, Pulmonary Hypoplasia

** - Infant death*

Table 3.4 Mortality - Inborn Infants Normally Formed >1500g (n = 7)

Birthweight (g)	Gestational Age	Apgar Scores	Age at Death (day of life)	Place of Death	Cause of Death
1600	29 + 6	3, 7	3	CWIUH	Extreme Prematurity, E. coli sepsis
2210	37 + 1	1, 1	1	CWIUH	Coroner's report pending
2510	38	9, 10	13	Home	SIDS
3350	40 + 4	5, 9	13	OLCHC (PICU)	HIE Out of Hospital secondary to NEC
3520	38 + 6	0, 0	1	CWIUH	HIE Stage III, Macrosomic newborn
3600	38 + 4	5, 7	5	CWIUH	Subgaleal Hemorrhage, Coagulopathy
3640	36 + 5	0, 0	2	CWIUH	HIE Stage III

Table 3.5 Mortality - Outborn Infants Normally Formed ≤ 1500g (n = 1)

Birthweight (g)	Gestational Age	Apgar Scores	Age at Death (day of life)	Place of Death	Cause of Death (Referring Hospital)
1035	25 + 1	6, 9	6	CWIUH	NEC with intestinal perforation (Letterkenny)

Section 4: Selected Morbidity Tables for Patients Admitted to Neonatal Centre

Table 4.1 Term Baby Causes of Respiratory Morbidity (> 37 weeks) (n)

Transient Tachypnea of the Newborn	149
Respiratory Distress Syndrome	18
Pneumothorax	10
Meconium Aspiration Syndrome	12
Aspiration Pneumonia	1
Congenital Pneumonia	1
Pulmonary Hypertension of the newborn	36
Congenital Diaphragmatic Hernia	3
Esophageal Atresia/Trachea-Esophageal Fistula	6
Congenital Pulmonary Airway Malformation	4
Pulmonary Hemorrhage (isolated)	1

Table 4.2 Jaundice in Term Babies (>37 Weeks) (n)

Non-hemolytic	72
Hemolytic	
ABO	11
Rh	2
Other	1

Section 5: Congenital Abnormalities Born in the Coombe Women and Infants University Hospital

Table 5.1 Gastrointestinal Tract Anomalies (n)

Cleft lip	3
Cleft palate +/- lip	17
Bowel Atresia/Obstruction	7
Anorectal anomalies	2
Exomphalos	3
Gastroschisis	1

Table 5.2 Urinary and Genital System Anomalies (n)

Renal Agenesis	4
Multicystic kidneys unilateral/bilateral	6
Hydronephrosis	10
Duplex Kidney	2
Posterior Urethral Valve	1
Bladder Extrophy	1
Hypospadias	6
Ambiguous Genitalia	1

Table 5.3 Neural System Anomalies (n)

Anencephaly	2
Encephalocele	1
Meningomyelocele =/- ventriculomegaly	2
Ventriculomegaly (isolated)	5
Agenesis Corpus Callosum (isolated)	2
Dandy Walker	1
Teratoma	1

Table 5.4 Skin Anomalies (n)

Cephalohematoma	5
Subgaleal Hemorrhage	8
Skin Necrosis	3
Vascular malformation of the skin (extensive)	1
Cystic Hygroma	4

Table 5.5 Musculoskeletal Anomalies (n)

Congenital deformities of the feet	13
Arthrogryposis	2
Digital anomalies	8
Developmental Dysplasia of the Hip (requiring treatment)	124
Limb Reduction defects	2
Achondroplasia	1

Table 5.6 Cardiac Anomalies (n)

Isolated Perimembranous Ventricular Septal Defect	5
Double Outlet Right Ventricle	1
Hypoplastic Left Heart Syndrome	4
Tetralogy of Fallot	6
Atrioventricular Septal defect	9
Patent Ductus Arteriosus in term newborn	4
Atrial Septal defect	1
Dysplastic aortic valve	1
Pulmonary Stenosis	2
Complex Congenital Heart Disease	11

Table 5.7 Chromosomal Anomalies (n)

Trisomy 21	31
Trisomy 18	8
Trisomy 13	11
Klinefelter syndrome	1

Table 5.8 Other Disorders Associated with Dysmorphic Features/Anomalies (n)

Klippel Feil syndrome	1
Treacher Collins syndrome	1

The year 2017 featured an expansion of the number of consultant neonatologists within the department. We welcomed the addition of a newly appointed consultant neonatologist Dr. Hana Fucikova. Dr. Fucikova was appointed in late 2017 with a unique post to the CWIUH dedicated to the provision of a consultant neonatologist led critical care transport service. She works with Dr Jan Franta to provide a 24/7 consultant neonatologist led national newborn transport service provided by the staff of the three Dublin maternity NICUs. Dr Fucikova is based at the CWIUH but works across all three Dublin NICUs in a manner analogous to Dr Jan Franta.

Prof. Martin White continued his role as Chairman of the Neonatal Clinical Advisory Group as part of the National Clinical Programme for Paediatrics & Neonatology.

Prof. Martin White, Prof. Jan Miletin and Prof. Eleanor Molloy continued their respective academic roles within the CWIUH in association with the Royal College of Surgeons, University College Dublin and Trinity College Dublin respectively.

I would like to thank all the nursing, midwifery, medical, orthopaedic, physiotherapy, chaplaincy, dietetic, medical social work, laboratory, pharmacy, information technology, radiology, infection control and bioengineering personnel, as well as the human resources staff and our obstetric colleagues for their continued support and dedication in providing care for infants born at the Coombe Women & Infants University Hospital. I would also like to thank a number of our colleagues from Our Lady's Children's Hospital Crumlin and the Children's University Hospital Temple Street, who continue to consult both pre and postnatally and visit the Unit – often in the late hours. In particular, we are grateful to Dr Orla Franklin, consultant paediatric cardiologist who continues to provide an excellent onsite fetal cardiology and postnatal cardiology consultation service to the neonatal unit. Dr Franklin and her OLCHC consultant cardiology colleagues provide out of hours consultation advice to the NICU in a 24/7 manner. We are grateful to them for this continued service.

Comparison with Previous Reports

For the year 2017 the Coombe hospital cared for 140 premature infants whose birth weights were between 401 - 1500–g and/or whose gestational ages were between 22 + 0 weeks until 29 + 6 weeks. This included a few infants with major congenital anomalies. They included both inborn and a minority of outborn infants who were transferred into the Coombe hospital at some point during the first 28 days of their lives. These infants and aspects of their care were all prospectively reported into an international collaborative network known as the Vermont Oxford Network (VON). This number is increased from the year 2016 when the Coombe hospital cared for 121 such infants.

Of these 140 premature VON infants complete survival/mortality data for 137 of these infants is known at the point of death/discharge. The total survival to discharge in 2017 was 81.7% compared to a slightly higher value of 85.1% for the year 2016. Of these 137 premature VON infants, 125 were inborn at the CWIUH and 12 were outborn.

Of these 137 premature VON newborns the Coombe NICU admitted a total of 126 infants in the year 2017. The total survival to discharge was 87.8%. This compares similarly to a survival to discharge in the year 2016 of 89.6%. In 2017 the survival to discharge of such premature infants without specified major morbidities was 65% which was quite similar to the 66% for the previous year. We are quite pleased that our survival to discharge without specified major morbidities is higher than overall network result of 58.9% and that of the Republic of Ireland VON result of 57.8% for the year 2017. Please refer to Figures 1 – 3 for a ten year trend concerning numbers of VON premature newborns and survival outcomes at the Coombe.

The incidence of severe intraventricular/periventricular (PIVH) (grade III/IV) haemorrhages was low at 3.2%.

There were three infants with retinopathy of prematurity (ROP) that necessitated Anti-VEGF (Evastin) therapy that was performed on site in the Coombe NICU and one infant who required transfer to OLCHC for laser therapy of ROP. We are extremely grateful to our two excellent consultant pediatric ophthalmologists Mr Donal Brosnahan and Dr Kathryn McCreery who provide for regular retinal screening in addition to Evastin and retinal surgical therapies as required.

The frequency of Chronic Lung disease (defined at 36 weeks gestational age) was increased at 19% compared to the year 2016 when it was lower at 13.5%. This still remains lower than both the entire network at 24.8% and the Republic of Ireland VON at 23.6%. The Shrunken Standardised Morbidity over the last three years for chronic lung disease is 0.8 (95% confidence interval 0.6 – 1). There is a continuous trend of using non-invasive forms of ventilation.

Concerning the VON Shrunken Standardised Morbidity rate for various infectious performance parameters over the three years 2015-2017, the CWIUH remains within the acceptable normative range. The SMR for "late bacterial infection" is 1.1. The SMR for "coagulase negative infection" is 1. The SMR for "nosocomial infection" is 1.1. The SMR for "fungal infection" is 1. This three year steady state concerning neonatal infections likely represents the collaborative efforts of medical, nursing and midwifery staff in promoting hand hygiene, touch surface cleaning, care bundles and early enteral human milk nutrition.

In relation to patent ductus arteriosus (PDA), 3.2% of our VLBW infants had PDA as defined by the VON definition.

This is a decrease from the year 2016 from 7.5%. The Coombe NICU frequency of PDA diagnosis was much lower than within the VON database of 25.9%. In 2016 and 2017 there was only 1 case each year of ibuprofen usage for PDA treatment. We continued with our conservative strategy (started in 2010) and the frequent usage of point of care ultrasound (together with excellent cardiology support from Dr. Orla Franklin); there was one case of PDA surgical ligation in each year 2015 - 2017 respectively.

In relation to hypoxic ischaemic encephalopathy (HIE), there were eight inborn infants classified as HIE grade II and two classified as HIE grade III. All of these infants were treated with therapeutic hypothermia. Our inborn HIE II/III hypothermia treatment number of 10 infants is an increase from the 6 infants who received hypothermia in the year 2016. There were five outborn infants referred to the Coombe for therapeutic hypothermia in 2017. The Coombe NICU is a national referral centre for total body hypothermia therapy for infants with defined criteria (TOBY trial criteria), where this therapy would be commenced within six hours of birth. See Table 3.1 for details.

The Neonatal Centre continues to receive significant numbers of infants diagnosed with congenital abnormalities prenatally, including congenital cardiac disease. The Coombe Women & Infants University Hospital has a close relationship with cardiology, cardiothoracic surgery and paediatric intensive care at Our Lady's Children's Hospital, Crumlin in the care and transfer of these infants. Babies born with significant paediatric surgical problems receive care through the paediatric surgical teams based at the Children's University Hospital, Temple Street and Our Lady's Children's Hospital, Crumlin. There is close co-operation between our team and the fetal/perinatal medicine specialists in the Coombe Women and Infants University Hospital. We have presented within this report all newborns with congenital abnormalities in the Coombe Women and Infants University Hospital.

I would like to thank Dr. Zulfiquar Sarani for his dedication and hard work in compiling this report. This report whilst compiled by myself, is in no small part a product of the hard work of Dr. Sarani and Ms Julie Sloan (research midwife). I wish to acknowledge the efforts of my consultant neonatology colleagues Prof. Jan Miletin, Prof. Martin White, Dr Anne Doolan, Dr Pamela O'Connor, Dr Jana Semberova, Dr. Hana Fucikova, Dr. Jan Franta and Dr Shahid Saleemi for their excellent care of sick infants and their support to the staff and families of the Coombe. In addition a debt of gratitude to the Vermont Oxford Database Co-Ordinator at the CWIUH, Ms Julie Sloan, and Baby Clinic staff, Ms Maureen Higgins, Ms Ciara Carroll, and Ms Catherine Barnes for their invaluable help and assistance in preparing this Annual Report, Jean Cousins (Clinical Midwifery manager) and the other nurses/ midwives and administrative staff of the Baby Clinic. In relation to development of guidelines, Ms Anne O'Sullivan ANNP and Mr Peter Duddy, Neonatal Pharmacist, with the help of the Paediatric Drugs & Therapeutics Committee, reviewed our in-house drug policies and protocols. A massive thank you to the inspirational neonatal nurses, neonatal nurse managers, midwives and care assistants who provide a high standard of care for the newborns within the neonatal unit and subsequently on follow up visits in the Baby Clinic. Finally, I would like to thank all staff members and my colleagues in the Neonatal Centre for their hard work throughout 2017.

CWIUH Baby Clinic: Summary of Activity for 2017

The Coombe Department of Paediatrics & Neonatal Medicine runs a busy outpatient clinic that is commonly known as the Baby Clinic. The baby clinic sees newborns and infants for the following indications: medically indicated two and six week checks, weight checks, referrals from General Practitioners and Public Health Nurses/Midwives regarding issues such as feeding difficulties, breast feeding support, weight loss, orthopaedic follow up for surveillance and management of developmental dysplasia of the hips, antenatal breast feeding education, antenatal paediatric consultations for high risk pregnancies, interval developmental follow up of ex-premature newborns and HIE cooled newborns until 24 months of age corrected for prematurity, consultant provided medical clinics, physiotherapy assessments, and soon to commence clinical psychologist provided Bayley (3rd edition) developmental assessments. On occasional weekends the Newborn Audiology Screening service utilize the premises. The clinic is managed by Ms Jean Cousins (Clinical Midwifery Manager) and Maureen Higgins as the administrative manager. There are additional administrative staff, nurses and midwives who work either solely or mostly in the baby clinic, most amazing and hardworking staff whom we thank for all their efforts and late hours!

For the year 2017 there were a total of 7644 individual patient visits. This amounts to 30.4 patient visits per each working day. The table below denotes the breakdown of these visits. This also included 531 referrals by GPs/ Public Health Nurses to our stand alone Senior House officer clinic. I believe the CWIUH baby clinic is unique in Ireland in that it provides for paediatric senior house officers and registrars to run a stand-alone clinic. We believe this enhances clinical autonomy and decision making of our non-consultant hospital doctors whilst still prioritizing patient safety. The high activity of the CWIUH Baby Clinic compares quite similarly to a

local Dublin GP service that sees approximately 3000 children (< 16 years of age) and up to 19000 patient visits per year. The CWIUH Baby Clinic is currently operating with a census of clinical activity that equates to a GP service for newborns/infants! This is quite an impressive performance for a clinic with limitations to both infrastructure and staffing.

Clinic type	Number of patient visits in 2017
Consultant Clinics	1920
Orthopaedic clinics	312
Non-Consultant Hospital Doctor clinics	3598
Physiotherapy clinics	1814
Total	**7644**

Research in the Department of Paediatrics & Newborn Medicine 2017

The CWIUH Neonatology department continues to be very active in research. We run numerous research projects ourselves and participate in other multi-centre and international studies. Three research fellows in neonatology worked with us in 2017, Dr. Matthew McGovern, Dr. Mary O'Dea and Dr. Saira Tabassum. The main research projects conducted in the Neonatology department in 2017 are listed below.

ETT study: Multicentre international prospective study. The aim was to identify the most accurate method for measuring the safe depth of orally placed neonatal endotracheal tubes (ETT). The investigators compared different body measures in relation to the ETT tip on chest radiograph. Recruitment ongoing throughout 2017.

HIPtrial: Multicentremultinationalrandomisedcontrolled trial investigating Management of Hypotension in the Preterm Extremely Low Gestational Age Newborns (ELGANs). The aim of the HIP trial is to develop effective diagnostic tools and treatment of hypotension in the ELGANs. HIP trial is the largest multicentre randomised European study in this particular population. Recruitment completed in 2017.

PRISM study: PReterm Infection and SysteMic inflammation and neonatal outcomes. This study is focused on newborn infection and inflammation, examining novel blood inflammatory markers. The research is aimed to improve the understanding of the systemic inflammatory response in preterm infants and evaluate possible future therapies. Recruitment continued in 2016. NCH Foundation: Prof Eleanor Molloy (PI): €39,500: 2016-2017. Two international abstract presentations; PhD thesis to be submitted December 2017.

GENIE study: Gender and Neonatal Inflammation in preterm outcomes. NCRC: Dr Matt McGovern and Prof Eleanor Molloy (PI) €185,875: 2017-2020.

DISCO study: Down syndrome, Infection and Clinical Outcomes. NCH Foundation: Prof Eleanor Molloy (PI) €316,500: 2017-2020.

NEBULA study: Neonatal brain injury: Understanding systemic inflammation and immunomodulation. NCH Foundation: Prof Eleanor Molloy (PI) €39,000: 2016-2017. Four international abstract presentations.

NIMBUS study: Neonatal Inflammation and Multiorgan dysfunction and Brain injury research group. HRB HRA Award: Dr Mary O'Dea and Prof Eleanor Molloy (PI): €328,000: 2015-2018.

CHAMPION study: Childhood multiorgan outcomes after Neonatal encephalopathy. NCH Foundation: Dr Denise McDonald and Prof Eleanor Molloy (Co-PI). €107,562: 2015-2017; four international abstract presentations; Cochrane review ongoing; 2 manuscripts submitted for publication.

SFI SIRG Programme: Dr Eva Jiminez and Prof Eleanor Molloy (collaborator). The sensitivity and specificity of miRNAs as biomarkers of neonatal seizures. €519,636:2015-8

NICOM study: Prof. Jan Miletin and Dr. Jana Semberova have piloted the use of Noninvasive Continuous cardiac Output Monitoring (NICOM) and cerebral perfusion monitoring in term newborns with HIE in addition to preterm newborns.

The effect of early postnatal nutrition on growth velocity and body composition of preterm infants. Prospective study by Shevaun Teo, Dr. Daniel McCartney and Dr. Anne Doolan. Department of Nutrition Dublin Institute of technology and CWIUH.

A pilot longitudinal study examining the impact of maternal diet on breast milk macronutrient composition. Prospective study by Divya Ravikumar, Dr. Daniel McCartney and Dr. Anne Doolan. Department of Nutrition Dublin Institute of technology and CWIUH.

In addition to the prospective studies, we performed numerous retrospective chart reviews. We also performed multiple clinical audits which led to change of our daily practice. Monthly research meetings continue to be a platform to discuss the progress in research studies and audits.

Publications in the Department of Paediatrics & Newborn Medicine 2017

- O'Driscoll DN, Greene CM, Molloy EJ. Expert Rev Clin Immunol. 2017 Nov; 13 (11): 1061-1071. Immune function? A missing link in the gender disparity in pre-term neonatal outcomes.
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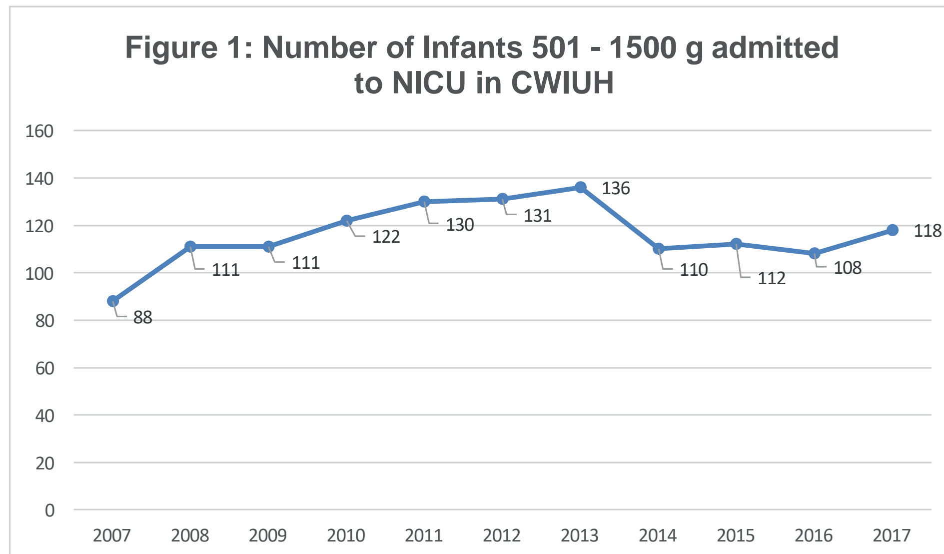
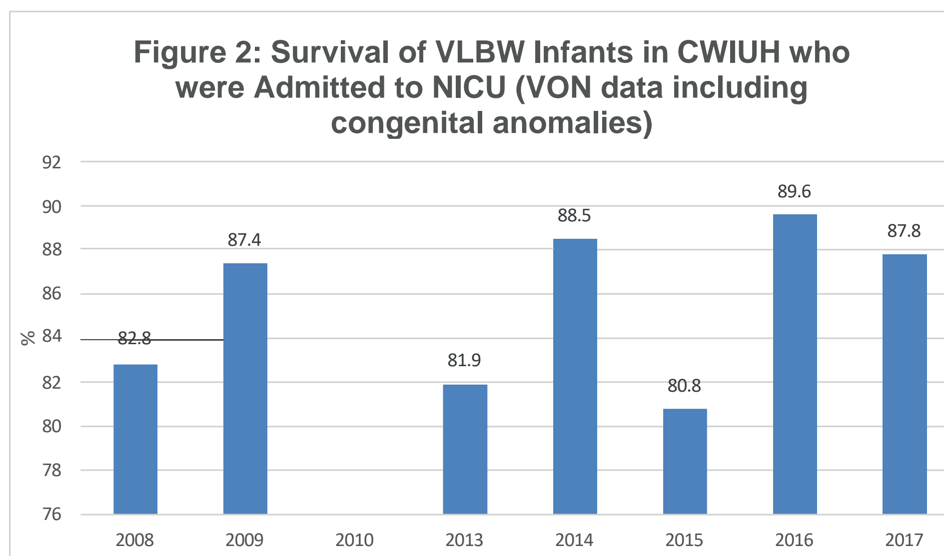
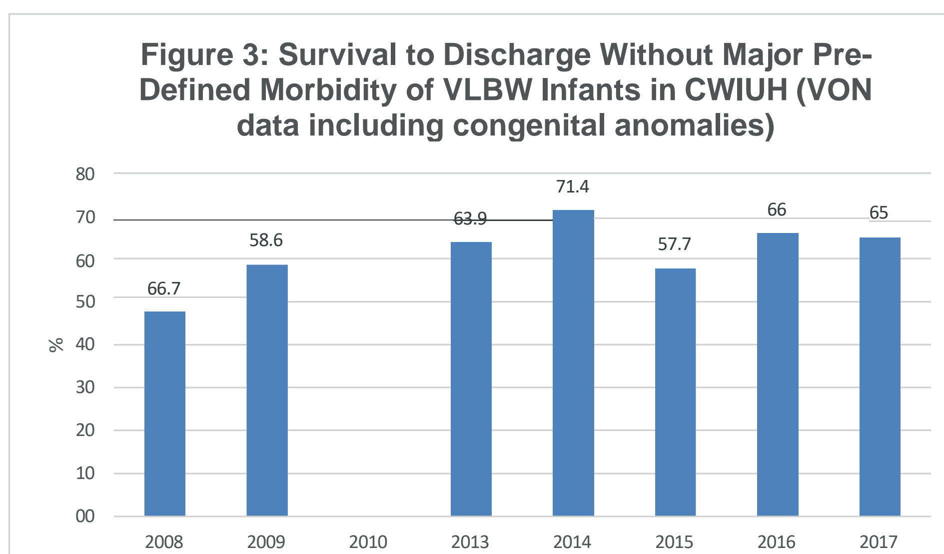
Dr John Kelleher MB BCh BAO MSPH
Director of Paediatrics & Newborn Medicine, IMC 23364

Trends in Very Low Birth Weight (VLBW) Infants in the Coombe Women and Infants University Hospital over the Last 10 Years







Division of Paediatrics & Newborn Medicine – Midwifery/ Nursing Report - Neonatal Unit

Heads of Department

Dr John Kelleher, *Director of Paediatric & Newborn Medicine*

Bridget Boyd, *Assistant Director of Midwifery & Nursing*

Ann Kelly, *Acting Clinical Midwife Manager III (until May 2017)*

Mary Ryan, *Acting Clinical Midwife Manager III (from June 2017)*

Staff Complement

Complement of 90 WTE including:

1 WTE Advanced Nurse Practitioner – Neonatal Nursing

1 WTE CMM III

6.5 WTE CMM/CNM II

7 WTE CMM/ CNM I

1 WTE CMS Discharge Planning

0.5 WTE CMS Resuscitation

1.5 WTE Clinical Skills Facilitators

65.99 WTE Midwives / Nurses

Clerical Staff

Support Staff

Key Performance Indicators

- Coombe Women & Infants University Hospital team are committed to improving the quality and safety of medical and nursing care for all newborn babies and their families.
- Continuously striving to improve the quality of care based on current evidence based literature to achieve quality improvement and optimize staff development.
- Improvement in medication safety management.
- Reduction in nosocomial infection rates.
- Striving to reduce the number of ventilation days, ultimately decreasing lung injury and thus chronic lung disease.
- Continued development of the fundamentals of Family-Centred Developmental Care (FCDC), maintaining each baby's and family's dignity and respect enhancing the quality of care.

Achievements in 2017

- 13 WTE staff nurses were recruited; 9 staff resigned, with a retention rate of 88.8%.
- Seven staff graduated with Postgraduate Diploma in Neonatal Intensive Care Nursing and two Staff commenced the programme.
- Three staff completed the MSc in Nursing (Neonatal).
- Six staff completed the Foundation Programme on Principles of High Dependency and Special Care; two completed level II on neonatal intensive care.
- The NNTP team from CWIUH conducted a total of 187 transports representing 33% of the 564 NNTP transports.
- 77 % of referrals were accepted.
- Eight staff completed the fourth Family Infant Neurodevelopmental Education (FINE) Level I programme facilitated and coordinated by the CWIUH.
- Second Irish FINE Level II course was coordinated from the CWIUH.
- World Prematurity Day celebrations included the hospital being illuminated in purple and celebrations on the neonatal unit with parents and staff.

Challenges for 2018

- To re-invigorate Family-Centred Developmental Care by increasing parental presence and participation in their babies care, facilitating their increasing confidence and competence as discharge approaches.
- To continue to develop, revise and update policies and guidelines in keeping with current best practice.
- To reduce infection rates.
- To overcome the ongoing challenge posed by NEC, using a Quality Improvement Initiative expanding to interdepartmental education sessions, fostering preparation and support in obtaining early colostrum.
- Optimize capacity effectively.
- Continue staff recruitment programme and enhance retention.
- Preparation for maternal infant electronic charting systems.
- Each baby receives individualized supportive care during painful and stressful procedures in conjunction with the best evidence literature, from his nurse and /or parent.
- Each parent is given the choice and facilitated to be their infant's co-regulator.

Neonatal Transition Home Service (NTHS)

Heads of Department

Dr John Kelleher, *Director of Paediatric & Newborn Medicine*

Bridget Boyd, *Assistant Director of Midwifery & Nursing*

Ann Kelly, *Acting Clinical Midwife Manager III (until May 2017)*

Mary Ryan, *Acting Clinical Midwife Manager III (from June 2017)*

Barbara Whelan, *CMS Neonatal Transition Home Service*

Staff Complement

1 WTE CMS – NTHS, Barbara Whelan

Key Performance Indicators

- Promote parental education in Neonatal Centre to enhance readiness for discharge. Weekly parent education sessions are organised and all parents are encouraged to attend, staff are also welcome.
- In collaboration with Lactation Support CMS, we continue to provide a bi-weekly class for mothers who are expressing breast milk for their babies. This support, help and guidance enhances mothers' chances of successfully providing milk for their babies.
- Facilitate monthly Neonatal Support Group, which continues to be extremely popular, parents appreciating the 'peer' support. Parents are encouraged to attend prior to discharge.
- Provide valued education sessions to Midwives and Nursing students as part of their curriculum.
- Respiratory Syncytial Virus (RSV) prophylaxis with Palvivizumab continues over the winter period. Initial administration in hospital and referral to home care service when appropriate.
- Member of the Antenatal to Three Initiative (ATTI) Group. This is a multidisciplinary committee developed to increase awareness of community initiatives and improve inter-agency communication for this cohort of children in the West Tallaght area.

Achievements

- Invited to present at an International neonatal Conference in Abu Dhabi.

Registered Advanced Nurse Practitioner

Heads of Department

Dr John Kelleher, *Director of Paediatrics & Newborn Medicine*

Bridget Boyd, *Assistant Director of Midwifery & Nursing*

Anne Kelly and Mary Ryan, *Acting CNM III*

Staff Complement

Anne O'Sullivan, *Registered Advanced Nurse Practitioner (Neonatology), accredited in 2006 (Author) 1 WTE.*

Key Performance Indicators

- To enable consistency in standards of healthcare. This is achieved by having a presence in the clinical area, offering support and guidance to medical and nursing staff, ensuring care is evidenced-based, while also managing a caseload. Outcomes are measured by regular audits.
- To promote family-centred care, empowering parents to participate in the care of their infants, education required to support this initiative is on-going.
- To further reduce nosocomial infection rates, monitor antibiotic use and put strategies in place to minimise multidrug resistant organisms.
- To further reduce ventilation days and minimize incidence of chronic lung disease in our VLBW infants.
- To promote breastfeeding and optimize nutritional management of our infants.
- To promote and facilitate research activities by participating in research studies as a primary researcher, as an investigator or in a support role.

Achievements in 2017

- In collaboration with medical and nursing colleagues, we presented posters at national conferences.
- In conjunction with nursing and medical colleagues, a Quality Improvement Initiative was introduced to reduce the incident of Hypoglycaemia whilst promoting breastfeeding.
- Participated in education programmes for Higher Diploma and Masters of Science in Nursing/Midwifery (Advanced Practice) programmes in the RCSI, as a member of curriculum development group and as a lecturer.

Challenges and Plans for 2018

- NEC rates have remained constant over the last number of years. Reduction of same is proposed as a KPI for 2018. Education and support of mothers to produce early colostrum and MEBM is a current and on-going QII.
- Seek publications to disseminate results of research projects undertaken in 2017.
- To further develop the role of the postnatal ward Liaison Nurse. The aim of this initiative is to minimize separation of mothers and babies and to enhance the provision of neonatal care on the postnatal wards and in the Delivery Suite in conjunction with midwifery staff.
- Improve parent facilities as well as storage and to develop the entrance to the NNU.
- To enhance the working relationship with medical and nursing staff in our network hospital as we strive to provide expert neonatal care in the region.
- Prepare for the Introduction of the Maternal & New-born Clinical Management System Neonatal team to work with Project Lead to include all disciplines and super users.

Department of Peri-operative Medicine

Head of Department

Dr Terry Tan

Staff Complement

Dr Steven Froese, Consultant, 26 hours
Dr Niall Hughes, Consultant, 11 hours
Dr Nikolay Nikolov, Consultant, 11 hours
Dr Terry Tan, Consultant, 26 hours
Dr Rebecca Fanning, Consultant, 13 hours
Dr Sabrina Hoesni, Consultant, 39 hours
Dr Yassir Mohamed, Locum Consultant
Dr Siaghal Mac Colgaín, Locum Consultant
Dr Michelle Walsh, Locum Consultant

Key Performance Indicators

Total Number of Anaesthetics	5395
General	2476
Regional	2919
Local	52
Elective	3742
Emergency	1653

Theatre

Number of Caesarean Sections	2540
Elective	1308
Emergency	1232

Caesarean Sections

	ELECTIVE	EMERGENCY
General	22	77
Spinal	1285	674
Epidural	0	480
CSE	1	1
Total	1308	1232

Mode of Anaesthesia for Caesarean Section

None	586
Entonox	5018
Pethidine	180 (2.3%)
Spinal	161 (2%)
TENS	462 (5.8%)
Epidural	3165 (39.7%)
Birthing Pool	14 (0.18%)
Hypnotherapy	58 (0.7%)
Remifentanil PCA	16 (0.02%)
Total number of mothers delivered	7975

Mode of Labour Analgesia

Number of epidurals in primiparae – 1855 (56.8% of primiparae)

Number of epidurals in parous – 1310 (27.8% of parous)

Achievements in 2017

- 97% of all patients presenting for elective surgery were evaluated at the Anaesthetic Pre-operative Assessment Clinic.
- Same day of surgery admission (DOSA) rate of greater than 98% of all elective surgery.

Challenges for 2018

- Up-grading the Pre-operative assessment clinic to a full Pre-admission unit for elective surgery.

Publications

- Fanning RA, Campion DP, O'Shea M, Carey MF, O'Connor JJ. A comparison of the effects of lindane and FeCl3/ADP on spontaneous contractions in isolated rat or human term myometrium. Reproductive Toxicology. Vol 74; Dec 2017; pp 164-173.
- R ffrench-O'Carroll, S Mac Colgáin, T Tan. Changes in cardiac output using NICOM Cheetah during caesarean section under spinal anaesthesia with maintenance of normotension using phenylephrine and ephedrine boluses. International Journal of Obstetric Anaesthesia 2017. Vol 31; Supplement 1; S10

Presentations

- T Tan. Obstetric Anaesthetists Association Three Day Course in Obstetric Anaesthesia. 6-8 November 2017. Church House Conference Centre, London. “The Category 1 C-Section - Quickly and Safely”.
- T Tan. Obstetric Anaesthetists Association Three Day Course in Obstetric Anaesthesia. 6-8 November 2017. Church House Conference Centre, London. “Managing the Obese Parturient”
- T Tan. Irish Society of Obstetric Anaesthesia Annual Meeting. Rotunda Hospital, Dublin. Dec 2017. “Review of the Literature”
- T Tan. Northern Ireland Obstetric Anaesthesia Network Annual Study Day 31 Mar 2017. “Ultrasound for the Obstetric Anaesthetist”
- J Close. Agreement between functional fibrinogen on TEG 6s and Clauss fibrinogen in term parturients. ISOA annual scientific meeting Dec 2017. (awarded 1st prize in oral presentations).
- J Close. Spinal anaesthesia for C-section in a woman with POTS. A case report. ISOA annual scientific meeting Dec 2017. (awarded 1st prize on poster presentation).
- A Rizwan. Experience of post dural puncture headache over 5 years. ESRA 2017. Switzerland.

Department of Laboratory Medicine Report

Heads of Department

Professor John O'Leary, *Director of Pathology*

Martina Ring, *Laboratory Manager*

Ruth O'Kelly, *Principal Biochemist*

Stephen Dempsey, *Pathology Quality/IT Manager*

Staff Complement

Pathology Consultants:

Dr Niamh O'Sullivan - Microbiology

Dr Catherine Flynn - Haematology/Transfusion

Dr Colette Adida - Histopathology/Cytology

Dr Vivion Crowley - Chemical Pathology

Locum-Pathologist: Dr Peter Kelehan – Pathology/ Morbid Anatomy

Other Staff

Staff Complement:

Medical Scientist & Lab Aide Staff - 37 WTE

Biochemists - 3 WTE

Phlebotomist - 3 WTE

Administration / Clerical Staff - 6 WTE

Laboratory Aide with Portering duties - 1 WTE

Specialist Registrar [SPR] Histopathology - 1 WTE

Consultant Staff - 3 WTE

Haemovigilance Officer - 1 WTE

Key Performance Indicators: Workload by test request

Area	2012	2013	2014	2015	2016	2017
Microbiology	44,672	44,672	44,514	42,573	41,639	**44,387**
Biochemistry	172,734*	162,045*	205,475*	218,565*	216,849**	**207,686**
Haematology	45,718	46,877	50,717	53,961	55,111	**54,298**
Transfusion	22,076	22,866	25,273	26,537	26,328	**29,464*** **
Cytopathology	10,428	16,774	27,355	25,589	26,161	**26,185**
Histopathology	5,606	5,696	5,877	6,001	6,331	**6,380**
Post mortems	40	41	50	35	33	**32**
Phlebotomy	19,394	19,931	21,084	23,641	33,812**	**37,870**
Molecular Pathology [Gynae-Screen]	1,934	2,857	4,442	7,147	8,369	**7,611**

** including POCT tests*
***addition of workload from PNC*
****Change to counting of neonatal samples and introduction of RAADP responsible for 9% of the increase in Transfusion testing figures*

Achievements in 207

- Maintaining the accreditation of all Pathology Departments and POCT within the hospital.
- The Pathology Dept. continues to provide in-service training to Cytopathology third year DIT Medical Laboratory Science students.
- High level of achievement in research.

Challenges for 2018

- Review of equipment for programmed replacements.
- Continued cost saving and income generation initiatives within the department.
- Continued participation in the National Cervical Screening Service [CervicalCheck].
- Expanding test repertoires.
- Developing diagnostic test formularies.

Biochemistry/Endocrinology/Point of Care Testing

Heads of Department

Dr Vivion Crowley, *Consultant Chemical Pathologist*

Ruth O'Kelly, *Principal Clinical Biochemist*

Staff Complement

Ann O'Donnell-Pentony, *Specialist Senior Medical Scientist (1.0 WTE)*

Dr Anne Killalea, *Senior Clinical Biochemist (1.0 WTE)*

James Kelly, *Senior Clinical Biochemist (1.0 WTE)*

Paul Carlyle, *Medical Scientist (1.0 WTE)*

Susan Carlyle, *Medical Scientist (1.0 WTE) (from October)*

Key Performance Indicators

Test numbers:

Year	Biochemistry tests	In-house tests
2017	**207686**	**181582**
2016	216849	189614

- Overall testing has decreased slightly due to the falling birth rate.
- Increased testing seen in the diagnosis and monitoring of diabetes, maternal sepsis, pregnancy complications and ectopic pregnancy.
- The Biochemistry Department is accredited by the Irish National Accreditation Board to ISO 15189 and Point of Care testing (blood gases) is also accredited to ISO 22159.
- Excellent scores continued to be achieved in our External Quality Assessment Schemes.
- Referral service for specialised tests for external hospitals (Fructosamine and Total Bile acids).

Achievements in 2017

- Maintenance of INAB accreditation status and continued training and re-certification of ward staff in Point of Care testing.
- Senior staff regularly attended multi-disciplinary meetings including the Diabetes Team meetings, Point of Care committee meetings and weekly Perinatal review meetings.
- Two Biochemistry staff members were trained up to participate in the multidisciplinary on-call rota.
- Education and Teaching: Ruth O'Kelly lectured on the Masters in Clinical Biochemistry course (TCD). Ann Pentony is involved in the education of midwifery/medical/paediatric staff. Biochemistry staff have presented at the monthly Journal Club. Transition Year students were facilitated over the year.
- Professional Associations: Ruth O'Kelly represents her professional association (Association of Clinical Biochemists in Ireland) on the Healthcare Standards Consultative Committee (in-vitro diagnostics) of NSAI (National Standards Authority Ireland). Ann O'Donnell is on the Advisory Body of the Academy of Laboratory Medicine and Clinical Science for Point of Care testing.
- Collaboration with research projects within the hospital include the effect of glycolysis in glucose measurement and its effect on the diagnosis of Gestational Diabetes. Collaboration with National Cancer Control Programme – Measurement of serum tumour markers.

Publication

"A medically supervised pregnancy exercise intervention in obese women: a randomised control trial" Obstet Gynecol (2017) Daly N, Farren M, McKeating A, O'Kelly R, Stapleton M Turner MJ.

"Time and temperature affect glycolysis in blood samples regardless of fluoride-based preservatives: a potential underestimation of diabetes" Ann Clin Biochem (2017) Stapleton M, Daly N, O'Kelly M. Turner MJ.

Scientific Poster

"Plasma Conversion Factors may not be appropriate when measuring Point of Care glucose in neonatal samples" O'Kelly R, O'Donnell A, Killalea, Kelly J, Stapleton M. Association for Clinical Biochemistry and Laboratory Medicine Focus meeting Leeds 2017.

"Measuring Glucose in Neonates". O'Kelly R, Stapleton M, O'Donnell A, O'Sullivan A, White M. Presented at LabCon Galway 2017 and First prize was awarded to Ann O'Donnell-Pentony.

Challenges for 2018

- The extended working day continues to pose challenges for the department as we strive to maintain our excellent quality and service to our patients.
- Cost containment.

Cytopathology

Heads of Department

Prof John O'Leary, *Consultant Pathologist*

Mary Sweeney, *Chief Medical Scientist*

Staff Complement

Dr Colette Adida, *Consultant Histopathologist*

Padma Naik, *Senior Medical Scientist*

Nadine Oldfield, *Senior Medical Scientist*

Roisin O'Brien, *Senior Medical Scientist*

Niamh Cullen, *Medical Scientist*

Ruth McAlerney, *Medical Scientist (0.5WTE)*

Ita Nolan, *Medical Scientist*

Graham O'Lone, *Lab Aide (0.5WTE)*

Cathy Hannigan, *Lab Aide*

Kerry Ann Durbin, *Clerical Officer*

Elizabeth Lynch, *Clerical Officer (0.5 WTE)*

Mary Nugent, *Clerical Officer (0.5 WTE)*

Achievements in 2017

- Maintaining our INAB accreditation status.
- Participation in the Public Health England EQA scheme, U.K. (2 rounds per annum).
- Participation in the Hologic TEQA scheme (4 rounds per annum).
- Participation in Coombe, Tallaght, Rotunda and NMH Holles St. Colposcopy MDT meetings.
- Attendance of Scottish Training School, Edinburgh: Ms Nadine Oldfield and Ms Roisin O'Brien.
- MSc in Biomedical Science achieved by Roisin O'Brien.

Challenges for 2018

- Improve TAT on reporting.
- Introduction of Primary HPV screening by National Cervical Screening Programme.

Key Performance Indicators

Specimen throughput	2015	2016	**2017**
Total number of smears	25589	26161	**26185**
Programme Smears	24224 (95%)	24751(95%)	**24800(95%)**
Turnaround Time (TAT(0-2 weeks))	95%	83 %	**54 %**
Unsatisfactory	1.4%	1.6 %	**3.3%**
Negative	89%	91 %	**88 %**
Low-Grade	7.9%	6.0 %	**6.8 %**
High Grade	1.7%	1.4 %	**2.0 %**

Haematology / Transfusion Medicine

Head of Department

Dr Catherine Flynn, *Consultant Haematologist*
Fergus Guilfoyle, *Chief Medical Scientist*

Staff Complement

1 WTE Chief Medical Scientist, Fergus Guilfoyle 3 WTE Senior Medical Scientists:
Gabriel Hyland
Karen Foley (0.5 WTE) (Jan – Jul)
Isabel Fitzsimons (0.5 WTE)
Declan Lyons (Jan – Nov)
Niamh Mullen (0.5 WTE) (Nov– Dec)
5 WTE Staff Grade Medical Scientists:
Orla Cormack
Rebecca O'Grady
Eimear McGrath
Kate O'Brien (Feb – Sep)
Niamh Byrne (Mar – Dec)
0.8 WTE Haemovigilance Officer, Sonia Varadkar
0.5 WTE Clerical Officer, Maureen Hand

Key Performance Indicators

Specimen Throughput

Haematology Tests
54,298 (55,111 in 2016, 1.5% decrease)
Transfusion Medicine Tests
29,464* (26,328 in 2016, 12% increase)
**Change to counting of neonatal samples and introduction of RAADP responsible for 9% of the increase in Transfusion testing figures.*

Turn Around Time (TAT) Figures for Haematology

Test	Full Blood Count		Coagulation Screen	
Year	**2017**	2016	**2017**	2016
Target Max TAT	**60 mins**	60 mins	**120 mins**	120 mins
Average TAT achieved	**19 mins**	20 mins	**34 mins**	36 mins
% within target TAT	**99%**	99 %	**97%**	99 %

Turn Around Time (TAT) Figures for Transfusion Medicine

Test	Crossmatch		Inpatient Group & Screen	
Year	**2017**	2016	**2017**	2016
Target Max TAT	**240 mins**	240 mins	**240 mins**	240 mins
Average TAT achieved	**52 mins**	53 mins	**111 mins**	103 mins
% within target TAT	**100%**	100 %	**99%**	98%

Achievements in 2017

- Maintained INAB ISO 15189 accreditation for Haematology, Transfusion Medicine and Haemovigilance.
- Continued high level of service provision to users despite challenges of increased staff turnover and loss of senior staff members with significant experience.
- Low blood product wastage and maintenance of low rate of expiry for blood stocks and signed SLA with OLCHC for re-routing of unused paedipacks.
- Increased participation of departmental scientists in presentations at in-house journal club.
- DIT BSc student completed project on survey of Transfusion testing in Irish maternity units & incidence of development of blood group antibodies in pregnancy in CWIUH patients and presented findings at the British Blood Transfusion Society Conference in October 2017.
- Scientist Orla Cormack awarded MSc in Medical Science with distinction from DIT.
- Scientist Orla Cormack presented case study of patient with HDFN due to Anti-Jka at inaugural ACSLM Blood Group Serology Conference.

Challenges for 2018

- Roll-out of Phase 3 of Blood Track system scheduled for Quarter 2 of 2018.
- Quality Improvement Plan to reduce sample labelling errors led by consultant haematologist and laboratory manager in conjunction with service users.
- Procurement and validation of coagulation analyser.
- Optimisation of the RAADP program with integration of foetal RHD typing on all RhD Negative antenatal patients to confirm suitability for Anti-D prophylaxis.
- Development of in-house guideline for women who decline blood products and further improvements in management of patients with haemoglobin disorders including a laboratory guideline.
- Development of comments on Transfusion reports, standardised across the three Dublin maternity hospitals, to aid clinical interpretation of the potential significance of blood group antibodies.
- Development of Internal Quality Assurance system to increase standardisation of blood film reporting, with greater use of clinical interpretive comments on Full Blood Count and Blood Film reports.
- There is a greater demand on the department to be involved in the clinical management of patients with co-existent haematological diagnoses during pregnancy; this requires more consultant sessions if

Haemovigilance

Head of Department

Dr Catherine Flynn

Staff Complement

Sonia Varadkar, *Haemovigilance Officer (0.8 WTE)*

Key Performance Indicators

Number of women transfused	266
Number of women who received 5 or more RCC	12
Number of babies who received pedipacks	78
Neonatal exchange transfusions	0
Reports to National Haemovigilance Office	2

Achievements in 2017

- Accreditation – ISO 15189.
- 100% traceability of blood components and blood products.

Challenges for 2018

- Education of staff.
- Review guidelines/SOPs relating to blood components and blood products.
- Transfusion rate reduction - staff identifying risk factors early.
- To maintain ISO 15189 (INAB Accreditation).
- Implementation of Phase III of Electronic Blood Track System.

Histopathology and Morbid Anatomy

Head of Department

Professor John O'Leary, *Director & Clinical Head of Department*

Jacqui Barry O'Crowley, *Scientific Head of Department*

Staff Complement

Consultant Pathologist

Professor John J. O'Leary

Dr Colette Adida

Dr Peter Kelehan [locum]

Special Registrars

Dr Erin McGrath

Dr Ruth Kilkenny

Scientific Staff

Jacqui Barry O'Crowley, *Chief Medical Scientist*

Niamh Kernan, *Senior Medical Scientist*

Claire Maguire, *Senior Medical Scientist (Appointed Sept)*

Trinh Pham, *Medical Scientist*

James O'Keeffe, *Medical Scientist*

Eibhlin Gallagher, *Medical Scientist*

Mairéad O'Byrne, *Medical Scientist (June - Sept)*

Johnny Savage, *Lab Aide*

Graham O'Lone, *Trainee Mortuary Technician*

Clerical Officers

Ursula Mangan

Maud Flattery

Aoife O'Dwyer

Work Processes

The routine Histopathology Department has INAB Accreditation to ISO15189 Standard. The volume and type of work processed in the Histopathology Lab has continued to increase & develop in 2017.

Key Performance Indicators

Specimen Throughput

Specimens	6,380
Blocks	22,616
Post Mortem Cases	32
H&E Stains Special Stains Immunohistochemistry HPV IN-Situ Hybridisation and C17 Silver In-Situ	32,000

Colposcopy Specimens

Specimen Type	Avg. Case Numbers
LLETZ*	710
CxBx**	1,830

* Each case has approximately 6 blocks and each block has x 2 level on each block.
** Each block has x 3 level on each block.
Note: 30% of LLETZ / Cervical Biopsy (CxBx) cases have extra levels taken, which is not reflected in the above H&E figures.

- The number of cases increased from 2016 despite the significant reduction in gynae theatre activity at the start of the year due to theatre refurbishments, with Colposcopy representing over 40% of the samples received into the Histopathology Laboratory. This shows the continual % increase in the number of colposcopy samples received year on year.
- There was an increase in the number of LLETZ/NETZ/SWETZ biopsies received but with a slight drop in the number of Cervical Biopsies compared to 2016.
- With the opening of a new Hysteroscopy Service in the Hospital last year, it is expected the number of samples will continue to increase in 2018.
- In 2017, although the number of cases increased, the block numbers decreased slightly compared to 2016, this may have been due to refurbishments in theatre at the start of the year.

Achievements in 2017

- INAB Inspection for the Histopathology Laboratory took place on 18th October 2017. The Histopathology Department retained INAB Accreditation to ISO15189 Standards.
- The Histopathology workload continued to increase slightly in 2017. This increase was generated through the CWIUH/NCSS Colposcopy Service Level Agreement.
- The immunohistochemistry panel of antibodies, molecular SISH & HPV ISH probes CINtec Plus p16/ki-67 Dual Staining and special stains offered by the Histopathology Department, continued to increase in 2017. All of these panels of antibodies, molecular probes and special staining methods are accredited by INAB, and are utilised on Gynaecological (Cervical) Liquid Based Cytology samples and Cervical Histopathology samples in the triage of patients referred with abnormal screening results.
- The Histopathology Department and the Clinical staff participate in a number of External Quality Assurance schemes to ensure all work aspects are in line with International Quality Benchmarks.
- All Histopathology staff are involved in Continuous Professional Development.
- Medical Scientists were facilitated to attend the Cellullar Pathology UKNEQAS workshop, the Roche / Ventana Training Programme, Irish Molecular Pathology Network Diagnostics Network meeting.
- Claire Maguire - Medical Scientist achieved MSc in Molecular Pathology.
- The Pathology Department under the direction of Professor John O'Leary, has a leading European Molecular Biology Research Centre. The Research Laboratory has a strong international research reputation in the area of cancer research, particularly in cervical cancer. The medical scientists in the Histopathology Department make a substantial contribution to this research.

Challenges for 2018

- INAB Accreditation Certification for histopathology with ‘Flexible Scope’.
- Proceed with Internal Audits for both the histopathology and the general laboratories.
- Continue the management of the Inter Laboratory IHC Assessment Scheme.
- Continue to support Histopathology staff in Continuous Professional Development programmes and complete their MSc in Molecular Pathology.
- Installation of the Cassette Printer / Vantage Tracing System [Roche].
- Expansion of the Histopathology Laboratory, to facilitate and accommodate the increase in workload.

Microbiology and Infection Prevention and Control

Head of Department

Dr Niamh O'Sullivan, *Consultant Microbiologist*

Dr Catherine Byrne, *Chief Medical Scientist*

Rosena Hanniffy, *Assistant Director of Midwifery/Nursing IPC*

Staff Complement

Dr Catherine Byrne, *Chief Medical Scientist*

KellyAnne Herr, *Senior Medical Scientist (on leave until Nov)*

Sabrina McCaffrey, *Senior Medical Scientist (until March)*

Sarah Deasy, *Senior Medical Scientist*

Anne Marie Meenan, *Surveillance Scientist*

Ciaran Byrne, *Medical Scientist*

Vickey Moran, *Medical Scientist*

Cian Foley, *Medical Scientist (from February)*

Mary Barrett, *Medical Scientist (Locum, from April)*

Teresa Hannigan, *Laboratory Aide*

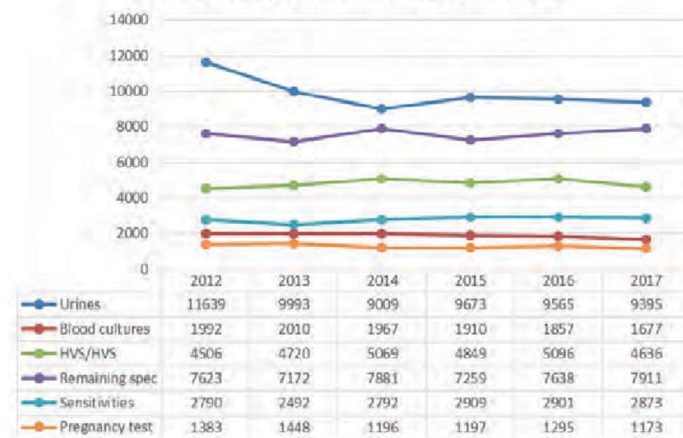
Maureen Hand, *Clerical Officer (0.5 WTE)*

Key Performance Indicators

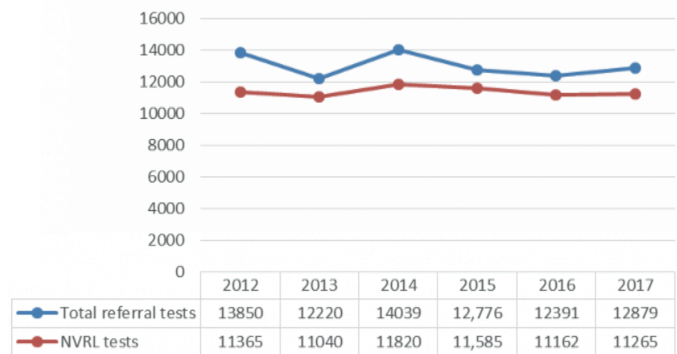
Microbiology

- The Microbiology Department is accredited by the Irish National Accreditation Board to ISO 15189: 2012 Standard.
- Microbiology specimen throughput:

Specimens:	28,635
Susceptibilities:	2,873
Referral tests:	12,879



	2012	2013	2014	2015	2016	2017
Urines	11639	9993	9009	9673	9565	9395
Blood cultures	1992	2010	1967	1910	1857	1677
HVS/HVS	4506	4720	5069	4849	5096	4636
Remaining spec	7623	7172	7881	7259	7638	7911
Sensitivities	2790	2492	2792	2909	2901	2873
Pregnancy test	1383	1448	1196	1197	1295	1173



	2012	2013	2014	2015	2016	2017
Total referral tests	13850	12220	14039	12,776	12391	12879
NVRL tests	11365	11040	11820	11,585	11162	11265

Environmental screening

- Substantial increase in testing compared to 2016 (59.9% increase).
- Required after building work is completed prior to opening.
- Essential to allow equipment to be reused post cleaning.

Turnaround times

- Turnaround times were analysed on twenty-two occasions in 2017.
- This included blood cultures, urines, microbiology specimens both simple and complex, semen and external tests.
- Seventeen of these were 100% within their turnaround times.
- All microbiology staff are up to date with manual handling, chemical safety and fire training.

Surveillance

- Microbiology and infection prevention and control dashboard is maintained to provide ongoing information on key performance indicators:
  - Alert organisms
  - Multi-drug resistant organisms
  - Serious infection rates
  - Notifiable diseases
  - Blood borne viral infections
- C/section surgical site infection (SSI) rate.
- Adult blood stream infection rate per 1,000 bed days used (BDU).
- Adult blood culture contamination rate.
- Paediatric late onset primary blood stream infection

	C/section SSI rate	Adult BSI rate	Paediatric NICU late onset BSI rate	Paediatric early onset BSI rate	S. aureus HAI rate	C difficile HAI rate
2016	5.1%	0.30	3.98	1.2	2.12	0
2017	**4.7%**	**0.38**	**4.19**	**1.4**	**1.1**	**0**

rate in NICU per 1,000 patient days.

- Paediatric laboratory confirmed early onset blood stream rate per 1,000 live births.
- HCAI Staph aureus and C. difficile rates per 10,000 BDU reported to Business Information Unit, HSE.
- Resistance patterns of specific organisms reported to EARS-Net (European Antimicrobial Resistance Surveillance Network). This allows comparison with similar hospitals in Ireland and national comparison with other European countries.
- Number of CRE screens performed: Nationally became a KPI in October 2017.

IPC

- Clinical staff compliant with hand hygiene training within past two years:
  - 2016: Between 80% and 87%
  - 2017: Between 70% and 84%
- Hand hygiene audits in clinical locations (target 90%):
  - 2016: 87% May/June 92% October/November
  - 2017: 92% June/July 91% October/November
- Alcohol gel consumption:
  - 2016: 1,732 litres
  - 2017: 1,859 litres

Achievements in 2017

- Maintained INAB accreditation.
- Uncertainty of measurement was initiated in 2017.
- Increased scope of external quality assurance, MRSA screening and genital pathogens added.
- Validation and batch acceptance continued for accreditation.
- Number of staff trained in semenology analysis increased.
- Ongoing training of ER staff in pregnancy testing.
- Senior staff regularly attend multi-disciplinary meetings within the hospital including Drugs and Therapeutic committee, Antimicrobial Stewardship committee, Infection Prevention and Control committee, POCT, hospital equipment procurement committee, hygiene & risk management.
- Microbiology staff are members of and contribute to many National committees/advisory groups.
- A Point Prevalence Survey (PPS) of healthcare associated infections and antimicrobial use was carried out in May. The results were fed back to Europe via the HPSC.
- Infection Prevention and Control Dashboard expanded and maintained.
- Adult blood culture contamination rate below 3% for the fourth year in a row.
- Increased alert organism and environmental screening undertaken.
- Antibiogram data produced to inform antimicrobial guidelines.
- Annual surveillance and IPC data produced for senior management and HIQA:
  - Annual newsletter
  - Hospital board report
  - Annual C/section SSI report
- Maternal blood stream infection enhanced surveillance data now required by the HPSC.
- Ongoing data presentations and feedback to multidisciplinary obstetric and paediatric meetings.
- Collaboration with research projects within the hospital.
- Patients with Multi-drug resistant organisms continue to have alerts added to their records on iPiMS.
- IPC team involvement in a quality improvement project to reduce C/section surgical site infection rates commenced in late 2017.
- Reviewing and implementing the new HIQA standards introduced in 2017.
- IPC audits were carried out using a new medical audit technology system. This tablet based system allows data to be collected electronically in real time.
- PVC care bundle audits continued with monthly feedback.
- Hand hygiene Day was celebrated on 5th May 2017 raising awareness of hand hygiene and the need to attend training.
- Ongoing training of staff in IPC issues.
- Collaboration with the Centre for Midwifery Education.

Challenges for 2018

- Microbiology and the Infection Prevention and Control Team must continue to respond to changes in patient case load, acuity and Public Health alerts.
- Introduction of molecular technology.
- Manage increased requirements to comply with ISO 15189 2012 to maintain INAB accreditation.
- Comply with microbiology/pathology internal audit schedule.
- Ongoing policy development and revision.
- Continue to facilitate microbiology staff to partake in Continuous Professional Development.
- Engagement with CORU to facilitate state registration.
- Cost containment.
- Continued engagement with users to reduce sample labelling errors.
- Recognition of emerging complex resistance patterns.
- Ongoing review and implementation of National guidelines as they are issued.
- Maintain annual surveillance and IPC newsletter for senior management and HIQA.
- Ongoing reporting of maternal blood stream infections to HPSC.
- Optimise and audit screening of patients for Multi Drug Resistant Organisms.
- Improve antibiotic stewardship by encouraging compliance with current guidelines.
- Increased information required by BIU, HSE for statistics on multi-drug resistant organisms especially Carbapenemase Resistant Enterobacteriaceae (CRE).
- Feedback of data to clinical teams to reduce HCAI.
- Numbers of patients screened for CRE required for National reporting.
- Input into product procurement and Point Of Care Tests.
- Ongoing hygiene and antimicrobial stewardship audits.

Pathology/Molecular Pathology

Head of Department

Professor John O'Leary [Clinical]

Professor Cara Martin [Scientific]

Staff Complement

Academics
Professor Cara Martin, Assistant Professor in Molecular Pathology (Trinity College, Dublin)

Molecular Pathology Manager: Professor Cara Martin (TCD/CWIUH)

Research Scientists
Dr Cathy Spillane

Dr Christine White

Dr Helen Keegan

Dr Michael Gallagher

Ms Loretto Pilkington

Dr Sharon O'Toole (shared with Obs & Gynae,TCD)

Dr Prerna Tewari

Dr James O'Mahony

Dr Mairead O'Connor (CERVIVA researcher at National Cancer Registry, Ireland)

Mr Alan O'Ceallachair (CERVIVA researcher at National Cancer Registry, Ireland)

Dr Bashir Mohammed [TCD]

Dr Bincy Jose

Professor Doug Brooks [visiting UniSA]

Dr Robert Brooks [visiting UniSA]

Dr Mark Ward [Obstetrics & Gynaecology, TCD]

Dr Lucy Norris [Obstetrics & Gynaecology, TCD]

Research Students:
PhD: Stephen Reynolds, Imogen Sharkey Ochoa, Tanya Kelly, David Nuttall, Melad Aswisi, Sara O'Kane.

Key Performance Indicators

1. Grants held 2017

Title: CERVIVA: The HPV Educate Project
Awarding Body: Health Research Board. Knowledge Exchange and Dissemination (KEDS) Awards (2017-2018)
Total Value: €60,000

Title: What influences cervical screening uptake in older women and how can screening programmes translate this knowledge into behaviour changing strategies? A CERVIVA-CervicalCheck co-production project
Awarding Body: Health Research Board. Applied Partnership Award (APA) Awards (2017-2019)
Total Value: €119,973

Title: CERVIVA: Making Connections and Creating Impact
Awarding Body: Health Research Board. Knowledge Exchange and Dissemination (KEDS) Awards (2016-2017)
Total Value: €60,000

Title: CERVIVA ECHO Studentship
Awarding body: The Coombe Women and Infants University Hospital (2016-2019)
Total Value: €68,454.00

Title: NIMBUS group: Neonatal Inflammation and Multiorgan dysfunction and Brain injury reSearch group
Awarding Body: Health Research Board (2016-2019)
Total Value: €329,352

Title: CERVIVA: From episodic care to disease prevention and management: Developing analytical skills and interdisciplinary learning from the case of HPV related cancers.
Awarding Body: Health Research Board. Interdisciplinary Capacity Enhancement (ICE) Awards (2015-2019)
Total Value: €748,793

Title: CERVIVA 2: building capacity and advancing research and patient care in cervical screening and other HPV associated diseases in Ireland.
Awarding Body: Health Research Board. Collaborative Applied Research Grant (2012-2019)
Total Value: €1,250,000

Title: Developing endosome and lysosome in prostate cancer
Awarding Body: National Health and Medical Research Council (ACT, ACT, Australia) 2014-12 to 2017-12
Total Value: $1,000,000 AUS

Title: Movember Revolutionary Team Award – Australia
Awarding Body: Movember 2014-2017
Total Value: $4,250,000 AUS

Title: Evasion of immune editing by circulating tumour cells is an exercise-modifiable mechanism underlying aggressive behaviour in obese men with prostate cancer
Awarding Body: World Cancer Research Fund 2014-2018
Total Value: £249,994

Title: PhD Studentship
Awarding Body: Royal City of Dublin Hospital Trust 2014-2017
Total value: €60,000.00

Title: Endosomal reactive oxygen species in tumour angiogenesis [2017-2019]
Awarding body: NHMRC
Total value: €549,858.00

Title: Targeting endosomal NOX-2 oxidase in viral disease [2017-2019]
Awarding body: NHMRC
Total value: €440,096.00

Title: Enterprise Ireland Innovation Award with Becton Dickinson
Awarding body: Enterprise Ireland
Total value: €803,000.00

Title: Health Research Board: CERVIVA-Vax [2017-2020]
Awarding body: Health Research Board
Total value: €368,000.00

Title: CERVIVA-Vax: Merck grant [2017-2020]
Awarding body: Merck
Total value: €203,000.00

Title: Health Research Board – Emerging Investigator Award to a CERVIVA post-doctoral health economist [2018-2022]
Awarding body: Health Research Board
Total value: €669,000.00

Title: EnVision Sciences [www. https://envisionsciences.com/]: Endosomal and lysomal biomarkers in prostate cancer
Awarding body: EnVision Sciences
Total value: Aus$3,800,000.00

Total value of grants held in 2017: €12,079,526

Publications
In 2017, the Molecular Pathology Group at the CWIUH and St James's Hospital published 14 peer reviewed journal articles and 17 published abstracts [see below]. Publications in top-ranked journals including: Nature Communications, Cancer Epidemiol Biomarkers Prev, Cell Death Differentiation, Cell Death Disease etc.

Post graduate degrees
Post graduate degrees: In 2017, the department had 11 post graduate students pursuing PhD, MD and MSc degrees.

Diagnostic Services
An INAB accredited HPV testing service is provided for the hospital by GynaeScreen located at the Coombe. In 2017, 7,611 HPV tests were performed on cervical smear samples.

Achievements in 2017

Peer Reviewed Publications for 2017

1. Traynor D, Kearney P, Ramos I, Martin CM, O'Leary JJ, Lyng FM. A study of hormonal effects in cervical smear samples using Raman spectroscopy. J Biophotonics. 2017 Dec 7. doi: 10.1002/jbio.201700240. PubMed PMID: 29215211.
2. Kearney P, Traynor D, Bonnier F, Lyng FM, O'Leary JJ, Martin CM. Raman spectral signatures of cervical exfoliated cells from liquid-based cytology samples. J Biomed Opt. 2017 Oct;22(10):1-10. doi: 10.1117/1.JBO.22.10.105008. PubMed PMID: 29086546.
3. Ó Céilleachair A, O'Mahony JF, O'Connor M, O'Leary J, Normand C, Martin C, Sharp L. Health-related quality of life as measured by the EQ-5D in the prevention, screening and management of cervical disease: A systematic review. Qual Life Res. 2017 Nov;26(11):2885-2897. doi: 10.1007/s11136-017-1628-z. Epub 2017 Jun 26. PubMed PMID: 28653217.
4. Woods RSR, Keegan H, White C, Tewari P, Toner M, Kennedy S, O'Regan EM, Martin CM, Timon CVI, O'Leary JJ. Cytokeratin 7 in Oropharyngeal Squamous Cell Carcinoma: A Junctional Biomarker for Human Papillomavirus-Related Tumors. Cancer Epidemiol Biomarkers Prev. 2017 May;26(5):702-710. doi: 10.1158/1055-9965.EPI-16-0619. Epub 2017 Jan 12. PubMed PMID: 28082347.
5. Woods RSR, Timon, CVI. HPV and the diagnosis and treatment of head and neck cancer –an Irish Perspective. Cancer Professional Vol 11 Issue 2 Summer 2017.
6. O'Connor M, O'Brien K, Waller J, Gallagher P, D'Arcy T, Flannelly G, Martin CM, McRae J, Prendiville W, Ruttle C, White C, Pilkington L, O'Leary JJ, Sharp L; Irish Cervical Screening Research Consortium (CERVIVA). Physical after-effects of colposcopy and related procedures, and their inter-relationship with psychological distress: a longitudinal survey. BJOG. 2017 Aug;124(9):1402-1410. doi: 10.1111/1471-0528.14671. Epub 2017 May 31. PubMed PMID: 28374937.
7. Arts FA, Keogh L, Smyth P, O'Toole S, Ta R, Gleeson N, O'Leary JJ, Flavin R,Sheils O. miR-223 potentially targets SWI/SNF complex protein SMARCD1 in atypical proliferative serous tumor and high-grade ovarian serous carcinoma. Hum Pathol. 2017 Dec;70:98-104. doi: 10.1016/j.humpath.2017.10.008. Epub 2017 Oct 24. PubMed PMID: 29079174.
8. Sulaiman G, Cooke A, Ffrench B, Gasch C, Abdullai OA, O'Connor K, Elbaruni S, Blackshields G, Spillane C, Keegan H, McEneaney V, Knittel R, Rogers A, Jeffery IB, Doyle B, Bates M, d'Adhemar C, Lee MY, Campbell EL, Moynagh PN, Higgins DG, O'Toole S, O'Neill L, O'Leary JJ, Gallagher MF. MyD88 is an es-

sential component of retinoic acid-induced differentiation in human pluripotent embryonal carcinoma cells. Cell Death Differ. 2017 Nov;24(11):1975-1986. doi: 10.1038/cdd.2017.124. Epub 2017 Sep 8. PubMed PMID: 28885616; PubMed Central PMCID: PMC5635222.

9. Ffrench B, Gasch C, Hokamp K, Spillane C, Blackshields G, Mahgoub TM, Bates M,Kehoe L, Mooney A, Doyle R, Doyle B, O'Donnell D, Gleeson N, Hennessy BT, Stordal B, O'Riain C, Lambkin H, O'Toole S, O'Leary JJ, Gallagher MF. CD10(-)/ALDH(-) cells are the sole cisplatin-resistant component of a novel ovarian cancer stem cell hierarchy. Cell Death Dis. 2017 Oct 19;8(10):e3128. doi:10.1038/cddis.2017.379. PubMed PMID: 29048400; PubMed Central PMCID: PMC5680566.

10. MacDonagh L, Gallagher MF, Ffrench B, Gasch C, Breen E, Gray SG, Nicholson S, Leonard N, Ryan R, Young V, O'Leary JJ, Cuffe S, Finn SP, O'Byrne KJ, Barr MP. Targeting the cancer stem cell marker, aldehyde dehydrogenase 1, to circumvent cisplatin resistance in NSCLC. Oncotarget. 2017 Aug 3;8(42):72544-72563. doi: 10.18632/oncotarget.19881. eCollection 2017 Sep 22. PubMed PMID: 29069808; PubMed Central PMCID: PMC5641151.

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12. Gasch C, Ffrench B, O'Leary JJ, Gallagher MF. Catching moving targets: cancer stem cell hierarchies, therapy-resistance & considerations for clinical intervention. Mol Cancer. 2017 Feb 23;16(1):43. doi: 10.1186/s12943-017-0601-3. Review. PubMed PMID: 28228161; PubMed Central PMCID: PMC5322629.

13. Lynam-Lennon N, Heavey S, Sommerville G, Bibby BA, Ffrench B, Quinn J, GaschC, O'Leary JJ, Gallagher MF, Reynolds JV, Maher SG. MicroRNA-17 is downregulated in esophageal adenocarcinoma cancer stem-like cells and promotes a radio-resistant phenotype. Oncotarget. 2017 Feb 14;8(7):11400-11413. doi:10.18632/oncotarget.13940. PubMed PMID: 28002789; PubMed Central PMCID:PMC5355274.

14. Sheill G, Brady L, Guinan E, Hayes B, Casey O, Greene J, Vlajnic T, Cahill F, Van Hemelrijck M, Peat N, Rudman S, Hussey J, Cunningham M, Grogan L, Lynch T, Manecksha RP, McCaffrey J, Mucci L, Sheils O, O'Leary J, O'Donnell DM, McDermott R, Finn S. The ExPeCT (Examining Exercise, Prostate Cancer and Circulating Tumour Cells) trial: study protocol for a randomised controlled trial. Trials. 2017 Oct 4;18(1):456. doi: 10.1186/s13063-017-2201-3. PubMed PMID: 28978344; PubMedCentral PMCID: PMC5628461.

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- White C, Reynolds S, Naik P,O' Brien R, Pham T,Pilkington L,Sharkey Ochoa I,Powles C, Wright F, Bolger N, Barry O'Crowley J, Tewari P, O'Toole S, Normand C, Sharp L, Flannelly G, O'Leary JJ*, Martin CM* on behalf of CERVIVA the Irish Cervical Screening Research Consortium. HPV Primary Screening Pilot Study: molecular testing of potential triage strategies for HPV-positive women. British Society for Colposcopy and Cervical Pathology. Cardiff. May 2017. (Oral Presentation) * = joint senior author.
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- B Jose, S O'Toole, R Forster, JJ O'Leary. Smart Nanomotors: Towards in-vivo Sensing. Laboratory Investigation 2017; 97(S1): 530A.

Key Performance Indicators [Including Current Activity]

- 6 PhD students
- 2 MD students
- 2 MSc students
- 17 Post-doctoral scientists
- Grant income highlights:
  - Income in excess of 52.9 million euros over the past 5 years
  - Total career grant income: >90 million euros
- Since 1998:
  - PhD students completed = 43
  - MD students completed = 10
  - MSc students completed = 10
- Industrial links with:
  - Life Technologies [ThermoFisher]
  - Affymetrix
  - Roche Molecular Systems
  - Roche Oncology
  - Sanofi Oncology
  - Glaxo Smith Kline
  - IonTorrent
  - Invitrogen
  - Hologic
  - Qiagen
  - Fluxion
  - Johnson & Johnson
  - Alere
  - Illumina
  - Vaccinogen
  - Becton Dickinson
  - Research group h-index >70
  - Research group i-10 index >170
  - Total group citations: >15,000

Challenges for 2018

- Expand our HPV testing service to meet demand associated with CervicalCheck planned change to primary HPV-based cervical screening in Q4 2018.
- Introduce a full suite of Molecular testing protocols.

Phlebotomy in OPD

Head of Department

Martina Ring, *Laboratory Manager*

Staff Complement

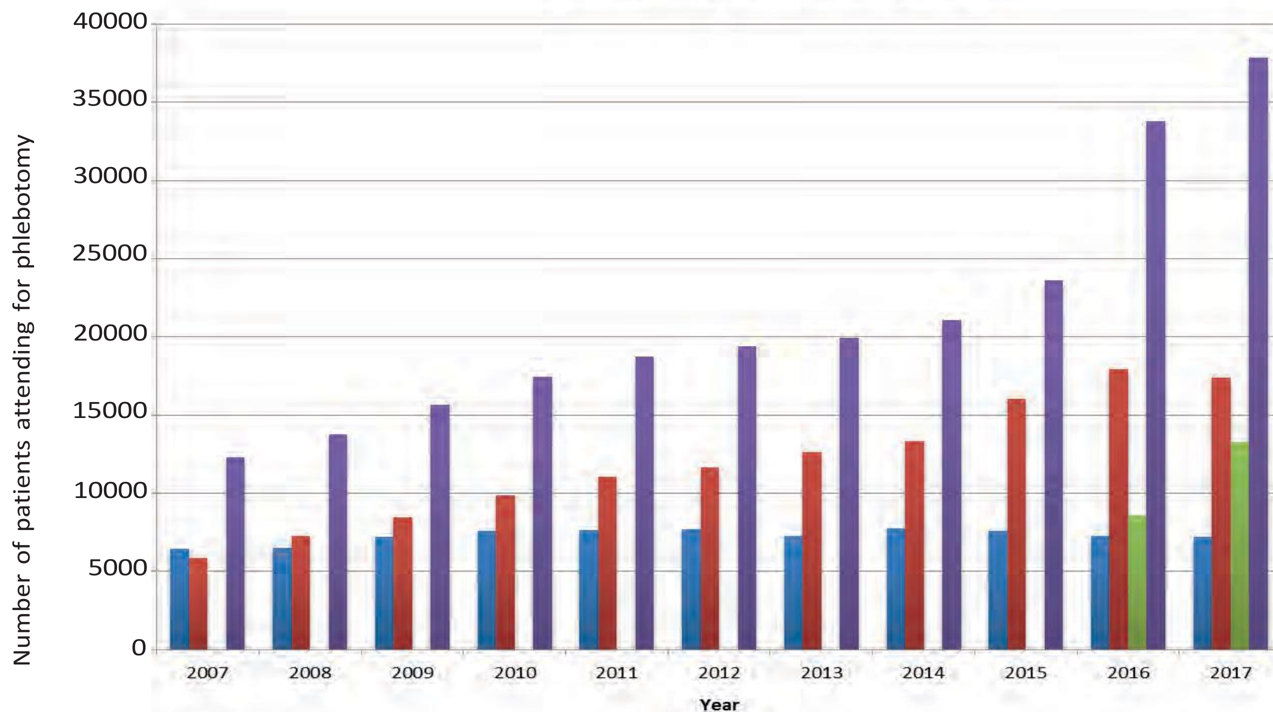
1 WTE - Artemio Arganio

1 WTE – Vladimir Getoyev

1 WTE- Anne-Marie Jenner- (March – July), Roisin Nolan - Dec

Key Performance Indicators

- Continued increase in throughput of patients in the OPD and Perinatal Centre, with 4058 additional patient episodes taking place.
- The majority of this increase was noted in the Perinatal Centre where for the first time there was a full year of phlebotomy service available.
- Figures presented are patient episodes and do not reflect actual numbers of samples from each patient.



	2011	2012	2013	2014	2015	2016	2017
First Visits	7,672	7,714	7,298	7,773	7,586	7,296	**7,237**
Other Visits	11,060	11,680	12,633	13,311	16,055	17,954	**17,369**
PNDC						8,562	**13,264**
Total	18,732	19,394	19,931	21,084	23,641	33,812	**37,870**

- 2017 was a challenging year for staffing with the departure of one of our phlebotomists, and shortage of available phlebotomists resulted in delays in appointing a replacement.
- All three phlebotomists were rostered to work in the Perinatal Centre thus provided cross cover with the OPD.
- The workload within the Perinatal Centre continues to be substantial, > 1000 patient episodes per month, and is a reflection of the increasing levels of Gestational Diabetes.

Adult Radiology

Head of Department

Professor Mary T. Keogan

Staff Complement

I Clinical Specialist Radiographer/PACS Manager

I Clinical Specialist Radiographer (Ultrasound) – Part Time

I Locum Clinical Specialist Radiographer (Ultrasound – Holiday cover)

Key Performance Indicators

Adult Ultrasounds	4,478
Adult Radiographs	281
Total Examinations	**4,759**

Achievements in 2017

- Specialised examinations including hysterosonography and HyCoSy examinations have been introduced and can be requested directly on the NIMIS system.
- Many thanks to department radiography and clerical staff for their hard work in maintaining timely access to diagnostic examinations for all patients.

Challenges for 2018

- There has been a significant increase in work load within the department as demand for imaging, in particular ultrasound, continues to increase each year. Increasing in-house demand follows new consultant gynaecologist appointments. There is also increasing demand from GPs who are requesting ultrasound examinations in advance of gynaecology OPD appointments for which there is a long waiting time.
- Maintenance of acceptable turnaround times for radiology and ultrasound examinations is increasingly challenging as demand for these services continues to increase.

Paediatric Radiology

Head of Department

Dr David Rea

Staff Complement

2 full-time Radiographers shared between Adult and Paediatric Services

1 Clinical Specialist Radiographer and 1 senior post

Key Performance Indicators

	N=
Outpatient Radiographs	1,651
Inpatient Radiographs	1,483
Inpatient Ultrasounds	1,016
Total Paediatric Examinations	**4,150**

Achievements for 2017

- Teaching registrars on the RCSI Radiology Training Scheme about neonatal imaging particularly emergency US.
- Replacement of the end of life Departmental Radiographic Equipment with a Shimadzu Fixed Digital Radiography system and two Shimadzu mobile digital radiography systems.
- Appointment of Dr Eoghan Laffan as Consultant Paediatric Radiologist to replace Dr David Rea. Dr Laffan will commence in May 2018.

Challenges for 2018

- An increase in Consultant Paediatric Radiology Consultant numbers and support is still required for the Neonatal Service at CWIUH and in supporting both undergraduate/postgraduate education on this site.
- Developing a Service Level Agreement with the Children's Hospital Group to ensure adequate Radiology and Radiographic staffing, continued education for staff and to ensure access to Radiographic staffing to allow adequate department functioning day and night all year round.
- Formalizing the on-call arrangements for Radiologists at Our Lady's Children's Hospital, Crumlin.
- Hip ultrasound imaging for DDH remains outsourced.

Bereavement

Head of Department

Ms Brid Shine, *Clinical Midwife Specialist Bereavement & Loss (Author)*

Staff Complement

1 WTE Clinical Midwife Specialist Bereavement & Loss

Key Performance Indicators

- Provision of anticipatory bereavement counselling support to parents whose baby is diagnosed with a life limiting condition in close liaison with the Perinatal Co-ordinator CMM2 Ms Felicity Doddy.
- Provision of bereavement counselling support for parents who experience Early Pregnancy Loss & Perinatal Death. This may be at the time of loss, in the weeks and months that follow, and may include care in relation to subsequent pregnancy anxiety.
- Provision of bereavement counselling support for families returning from abroad following termination of pregnancy for medical reasons.
- Co-ordinating the formal structured follow up care of bereaved parents who have experienced a Stillbirth following MDT discussion at the Monthly Perinatal Mortality meeting.
- Advocacy role of the needs of bereaved parents, and development of service provision in response to identified needs of bereaved families.
- Development of a holistic approach in Bereavement Care in line with evidence based practice (NICE 2014).
- Resource & informal support to staff impacted in their care of bereaved families.
- Forged links with the Voluntary Support agencies that provide care to bereaved families in the community, with recognition of their invaluable support of families.

Achievements in 2017

- Bereavement training & education, inputting on Midwifery programmes in the CME, for staff midwives, the undergraduate programmes in TCD, post graduate Neonatal Nurse programme, staff induction sessions, as well as informal education in the clinical setting.
- Attended the International Stillbirth Alliance Conference in UCC.
- Presented on *'Complicated Grief"* at the RCPI Mental Health Study Day.
- Involved in the Hospital's Annual Service of Remembrance.
- Attended Ireland's 3rd Children's Palliative Care (CPC) conference.
- Involved in the ongoing work of the End of Life Care Committee.
- The Design & Dignity grant awarded by the IHF/HSE for our Mortuary upgrade and redevelopment was delayed with planning permission issues, but upon successful redesign & re-submission, plans are due to commence in 2018.
- Our second previously developed Design & Dignity project was re-submitted by the Fahey family and won nomination as the chosen children's charity for the Annual Galway Cycle event planned for April 2018. The fundraising will be to create bereavement suites on St Gerard's Ward, creating hospice-styled, family friendly bereavement rooms.
- Successful recruitment of a second CMS post as indicated by the HSE to further enhance and meet the needs of grieving families. Ms Sarah Gleeson took up acting position in October having commenced her Bereavement Studies post graduate training at the RCSI in September.

Opportunities for 2018

- Seek a nominated Clinical lead in the area of Perinatal Death to support service development, research & audit.
- Expanding the role of the CMS within the hospital, and in particular examining the development of an Early Pregnancy Loss clinic.
- Continuing to advocate for end of life care projects to enhance compassionate care afforded to families.
- Continuing to work with the national implementation team of the HSE to ensure our bereavement care is in line with the HSE 'National Standards for Bereavement care following Pregnancy Loss and Perinatal Death' which we were involved in developing.
- Further enhancing the support structures available to staff in the aftermath of critical incidences, with support from senior management. *"When an individual, team or organisation becomes conscious that staff-care is needed, by naming it, they give it value"* (Stevens 2011).

Promotion of a person-centred, humanistic approach in the care of bereaved parents and their families remains the primary focus of the CMS in Bereavement. This work could not be achieved without the involvement of the entire multidisciplinary team within the hospital. The author would like to acknowledge all grades and all disciplines of staff within the Hospital who care compassionately for our bereaved families throughout the year.

The author would particularly like to acknowledge the voluntary support organisations for their collaborative work in the support of bereaved families in communities across Ireland. Gratitude is also expressed to our partners in community care including primary health care teams, and local as well as specialist palliative care teams. We wish to thank all parties for their ongoing support, as we all work collaboratively to enhance bereavement care for the families that we serve, at a time of immense vulnerability.

Chaplaincy/Pastoral Care Department

Heads of Department

Ms Renee Dilworth, *Chaplain*

Ms Phil Power, *Chaplain (retired July 2017)*

Achievements in 2017

The Pastoral Care Department provides a supporting ministry to all families in times of sadness and in times of joy. The Chaplain understands that everyone has a spiritual dimension and many may have a religious component. Ministers and Leaders of other denominations and traditions are contacted at the request of patients. Chaplaincy is both a pastoral ministry of the church and an integral and necessary part of the holistic healing process. There has been an increased demand on Chaplaincy in caring for bereaved parents and extended family. There is also an increase in demand for burial information on historic losses.

The Oratory is located on the fourth floor of the hospital and is open 24 hours for use by patients, staff and families. The Book of Remembrance continues to be displayed in the Oratory and is regularly updated. The Department continues to maintain the Coombe Grave in Glasnevin and visits the grave each season to lay a wreath.

The chaplains are part of the ongoing Design and Dignity project to upgrade the Mortuary.

Key Performance Indicators

Bereavement Support	193
Funeral Services	166
Baptisms	43
Naming/Blessing Services	98
Appointments for past patients	11
Prayer Services for past miscarriage and loss	8
Referral for support for fetal anomalies	12
Requests for copy of Baptismal Certificates	19
Organise Mass and Services for staff as required	7
Staff Appointments	26

In 2017 the Department continued to provide support to patients and staff. There has been a notable increase in the demand for staff support. Holy Communion, when required, was provided. Our Service of Remembrance for Bereaved parents and their families continues to be a source of healing and support for all who attend.

The Coombe Workplace Choir provided the music and the attendance is increasing year-on-year. The Department continues to respond to the growing cultural diversity of families attending our hospital. We are committed to ongoing development personally, pastorally and professionally.

The Chaplain contributes to study days for staff and students. The Chaplain continues to work with the multidisciplinary team to provide best bereavement care to all families in their loss. Provision of care to families following termination is a growing area of care for Chaplaincy. Staff care is also a priority for the Chaplains.

The support and encouragement of all Staff and Management is deeply appreciated by the Chaplain.

Clinical Nutrition and Dietetics

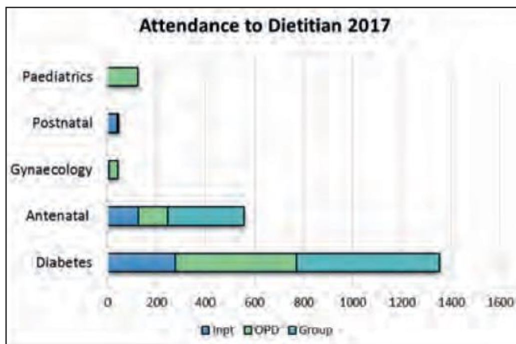
Head of Department

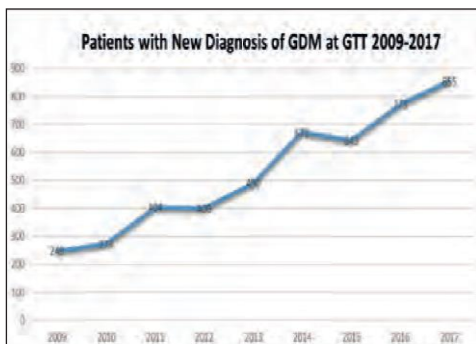
Fiona Dunlevy, *Dietitian Manager*

Staff Complement

1 WTE increased to 2 WTE in October 2017)
Celine Honohan, Senior (Jan-May)
Fiona Dunlevy, Manager (May-December)
Anne-Marie Keogh, Senior (October - November)

Key Performance Indicators





Achievements in 2017

- Change in governance and expansion of Department to meet growing demands and improve quality of Dietetic service provided.

Abstracts

- Dunlevy F, Walsh K, Martin M, Murphy N. An evaluation of patient empathy within the Health and Social Care Professions in an acute hospital using the CARE Measure. Irish Society for Clinical Nutrition & Metabolism Dublin. 2017.
- Dunlevy F, Martin M, Fenton A, Mc Hugh C, Corrigan C. Local Implementation of the IrSPEN refeeding guidelines: Audit of current practices and recommendations for local guidelines. Irish Society for Clinical Nutrition & Metabolism Dublin. 2017.

Other

- Fiona Dunlevy completed RCSI Future Leaders Programme for Health and Social Care Professions (HSCPs).

Challenges for 2018

- Recruitment of Dietitian for Neonatal Service.
- To promote National Maternity Standards specifically in the area of Nutrition and Health and Wellbeing.
- To work with multiple stakeholders to improve care of women and infants through optimal nutrition.
- To continue to provide an efficient dietetic service in diabetes care despite increasing demands due to exponential growth in prevalence.

Liaison Perinatal Mental Health

Head of Department

Dr Joanne Fenton, *Consultant Psychiatrist*

Staff Complement

Consultant Psychiatrists, 0.5 WTE Dr Joanne Fenton & Dr Ann O Grady Walshe

Elaine McGoldrick, 1 WTE, Perinatal Mental Health Nurse (until May 2017)

Suzanne Daly, 1 WTE, Perinatal Mental Health Support Midwife – Commenced Dec 2017

Psychiatry Registrar 0.3 WTE

Key Performance Indicators

Patients referred to Perinatal Clinic	1526
Patients seen for inpatient consultation	200
Diagnosed with antenatal depression	23%
Diagnosed with postpartum depression	42%
Diagnosed with anxiety disorder	30%
Diagnosed with severe & enduring mental illness	5%

Achievements in 2017

- Educational programmes provided to medical students and midwives in Perinatal Mental Health.
- Joint Educational Day for HST Obstetrics, Gynaecology and Psychiatry trainees.
- Ongoing research in collaboration with Trinity Health Services.
- Invited member of HSE Steering Group for the Development of Perinatal Mental Health Services in Ireland.
- Recruitment of a CNS/CMS to enhance MDT.

Challenges for 2018

- Provide a MDT approach to patients with mental health difficulties.
- Recruitment of CNS.
- Advocate for increased consultant hours to reduce waiting times.
- Provide anxiety management groups.

Medical Social Work Department

Head of Department

Rosemary Grant (Author)

Staff Complement

Ms Rosemary Grant, *B.S.S., C.Q.S.W. - Principal Medical Social Worker*

Ms. Tanya Franciosa, *B.S.S., N.Q.S.W. Senior Medical Social Worker from March 2017*

Ms Denise Shelly, *B.Soc.Sc., C.Q S.W. - Senior Medical Social Work Practitioner*

Ms. Kate Burke, *B.Soc. Sc., M. Soc. Sc., N.Q.S.W.*

Ms Sarah Lopez, *B.A., H Dip.Soc.Pol., MA Social Work, N.Q.S.W. Masters in Child and Adolescent Therapy and Psychotherapy (Part Time/Job Share post)*

Ms Sorcha O'Reilly, *B.S.S., N.Q.S.W. (Part time/Job share post)*

Ms. Gretchen McGuirk, *B.S.S., N.Q.S.W. Permanent post from March 2017*

Ms Tara Lynch *BSS NQSW Temporary post from August 2017*

Ms Elaine Forsythe (Job Share), *Receptionist/Secretarial Support*

Ms June Keegan (Job Share), *Receptionist/Secretarial Support*

During 2017 the Medical Social Workers continued to provide a social work service to patients, their partners and their families. Continuity of care was considered important by patients and by staff so the attachment of the Medical Social Workers to the Obstetric Teams (Public, Semi-Private and Private) continued where possible. Periodically this proved impossible due to the unpredictability of the caseload generated at any given time by a particular team.

It was still not possible to provide a dedicated Medical Social Worker to all of the obstetric teams. This is particularly true in the case of the specialist clinics including the non-addiction part of Team A Dr O'Connell, Team Multiple Births, Team Diabetes, the Medical Team and Team E. The Medical Social Work service provided to patients attending these teams continued to be on a rota basis. The lack of a dedicated Medical Social Worker for these patients continues to be problematic for the patients, the Medical Social Workers and for other members of the interdisciplinary team providing care to these women, their partners and expected babies.

During 2017 the number of patients, who were appropriately referred to the Medical Social Worker by a range of professionals in the hospital and in the community and those who self-referred, continued to increase. The unpredictability involved in the maternity setting continues to challenge the provision of a Medical Social Work service to patients. This is further challenged by the increasing emphasis on Combined Antenatal Care with the patient's General Practitioner, attendance by patients at outlying Clinics and Early Transfer Home. The 'window' enabling patients to access a Medical Social Work service while they are actually in the hospital either as an inpatient or while attending an outpatient clinic is becoming shorter. At the same time the need for assessment of a patient's situation is essential particularly if child protection or other safety concerns are raised. Referrals are prioritised and Domestic Violence and Child Protection concerns continue to receive the highest priority. As a result, the early identification of issues of concern with a consequent referral to the Medical Social Work Department remains crucial.

Child protection issues arise in relation to a wide range of children including:

- babies born in the Coombe Women and Infants University Hospital
- patients attending either the hospital's gynaecological service or obstetric service who are under 18 years
- siblings of babies born in the hospital who are under 18 years
- siblings of patients attending the hospital who are under 18 years
- children who are visiting the hospital who are under 18 years
- unknown children who are under 18 years.

The acknowledgement by all hospital staff of the broader concept of children whose protection is in our remit is a very important message for us to promote. Staff find it easier to acknowledge a need to be concerned about babies born here and patients who are under 18 years. It is less obvious that concern should extend to siblings of babies and siblings of patients. It can be difficult for people to be aware of the responsibility to visitors who are not our patients and even more so for children who are not known to us. For example the retrospective disclosure by a patient, now an adult, of abuse as a child, raises potential child protection issues unless the perpetrator is confirmed to have died.

The identification of Child Protection concerns in relation to any of the above groups of children is of extreme importance as is the appropriate referral of the family to their local Child Protection Social Work team for an

assessment of the risks/issues involved. Preparation for and attendance at Child Protection Case Conferences both pre-birth and post-birth remain an important and time consuming part of the workload of the Medical Social Workers.

The full implementation of Children First on the 7th December 2017 was a major milestone for the protection of children and had huge implications for hospital staff including the need for a Child Safeguarding Statement and the training of all hospital staff irrespective of profession or grade in issues relating to the protection of all children, not just those attending our hospital.

The introduction of a mandatory requirement to report child protection and welfare concerns to Tusla, the Child and Family Agency, for specific professions is a major development for hospital staff. In the Coombe Women and Infants University Hospital Mandatory Reporters include all Doctors, Midwives and Nurses, Physiotherapists, Chaplains and Medical Social Workers.

The work involved in preparing for the full implementation of Children First was immense and the support and cooperation of the Hospital Management Team was very much appreciated in this regard.

Appropriate referrals to Medical Social Work Department include public, semi-private and private patients who are attending the maternity, neonatal/paediatric and gynaecology departments. Referrals include patients who experience different problematic issues in their lives generally and those where issues arise as a result of pregnancy. They include bereavement, domestic violence, addiction, relationship issues, mental health issues, underage pregnancy, the birth of a baby with special needs, child protection/child care issues, concealed pregnancy, crisis pregnancy and learning disability. Hospital staff, when making decisions about an appropriate referral being made to the Medial Social Work Department, need to take account of all of the people involved and in particular children affected by the issue of concern. As mentioned earlier, affected children are not just the expected babies but include siblings, young parents, and other children whose identities may be unknown.

As a tertiary referral centre, each year we see a number of mothers whose care is transferred from another hospital to the Coombe Women and Infants University Hospital for specialized Obstetric or Neonatal care and may include the need for proximity after birth to Our Lady's Children's Hospital Crumlin or Children's University Hospital Temple Street. The challenges involved for parents at this time are immense. As well as coping with all the emotions involved in having a baby who may be critically ill, they need to cope with accessing accommodation in the Dublin area, funding this accommodation and their stay in Dublin, making appropriate provision for the care and continued schooling of other children etc. They may not have any support in the Dublin area and may not in fact know Dublin well. All of this occurs within the emotional rollercoaster of having an ill baby. At these stressful times for parents Medical Social Work staff and staff in the Neonatal Units work tirelessly to try to assist them to work out a support plan which enables them be with their baby as much as is possible. The support of Friends of the Coombe has been invaluable in this regard. At the time of going to print, the Cabinet have approved a proposal that will see enhanced Maternity Leave entitlements for mothers of premature babies. This will hugely assist parents trying to care for their premature babies and other children.

During 2017 homelessness and related situations remained a significant issue for many of our patients. Patients reported uncertainty about their living arrangements, an inability to continue to live where they were living, homelessness and the fear of homelessness. Families were unable to continue to rent privately due to either the cost involved or to a lack of suitable accommodation. Some families needed to move back to their family of origin creating space problems and often relationship problems. Families moved into Hostel, B&B or Hotel based accommodation with all the associated difficulties. Parents did their utmost to ensure children continued to attend school despite having to travel long distances a number of times a day with the associated financial implications. Parents tried to provide appropriate nutrition for children despite limited/no access to cooking facilities. Families were often accommodated a distance from their usual supports and floundered without the support of their family and friends.

During 2017 the implications of homelessness for our patients became even more challenging than other years with patients reporting sleeping in their cars, having to move from one accommodation to another frequently, having to locate hotels/B&Bs themselves, having to split their children up and arrange for them to stay with various family members/friends for a night at a time and still try to keep all their appointments, get the children to school and not know from day to day where they were going to be staying. The addition of a new baby and a newly delivered mother to this scenario is overwhelming. Lack of an address or uncertainty about an address creates difficulties for the safe follow up of mothers and babies. It is difficult for a Public Health Nurse to follow up newborns. It is difficult for new mothers to appropriately access adequate sleep/rest, food, hygiene facilities etc. Being homeless is a major challenge for all but is often overwhelming for a family with a new baby.

For those dislocated as a result of domestic violence, the closure of the refuge in Rathmines at the end of 2016 has been a particular challenge for both women who are attending the Hospital and for staff in the Medical Social Work Department. The care, support and advice offered by refuge staff over many years has been invaluable,

with a warm welcome to all at an especially vulnerable time. Its reopening during 2017 was anticipated but to date this has not occurred placing further pressure on available beds in other Refuges.

In all of our work with patients, communication and liaison with a wide range of professional groups and voluntary specialist organisations within the hospital and in the community is essential. This liaison continued during 2017 both at individual patient/ family level and at a broader level. The Medical Social Work staff continued to liaise with organisations such as the Teen Parent Support Programme, Women's Aid, Focus Ireland, A Little Lifetime Foundation and the Miscarriage Association of Ireland. Ms Rosemary Grant continued to chair the National Advisory Committee of the Teen Parent Support Programme and to represent the hospital on the Dublin Midlands Hospital Group Committee preparing for Children First.

Within the Hospital the department continued to be represented on the Obstetric Division, the End of Life Care Committee and the Bereavement Committee. Ms Denise Shelly continued with her involvement with the Neonatal Support Group.

Ms Rosemary Grant was involved with the School of Midwifery in Trinity College Dublin in the provision of educational sessions about Medical Social Work in the Maternity Setting to midwifery students.

The staff of the Medical Social Work Department continues to be indebted to the members of Coombe Care who provide assistance to patients by way of necessary practical help at the time of a baby's birth. This help may include clothing and toiletries for the mother for her admission and clothing and other items for the baby for its hospital stay and discharge home. They also provide vouchers over the Christmas period to enable patients to buy items for which they would not ordinarily have the resources. The work of the Coombe Care Committee is much appreciated by hospital patients, the staff in all areas of the hospital and in particular by staff of the Medical Social Work Department. Committee members are always willing to engage with the Medical Social Work team to discuss potential areas of need. During 2017 assistance was given to individual families who were in particular need where it was impossible to locate an alternative source of support. The increased pressure on families as a result of the broader economic situation meant that a number of families who had never before been in a position of needing support found themselves in such a position.

During 2017, as in other years I have appreciated the support of the Principal Medical Social Workers in the other Maternity hospitals. There has always been a good liaison between the Medical Social Work Departments, which contributes to the ideal of best practice. The Medical Social Workers assigned to the paediatric units and to patients with addiction issues in each of the three maternity hospitals in Dublin continued to meet on a number of occasions in 2017. There were benefits to all in sharing knowledge and experiences of these particular areas of Social Work in the maternity setting.

In conclusion I would like to express my sincere thanks to those who work in the Medical Social Work Department including the Medical Social Workers and the Receptionists/Secretaries. The level of professionalism and the seeking to attain a standard of best practice demands a major commitment on the part of staff in the Department which is much appreciated. The support of our colleagues in other Departments within the hospital is essential as is the support of our colleagues, both Social Work and Non Social Work within the community. I had hoped that when writing the 2017 Annual Report the major challenges posed by the housing situation would have decreased and that our patients would no longer be faced with uncertainty about their accommodation situation at the time of the birth of a new baby. This is not the case. 2017 has provided major challenges with regard to housing and accommodation issues. The feeling of being overwhelmed by the challenges is experienced by patients, by staff and those in all the services aiming to provide shelter and support to those in need.

Rosemary Grant

Principal Medical Social Worker

Pharmacy Department

Head of Department

1 WTE Director of Pharmacy Services, Mairéad McGuire

Staff Complement

1 WTE Chief II, Peter Duddy (Neonatal & Medication Safety; from July 2017)

1 WTE Senior Grade Pharmacist, Úna Rice (Antimicrobial Pharmacist)

1 WTE Senior grade Pharmacist, Orla Fahy

1 WTE Basic grade Pharmacist, Joanne Frawley

1 WTE Pharmacy technician, Gayane Adibekova

Key Performance Indicators

- Clinical service provision:
  - Daily review of patient drug charts on adult and neonatal wards
  - High Risk Pregnancy Medical clinic
  - Acute pain round/team
  - Twice monthly Antenatal GUIDE Clinic
  - Daily Antimicrobial Stewardship rounds from Nov 2014
- The department issued stock to wards, outpatients, staff and babies discharged from SCBU on 33,479 occasions, equating to approximately one dispensing transaction for every 10 minutes a pharmacist is in the hospital, or one dispensing transaction for every 2.5 minutes that a Pharmacist is rostered to be in the dispensary.
- Work continued on and developing and maintaining a Pharmacy Risk Register.
- Continued monitoring of compliance with the hospital Prescribing and Microbiology Guidelines for Obstetrics & Gynaecology, further enhanced by the continued development of the post of antimicrobial pharmacist which has allows for closer monitoring and documentation of pharmacist intervention in relation to antimicrobial prescribing practice.
- Peter Duddy continued his teaching collaborations with the School of Pharmacy in University College Cork.
- As a key member of the Antimicrobial Stewardship team, Úna Rice participated in the European Antimicrobial Point Prevalence Study.
- The department continued provision of Educational sessions to medical staff, NCHDs and Nurses/Midwives e.g. Gentamicin, analgesia, parenteral nutrition and medication management/safety sessions.
- Continued Educational support to the Centre for Nursing and Midwifery training programmes.
- Significant increase in workload around the management of drug shortages and supply issues and risk mitigation associated with this.
- Ongoing involvement with developments in MN-CMS project, national TPN steering group & Clinical programmes.
- Pharmacy Technician-operated medication Top-up service for wards continue to show improved stock availability, more efficient use of stock and cost efficiencies through the wards.

Achievements in 2017

- Peter Duddy was appointed to the new role of Chief II pharmacist for neonatal services and medication safety in July 2017. This is the first medication safety pharmacist post to be appointed in a specialist hospital in Ireland. He has special responsibility for development, implementation and progression of a medication safety programme in the hospital that aims to ensure safe and effective use of medications based around the principles of a just culture of safety, while also providing a modern, pharmaceutical care-based clinical service to the hospital's neonatal centre.
- Continued success of multidisciplinary Medication Safety Committee dedicated to promoting and advancing a culture of medication safety as a priority across CWIUH, in order to foster a comprehensive and interdisciplinary approach to medication safety.
- Continued operation and update of Paediatric smartphone prescribing app. This app is available to all neonatal staff members in order to provide accurate and up to date guidance on medications directly to the user's phone or tablet, while simultaneously allowing us the flexibility to update medical guidelines and distribute them via this mobile platform, reducing the risk of staff referring to outdated medical information and materials. In the long run, the cost of producing & printing paper copies of guidelines will be eliminated.
- Launch of the Smartphone app for Obstetrics and Gynaecology August 2017. Similar to the neonatal app, this app is available to all midwives and obstetrics and anaesthetic medical staff. It also provides accurate and up to date guidance on medications directly to the user's phone or tablet, while simultaneously allowing us the flexibility to update medical guidelines and distribute them via this mobile platform, reducing the risk of staff referring to outdated medical information and materials.
- The pharmacy department led the hospital's preparations for a visit by HIQA as part of the medication Safety Monitoring Programme. Preparations included holding information sessions for all staff, compiling dossiers of required documentation and completing preparatory questionnaires. The report of the visit was published on www.hiqa.ie in December 2017, and was largely positive for the hospital, with emphasis placed on

the leadership of the chief pharmacist and medication safety pharmacist. The hospital was asked to continue to progress plans to improve reporting among clinical staff and to continue good work promote quality assurance through audit.

- Continued support and development for the National Standard concentration Infusion library in NICU in collaboration with colleagues in the engineering department and the pharmacy department in Our Lady's Children's Hospital Crumlin. This involves the use of Drug Error Reduction software to ensure safe use of infusion in the neonatal population using Smart Pump technology.
- Regular antimicrobial stewardship rounds (initiated in late November 2014) continued to be carried out by the antimicrobial pharmacist, ensuring robust stewardship of antimicrobials. Weekly rounds with the infection control team are also undertaken on a continuous basis.
- Continued work by the multidisciplinary Antimicrobial Stewardship Committee. Regular quarterly meetings ensure multidisciplinary involvement and review of antimicrobial prescribing guidelines, completion of audits, and feedback of findings and discussion of antimicrobial consumption. This has allowed the continuous development of a robust antimicrobial stewardship programme within the hospital.
- To regulate restricted antimicrobial use within the hospital, patient specific registers for "restricted agents" e.g. Meropenem, have been developed and maintained by the clinical pharmacists.
- Six monthly review of electronic versions of Prescribing and Microbiology Guidelines and Neonatal prescribing handbook which can now be accessed from the user's Smartphone.
- Continued development of the role of the Pharmacist in the Medical Clinic Team.
- Renewed role on anaesthetic pain rounds and Nausea & Vomiting (PUQE) rounds.
- Introduction of a misoprostol pre-pack and register system in OPD.
- Continued development, revision and monitoring of comprehensive NICU medication prescribing and administration guidelines through the Paediatric Drugs & Therapeutics Committee.
- Work continued on the development of a drug chart for the prescribing of insulin to inpatients, in line with best practice recommendations of the Irish Medication Safety Network.
- Continued participation in Clinical Trials (e.g. HIP Trial, IRELAND trial).
- Continued involvement in Risk management and auditing of practices within the hospital to improve patient safety.
- Continued strong post- graduate education ethos:
  - Peter Duddy completed a Diploma in Patient Safety in Royal College of Physicians Ireland
  - Joanne Frawley commenced an MSc in Clinical Pharmacy in UCC
  - Orla Fahy completed an MSc in Clinical Pharmacy in UCC
  - Mairead McGuire completed a Diploma in Healthcare Management at Institute of Public Administration
  - Undergraduate and postgraduate teaching for pharmacy, medical and nursing/midwifery students
  - Attendance at national and international conferences related to maternity and neonatal pharmacy practice and pharmacy technician practice.
- Continued strong in-house education ethos:
  - Established protected time for all pharmacists to complete their CPD e-portfolio obligations as required by the Irish Institute of Pharmacy and the Pharmaceutical Society of Ireland.
  - Facilitated and aided nursing and midwifery colleagues in the development of the role of the Registered Nurse Prescriber within a maternity hospital setting.
  - Facilitation of second and third level students work placements.
  - Expanded in-house training for NCHDs, midwives and nurses.
  - Provision of lectures for National Midwifery Education courses
- The following audits were undertaken:
  - Out of hours access to the pharmacy
  - Use of Mifepristone
  - Pharmacist intervention and medication information provision
  - Improving appropriate VTE prophylaxis for postnatal patients
  - IV iron prescribing and clinical outcomes in antenatal patients
  - Compliance with Medication Incident forms
  - Anaesthetic clinic pre-operative medical assessment
  - Trends in Medication incident Reporting
  - European Antimicrobial Point prevalence Study
  - Survey of Staff Attitudes to Medication Incident Reporting
  - Administration of antimicrobial of Caesarean Section prophylaxis
  - OPAT patients
  - Antimicrobials used by patients transferred into the hospital

- Compliance with VZIg policy
- Suitability, cost, staff and patient benefits of technician led medication top-up services.
- Continued co-working with the other maternity hospitals in Dublin, as well as those outside of Dublin, particularly Midlands Regional Hospital, Portlaoise.
- Continued monitoring of all Pharmaceutical grade fridges in the hospital using web-based Temperature monitoring system.

Challenges for 2018

- To maintain current service levels in the face of increased demands related to increasing complexity of the patient population.
- To maintain sufficient stock of essential medicines despite global shortages and decreased supply due to pharmaceutical manufacturer mergers and take-overs and raw ingredient scarcity.
- To maintain current service levels in the face of increasing demands from a national level.
- To effect cost savings without compromise to the standard of service provision.
- To ensure adequate stock of medications on wards outside of pharmacy hours and to empower other staff to ensure sufficient stocks are obtained, where possible, during normal pharmacy hours and reduce burden on pharmacy staff outside hours and also on ADOMs with pharmacy access.
- Promote and advance a culture of medication safety as a priority across CWIUH, in order to enhance patient safety and minimise the potential for medication-related harm.
- To develop and maintain a robust system to highlight risk and reduce medication errors, particularly in advance of the introduction of high risk new technologies in the future, including the development of a medication safety committee and development of a hospital-wide medication safety strategy. A business case was submitted to address this issue.

Physiotherapy Department

Head of Department

Margaret Mason, *BA MA MCSP MISCP GradDipPhys*

Staff Complement

Anna Chrzan, *MISCP, Senior Grade 0.5 WTE*

Anne McCloskey, *BSc MISCP, Senior Grade 0.5 WTE*

Clare Farrell, *BSc MISCP, Senior Grade 1 WTE*

Julia Hayes, *BSc MISCP, Senior Grade 0.6 WTE*

Roisin Phipps, *BSc DPT MISCP, Senior Grade 1 WTE*

Sarah Bevan, *MISCP, Senior Grade 0.75 WTE*

Deirdre Kenny, *BSc MISCP, Junior Grade 1 WTE (maternity leave cover) June-October*

Ciara Black, *BSc MISCP, Junior Grade 0.75 WTE (maternity leave cover) June-September*

Sara Birch, *BSc MISCP, Junior Grade 1 WTE (maternity leave cover) from November*

Amanda Drumond Martins, *MISCP 0.75 WTE (maternity leave cover) from November*

Achievements in 2017

- As in previous years we continued to provide a wide range of services to women and infants attending this hospital on an inpatient and outpatient basis.
- Continued provision of a high quality service to women and infants, within the resources available to our department. The department faced considerable challenges in 2017 as it proved difficult to recruit staff to provide cover for maternity leave. At times, the department did not have a full complement of staff with occasions where the complement was 3.25 WTEs. This was particularly challenging during times when members of the remaining team were on annual leave.
- Continued development of the Urogynaecology triage system for women referred to the hospital with incontinence.
- Consolidation of the multidisciplinary pathway for the management of DDH, which commenced last year, providing a more efficient and streamlined approach for these patients.

Antenatal Education

- Antenatal education continues to be a priority for the physiotherapy department. Our classes are well-attended although we are limited by space and staffing issues. We continue to receive excellent feedback from the women who attend the classes who find them both enjoyable and informative.
- Antenatal classes provide an ideal opportunity for physiotherapists to discuss and encourage health benefits of general and specific exercise, and improve health behaviours and lifestyle changes.
- One of the main topics discussed in these classes is the importance of pelvic floor muscles, their role in pregnancy and during labour, and their role in good bladder function. Appropriate pelvic floor muscle exercises are taught and encouraged in these classes.
- As part of continence promotion good bladder habits are also discussed and women are encouraged to continue these and pelvic floor muscle exercises throughout their lives. In fact many women develop bad bladder habits even before pregnancy and find it very useful to be informed about normal micturition and the consequences of bad habits.
- The importance of exercise is stressed both generally and during pregnancy and women are encouraged to take part in appropriate exercise regimes. Most women are aware of the benefits of regular exercise but are unsure about what kind of exercise and how much exercise they could and should do during pregnancy. Physiotherapists with their knowledge of exercise are the appropriate health professionals to discuss exercise with women and it is also part of our health promotion role.
- Women are taught strategies for managing pain during labour using non-pharmacological methods and encouraged to have confidence in their abilities to give birth. The effects of oxytocin, endorphins and stress hormones in labour are discussed and women are taught how to use deep relaxation and breathing techniques (the basis of hypnobirthing) to avoid building up tension so that their experience may be more positive.
- Women are also encouraged to make informed decisions regarding their care throughout pregnancy, labour and the puerperium.

Pelvic Girdle Pain

- The number of referrals for pregnancy-related pelvic girdle pain and low back pain continued to rise. Referrals to the department for this condition often reach 200 per month. We continued to provide classes for these conditions, which we instigated seven years ago, as it would be impossible to provide individual appointments for these women without developing long waiting lists. Regrettably due to the staff

shortages that we experienced this year some women did have to wait a few weeks for their appointment. When a woman is referred with LBP/PGP she is given an information leaflet about the condition and an appointment for a class. Our aim is to give a class appointment within two weeks of referral. In this class women are given advice, but also practice exercises and techniques that they can use themselves to relieve pain. If a woman requires further treatment on an individual basis following the session this can be arranged. There has been very positive verbal feedback from women attending the classes.

Postnatal Care

- Postnatal women are encouraged to attend the physiotherapy postnatal classes no matter what kind of delivery they have experienced. They will receive advice on pelvic floor muscle exercises, abdominal exercises, back care, techniques for bending, carrying and lifting and good feeding positions. Women will also be advised on continuing regular exercise as part of our health promotion practice. They are also advised about positional plagiocephaly prevention and the importance of prone activities for their babies.

OASIS

- Women who sustain a third/fourth degree perineal tear are followed up individually by a physiotherapist. These women will be seen on the ward prior to discharge, two to three weeks later and six to eight weeks following delivery when they are attending for medical review. If symptomatic they will continue to attend physiotherapy for as long as is necessary. If onward referral is deemed appropriate this is organised with the medical team/consultant. These women may be referred to physiotherapy in subsequent pregnancies for advice on maintaining good pelvic floor health throughout the pregnancy and afterwards.

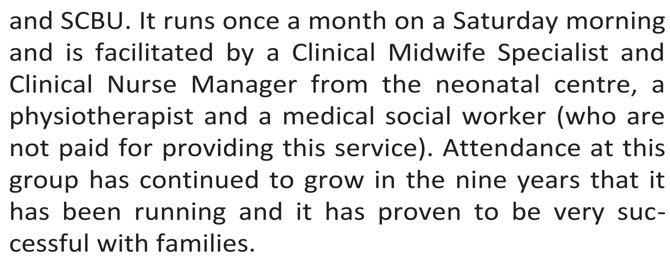
Continence Promotion

- Our Continence Information and Education sessions for women continued. Most newly-referred women attend one of these sessions, usually within one month of referral. This year some women had to wait up to two months to receive their appointment. In this session women are informed about normal micturition, why continence problems occur, the different types of incontinence, and are advised on techniques such as urge suppression, pelvic floor muscle exercises and good bladder habits. Frequency/volume charts are explained and distributed and women are advised to complete these prior to their next physiotherapy visit. All women will then be given an individual follow-up appointment for six to eight weeks later.

  The Urogynaecology triage system whereby one of the Urogynaecology consultants on the MDT triages the referrals and then sends suitable patients directly to physiotherapy continued this year. These women were seen by the physiotherapy members of the MDT while they continued on the Consultant Gynaecologist clinic waiting list. Many of these women responded well to physiotherapy and did not need to see the consultant which freed up clinics for those who do need consultant review. The Urogynaecology team consists of Consultant Urogynaecologists, members of the physiotherapy team, a Clinical Nurse Specialist and administrative support.

Paediatric Services

- The Baby Clinic where the outpatient infant services take place underwent a much needed refurbishment during the year which provided another challenge. This meant closing off various areas, including the physiotherapy section, at various times to facilitate the works. The whole multidisciplinary team in the clinic worked hard to make sure that the services ran smoothly for families during this time without compromising the usual high standards.
- We continued to provide services to the NICU/SCBU, the baby clinics, and to the specialist consultant, neurodevelopmental and orthopaedic clinics.
- The continued lack of therapy resources in the community has led to many infants with special needs continuing to be monitored by physiotherapy in CWIUH for up to two years of age due to long waiting lists for assessment and treatment by Early Intervention Services, Primary Care Services and Specialist Services in the community. This has put huge strain on our services as we are not resourced for this kind of work and can only see these infants infrequently. However it is extremely difficult to discharge them and leave these families with no input for their child with special needs, sometimes for periods of up to six months while they wait for the community services to give them an appointment. We usually have the equivalent of one WTE working in the neonatal service which clearly is not sufficient for the volume of work demanded. This year was especially challenging due to staff shortages but our commitment to this service remains. This work includes seeing babies on the postnatal wards with talipes, DDH, brachial plexus lesions, and providing follow-up for them as outpatients, and developmental follow-up in SCBU and in the baby clinic for those infants considered to be ‘at-risk’ of developmental delay.
- The multidisciplinary pathway initiated last year for the management of DDH has worked extremely well and we continued to use this model in 2017.
- One member of staff continues to be involved in the multidisciplinary Neonatal Post-Discharge Support Group. This group was set up to provide support to families of babies who have spent time in the NICU



and SCBU. It runs once a month on a Saturday morning and is facilitated by a Clinical Midwife Specialist and Clinical Nurse Manager from the neonatal centre, a physiotherapist and a medical social worker (who are not paid for providing this service). Attendance at this group has continued to grow in the nine years that it has been running and it has proven to be very successful with families.

Challenges for 2018

- To continue to provide high quality care within the limited resources. We will be challenged again in 2018 by staff changes/shortages due to a number of staff on continuing maternity leave. We are very appreciative of the support of the hospital management during these extremely challenging times.
- To continue to develop the physiotherapy service to women and infants within the resource constraints.
- To continue to develop our integrated multidisciplinary service for women referred to the hospital with continence issues and to develop new initiatives for treatment of women with these problems.
- To continue to develop the role of the physiotherapist in the management of DDH.

Grateful appreciation is due to those members of the team who did rise to the challenge in 2017 and showed their commitment to the department, the hospital, and most importantly to the women and infants in our care.

Thanks also to members of the wider multidisciplinary teams throughout the hospital who supported the Physiotherapy team this year including our secretary Bernie White. Particular thanks to the clerical and midwifery team in the Baby Clinic for ensuring that all members of the team including Physiotherapy were able to continue to provide a high quality service during the refurbishment works this year.

Psychosexual Therapy

Head of Department

Donal Gaynor

Staff Complement

Staff Complement

One Counsellor (part-time)

Key Performance Indicators

	Total
No. of Consultations	**260**
No. of Return Visits	**235**
No. of New Visits	**25**

Dysfunctions treated

- Vaginismus (19%)
- Dyspareunia (32%)
- Female Inhibited Sexual Desire (21%)
- Erectile Dysfunction (4%)
- Female Anorgasmia (8%)
- Male Anorgasmia (8%),
- Premature Ejaculation (2%)
- Sexual Addiction was evidenced in 4% of presentations.

Achievements in 2017

- Successful treatment of patient with deep-seated Inhibited Desire.
- Successful treatment of 2 patients, both with Lichen Sclerosus, experiencing Dyspareunia and Inhibited Sexual Desire.
- Attended CPD training in Dublin, Belfast and London.

Challenges for 2018

- Continued treatment of Vaginismus in patient with undiagnosed stromal sarcoma.
- Treatment for Vaginismus and Inhibited Sexual Desire of patient with BRCA gene mutation and who has had TAH, BSO and DM.

Clinical Risk Management Department

Head of Department

Ms Susan Kelly, *Clinical Risk Manager (to March 2017)*

Ms Anna Deasy, *Clinical Risk Manager (from April 2017)*

Staff Complement

Ann Byrne, *Assistant Clinical Risk Manager - 1 WTE*

Key Performance Indicators

- To capture and report all clinical risks, near misses, incidents and adverse clinical events which may pose a threat to the safety of the women and babies attending our hospital.
- To investigate all reported risks, near misses and incidents in order to identify possible system vulnerabilities, extract the learning, implement change where indicated and communicate this effectively throughout the process to the multidisciplinary team.
- To work closely with the State Claims Agency to manage all legal claims on behalf of CWIUH.

Challenges in 2017

- The requirement to conduct a full System Analysis Review on all of the incidents categorised by the HSE as Serious Reportable Events in a timely fashion remains extremely challenging.
- The number of medico-legal cases unfortunately continues to increase.
- The number of cases referred to the Coroner and the Inquests being conducted continued to increase throughout the year.

Achievements in 2017

- The Clinical Governance / Risk Committee Meetings were regularly held throughout the year and all were well attended.
- The Quality Safety & Risk Sub Committee of the Hospital Board continues to meet quarterly and the CRM is in attendance at these meetings.
- Commenced contributing to the Leadership Quality & Safety Walk-Rounds and the Safety Matters Staff Newsletter to provide feedback and learning from clinical incidents, reviews, inquests and medicolegal cases to all of the frontline clinical staff.
- The CRM continues to present on the Fetal Heart Rate Monitoring Workshop, Induction Programmes, Medication Management and many other educational programmes for both staff and undergraduate / postgraduate students of the hospital where there is an opportunity to participate in promoting patient safety and effective risk management.
- Participation in the HIQA Medication Safety Audit in October 2017.

Challenges for 2018

- To maintain and increase current levels of clinical incident reporting across all grades of clinical staff.
- To ensure ongoing compliance with the investigation of Serious Reportable Events.
- To implement the new HSE Incident Management Policy being launched in early 2018.
- To encourage the release of staff to attend the HSE System Analysis Training and After Action Review training which is hoped will enable incident reviews to be conducted in a more timely fashion.
- To ensure patients are supported through the systems analysis review process.
- To ensure staff are adequately supported when they are involved in a serious incident and the ensuing systems analysis review of the case.
- To ensure staff are supported through the Coronial Process in the event of being called as a witness in a Coroner's case, and medico-legal cases in the event of High Court proceedings.

I welcome the opportunity to sincerely thank the Clinical Governance / Risk Management Committee and its various members for their commitment and support in promoting patient safety and effective risk management.

I sincerely thank Ann Byrne for her support and assistance in the extremely busy area of clinical risk, incident and legal claims management. The administrative support of Mary Jackman is also acknowledged and appreciated.

Quality, Risk & Patient Safety

Head of Department

Evelyn O'Shea

Staff Complement

4 WTEs

Susan Kelly, *Clinical Risk Manager (to March 2017)*

Anna Deasy, *Clinical Risk Manager* (from April 2017)

Ann Byrne, *Assistant Clinical Risk Manager*

Carmel Tierney, *Patient Advocacy Manager*

Evelyn O'Shea, *Quality Manager*

Achievements in 2017

2017 was the first full year of the new Quality and Patient Safety (QPS) Directorate at CWIUH. The QPS team set-about establishing a structured approach to engage with women, staff and leadership to progress the development, delivery, implementation and evaluation of a comprehensive quality, safety and risk programme to provide assurance regarding our delivery of person-centred high-quality care in CWIUH.

Key achievements in 2017 included:

Service User/Patient Experience:

- Review of our management of service user feedback in the context of the revised HSE National Complaints Management Policy, the Ombudsman's Recommendations Learning to Get Better 2015, The National Maternity Standards 2016 and the updated National Incident Management Policy. Continuous improvements to our service user feedback database to facilitate learning and improving from our complaints and sharing feedback and learnings to staff and relevant committees.
- In 2017, we received 209 new complaints (101 written and 108 verbal) and 1380 compliments. 87% of our patient feedback was positive. The most common themes of our complaints were Communication & Information, Access and Safe & Effective Care.
- 100% of all written complaints were acknowledged within 5 working days of receipt of complaint. 74% of all written complaints were resolved within 30 working days of acknowledgement of the complaint.
- Continued delivery of complaints management training and education to staff at induction and on a one-to-one basis.
- Despite exclusion of the maternity hospitals, each of our gynaecology inpatients were invited to participate in our in-house led first National Patient Experience Survey in May 2017 (a HSE-DoH-HIQA collaborative). Our Response Rate was 59% (DMHG 48.5%); Patients Overall Satisfaction with our service at CWIUH was 90.2% (DMHG 83%). Patients were asked an open question "what was particularly good" about our service and 95% of respondents stated that it was our STAFF and complimented our very caring, professional, competent, informative, welcoming, consistent and approachable staff! The results are generally very positive and consistent with the feedback that we receive from our patients (compliments, complaints and suggestions). We have developed two MDT Quality Improvement projects as a direct result of our learnings from this survey that are currently on-going: Improving Nutrition Service for Patients and Improving Discharge Information for Gynae Patients.

Leadership Quality & Safety Walk-Rounds:

- The Leadership Quality & Safety Walk-Rounds were reviewed and revised in 2017 using Quality Improvement methodology (PDSA) and audits of both the dept/ward managers' experience and the Leadership Team's experience of the proposed changes. The feedback from staff was hugely positive - all staff welcomed the Walk-Rounds and feel that they are an effective opportunity for the Leadership team to engage directly with frontline staff to demonstrate their commitment to quality and safety for service users & staff and to support our culture of open communication, identifying, acknowledging and sharing good practice and strengthening our commitment and accountability for quality and safety in CWIUH. The written feedback given to the Ward Managers after each Walk-Round was very well received. The resultant changes and improvements to the Walk-Rounds include the following:
  - Conducted monthly instead of weekly, on a Tuesday instead of a Monday
  - The Manager is given advanced notice of the Walk-Round along with an explanation of what to expect e.g. the opportunity for discussion on what works well, how can senior management help with an issue, patient experience, staff experience, quality improvement initiatives, standards, audits and on-going issues
  - The Manager is encouraged to include members of the MDT in the Walk-Round if he/she wishes
  - Service users are included in the Walk-Round when appropriate/possible

- The Leadership team provide the Manager with a feedback report on service user experience & clinical incidents and learnings for the specific dept/ward during the Walk-Round
  - Written feedback on the Walk-Round is provided by the Leadership team to the Manager after the Walk-Round
  - The Leadership team are committed to reviewing the completion of actions from the Walk-Rounds.
- Since implementing these improvements in April 2017, 8 (monthly) leadership Quality & Safety Walk-Rounds were conducted in 2017.
- The Leadership Quality & Safety Walk-Rounds were acknowledged by HIQA in their 2017 inspections (medication safety inspection 25th October 2017 and prevention and control of healthcare-associated infections 31st May 2017.

Quality Improvement:

- A collaborative MDT Quality Improvement (QI) team, led by frontline Delivery Suite staff, was established to improve our rate of 3rd and 4th degree perineal tears (OASIs). By Summer 2017, our overall rate of OASIs was reduced to 1.31% (p<0.001), representing a 56% rate reduction. The rate of OASIs was reduced in Spontaneous Vaginal Deliveries by 48% from 2.19% to 1.13%, (p<0.05) and in Operative Vaginal Deliveries by 69% from 6.06% to 1.88%, (p<0.05). This QI project is ongoing - with education sessions, debriefing, audit and reporting continuing - to ensure that the significant improvement in clinical outcome is sustained. This QI project was awarded first prize at the National Quality, Patient Safety and Clinical Risk (State Claims Agency) Conference, 2017 and was shortlisted for the HSE's Health Service Excellence Awards 2017. This QI work was also presented by our Midwifery Staff at the "Nursing and Midwifery planning and development unit Conference", 2017 and at the INMO All Ireland's Midwifery Conference, 2017. Abstracts will also be submitted to 2018 international conferences. The State Claims Agency highlighted this QI project at a Midwifery Study Day in South Tipperary General Hospital in 2017. The hugely positive results reported in our poster (Jun-Aug 2017) continue to be sustained – the rate increased slightly to 1.86% for the period Jun-Dec 2017 but is still below our 2 % target (national average 2015). The Master presented the first prize to the Delivery Suite staff in December 2017. The prize and coffee & cake celebration was very well received by staff on the Delivery suite.
- The successful Reducing OASIs QI project serves as a demonstrator project in our Hospital to drive and support additional QI initiatives to reduce clinical incidents and improve clinical outcomes for our women and infants. A MDT group met with Senior Management in August 2017 to establish governance and leadership for QI to support evidence-based clinically meaningful and accountable QI in CWIUH. A "QI Plan Methodology" summary was developed for CWIUH staff to use and simplified QI methodology training was provided to staff. On-going QI methodology training to initiate and support QI projects is provided by the Quality Manager to staff on one-to-one basis/QI team basis. Numerous new QI projects were initiated in late 2017 including Improving Experience of Women with Induction of Labour, Reducing Surgical Site Infection Rate for Women having Caesarean Section, Improving Nutrition Service for Patients, Improving Discharge Information for Gynae Patients and a Review of Post-Partum Haemorrhages.

National Standards & Inspections:

- The QPS staff participated in and supported colleagues in self-assessments and preparations, audits and inspections in 2017 including announced HIQA Medication Safety 25-Oct-2017, unannounced HIQA inspection on 31-May-2017 (standards around prevention and control of healthcare-associated infections) and self-assessment against the Ombudsman's Recommendations Learning to Get Better, How public hospitals should handle complaints 2015 in June 2017.

"Quality & Safety Matters" Staff Newsletter:

- The Quality & Safety Matters Staff Newsletter was relaunched in Autumn 2017 and was very well received by staff. The Autumn edition included updates regarding Children First, correct Sample Labelling, Medication Safety, National Patient Experience Survey, INAB Accreditation, and the OASIS QI Project. It was also acknowledge by HIQA during their Medication Safety inspection in October. The Winter (Christmas) 2017 edition included updates for staff in relation to Hand Hygiene, Dr James Clinch Audit Prize, Medication Safety, Documentation & Handwriting, the OASIS QI Project and the Annual Clinical Reports Meeting.

Additional CWIUH initiatives supported by the QPS team include:

- The continued management of incidents, near-misses, Serious Reportable Events (SREs), establishment of System Analysis Reviews (SARs) for serious incidents and providing support to staff around these incidents and reviews including collaborating with colleagues to review Critical Incident Stress Management (CISM) and Schwartz Rounds support for staff. In 2017, 12 MDT CWIUH staff were trained as SAR Investigators / Reviewers.
- Medication Safety

- Open Disclosure.
- Communication (Clinical Handover).
- QPS staff attend many MDT and one-to-one meetings with numerous staff

Challenges for 2018

- Proactively engage with our women to establish their priorities for the delivery of an improved service and put changes in place to improve patients' overall experience of our hospital and our service.
- Continue to review our clinical incidents and complaints, collectively learn from them to inform and improve our service in order to ensure the safety of our women and infants and the delivery of high quality excellent care to them.
- Produce a first annual report on management of service user feedback.
- Review/revise our Incident Management policy and incident report forms.
- Develop a Clinical Audit Programme and Plan for CWIUH.
- Develop a Quality Improvement Programme for CWIUH.
- Clinical Handover (communication).
- Provide appropriate training and support for staff in all aspects of quality and patient safety (incident management including SARs and the Coronial System, complaints management, quality improvement and Open Disclosure).
- The high volume and on-going increase in SARs is demanding – we are challenged to continue to provide support to service users, staff and reviewers of SAR teams and the conduction and completion of SARs in the context of staff shortages and the enormous workload involved in the process. We endeavour to ensure that we learn from our Serious Incidents and SARs. This workload would be enormously supported by the recruitment of a second Clinical Risk Manager.
- Assess our hospital's compliance with the National Standards for Safer Better Maternity Services (HIQA) including 8 Themes, 44 Standards and 422 Features!
- We are a new team. We have a huge volume of work to do and it is ever-growing! We also have amazing opportunities – our Leadership team are hugely committed to QPS and delivering excellence in the care of women and babies, our QPS team is very committed & capable and most importantly our staff have already embedded a Quality Culture (woman and baby centred, excellence inn everything we do, respect, pride, caring and progressive) in CWIUH!

Thank you to all CWIUH staff for your huge support in our work. We appreciate the staffing challenges you face on a daily basis and hugely acknowledge your support in reporting and managing complaints and clinical incidents, writing reports, conducting audits and quality improvement projects, providing us with the data that we need in order to ensure the hospital's compliance with required quality standards and policies, proactively working with us to support continuous learning and establish priorities for the delivery of an improved service and putting changes in place to improve patients' overall experience of our hospital and our care.

I wish to take this opportunity to acknowledge Ms Susan Kelly for her enormous contribution to the delivery of a high quality safe care to all of our women and infants and wish her all of the very best for her retirement. I also wish to welcome Ms Anna Deasy to our QPS team. Thanks also to Ann Byrne for her continued hard work and dedication to our women and babies on a daily basis.

Academic Midwifery Report

Head of Department

Ms Ann Mac Intyre, *Director of Midwifery & Nursing*

Midwifery Education between the CWIUH and Trinity College Dublin (TCD) continued for both the BScM 4-year Midwifery Programme (pre-registration) and the 18-month Higher Diploma in Midwifery Programme (post registration). At the end of December 2017 we had a total of 67 midwifery students undertaking either one of the two programmes. Our sincere thanks to Dr. Denise Lawlor, Director of Midwifery Programmes and to all the staff at the Department of Nursing & Midwifery in TCD, without whose assistance and guidance the programmes would not be possible. To our Practice Development Team led by Ann Bowers, a very sincere thanks for all the support and guidance given to all the Student Midwives. We must also remember all our wonderful midwives and nurses who support, preceptor and guide our student midwives on their journey to becoming the Midwives of the Future.

The Postgraduate Diploma in Neonatal Intensive Care continued as a joint venture between the three Dublin Maternity Hospitals and the Royal College of Surgeons Ireland. We are indebted to both Dr. Linda Nugent and the coordinator of the programme, Patricia O'Hara for the continued success of this programme which enables nurses and midwives to provide the highest quality of neonatal nursing care in all three tertiary neonatal units..

The Centre of Midwifery Education is now in its 10th year under the direction of Ms Triona Cowman, Director of the CME. Due to excellent collaboration of senior staff from all the three Dublin Maternity Hospitals, another comprehensive programme of in-service training was provided for all nurses and midwives working in the three Dublin maternity Hospitals and the greater Dublin area. Sincere thanks are due to Susanna Byrne, Director of the NMPDU and chair of the Board of Management of the CME, and from whom much support is given in respect of practice development and continuing education.

The 10th Annual Essence of Midwifery Care Conference took place on the 3rd May. Dr. Andrew Simm, Consultant Obstetrician, Nottingham City Hospital, gave the 14th Maureen Mc Cabe lecture entitled "Gentle Caesarean Birth". The feedback from the conference was excellent.

Gold Medal BSC Midwifery
BSc 2011- 2015 - Maebh Ní Shúilleabháin
BSc 2012 -2016 - Emma Feeley

Silver Medals BSC Midwifery
BSc 2011-2015 - Jennifer O'Gorman
BSc 2012- 2016 - Darry Reed

Gold Medal Higher Diploma in Midwifery
Aisling O' Donnell

Silver Medal Higher Diploma in Midwifery
Elaine Small

Dr. T. Healy Awards – Best Overall Clinical Student Midwife
BSc 2011-2015 - Jennifer O'Gorman
BSc 2012- 2016 - Emer Curran
Higher Diploma - Paula Fernandez Esteban

10th Annual Essence of Midwifery Care Conference

08.30-08.50	**Registration/Coffee**	**SPEAKER**
08.50-08.55	**Welcome**	**Ms Ann MacIntyre,** Interim Director of Midwifery and Nursing, CWIUH
08.55-09.00	**Opening Address**	**Dr Sharon Sheehan,** Master/CEO, CWIUH
	Chair: Ms Anitha Selvanayagam CMM3 Out-Patients Services	
09.00-09.20	**Women & Infant's Health Programme**	**Mr Kilian McGrane** Director of National Women and Infants' Health Progranmme
09.20-09.40	**NMBI**	**Ms Dawn Johnston** Director of Midwifery, NMBI
09.40-10.00	**Healthy Ireland**	**Ms Sarah McCormack** National Programme Lead, Healthy Ireland, HSE.
10.00-10-40	**Customised Growth Charts**	**Ms Grainne Milne,** CMM3, **Dr Seosamh O Coligh,** Consultant Obstetrician. Our Lady of Lourdes Hospital Drogheda
10.40-11.00	***Coffee***	***Poster Presentation***
	Chair: To be confirmed	
11.00-11.40	**Investigations into Maternity Services in the UK**	**Ms Sascha Wells**, Director of Midwifery, **Mr David Burch,** Clinical Director, University Hospitals of Morecambe Bay NHS Foundation Trust
11.40-12.20	**Oasis Prevention Bundle**	**Ms Gillian Houghton,** Consultant Midwife, Liverpool Women NHS Foundation Trust
12.20-12.40	**Pelvic Floor Care**	**Ms Ann McCloskey,** Physiotherapist, CWIUH
12.40-13.00	**Urinary Incontinence**	**Ms Eva Fitzsimmons**, CNS, Urodynamics
13.00-14.00	***Lunch***	***Poster Presentation***
14.00-15.00	***The 13th Maureen McCabe Lecture.*** **'Gentle Caesarean Birth'**	**Dr Andrew Simm,** Consultant Obstetrician**,** Nottingham City Hospital**.**
	Chair: Ms Alison Rothwell CNM3	
15.00-15.15	***Midwife's Experience of a Woman Centred (gentle) Approach to Caesarean birth***	**Ms Cliodhna O'Sullivan**, CSF, University Maternity Hospital, Limerick
15.15-15.30	**Service User Experience of Gentle Caesarean Birth**	**Ms Caroline Wynn**
15.30-16.00	**Foundation Toolkit for Family Centred Develop-mental Care (FINE)**	**Ms Mary O'Connor,** CMM2 Neonatal Unit, CWIUH
16.00-16.15	**Closing Remarks & Results of Poster Competition**	**Ms Ann McIntyre** Interim Director of Midwifery and Nursing, CWIUH

Biological Resource Bank (BRB)

Head of Department

Dr Sharon Sheehan, *Master/CEO*

Professor Michael Turner

Staff Complement

Ruth Harley, RM

Muireann Ní Mhurchú, RM

Achievements in 2017

- The Biological Resource Bank worked in close collaboration and under the guidance of Professor Turner in the UCD Centre for Human Reproduction.
- We continue to audit the bloods and freezers to ensure the bloods are frozen correctly and the freezers are running efficiently.
- We work closely with Research Fellows who are undertaking their PhDs or MDs within the UCD Centre for Human Reproduction.
- There were 340 BRB bloods extracted and used by Prof. Cara Martin for a diagnostic test for preterm labour.
- We processed, stored and documented 60 antenatal bloods for Dr. Eimer O Malley, collection is at present ongoing.
- We met with an external company who had an interest in the using the BRB bloods. 18 blood samples were extracted and quality of samples examined, 95% of samples extracted were found to be of high quality.
- We analysed our database and have 1,574 duplicate pregnancy samples.

Opportunities for 2018

- To continue to work alongside Research Fellows within UCD Centre for Human Reproduction.
- Maintain and ensure the BRB bloods are stored correctly and freezers maintain -80 degrees.
- The BRB is a valuable and unique resource that we have in the CWIUH, we look forward to continuing its utilization for research studies that will benefit mothers and babies in the future.

Centre for Midwifery Education (CME)

Head of Department

Triona Cowman

Staff Complement

Triona Cowman, *Director (1 WTE)*

Patricia O'Hara, *Nurse Tutor (1 WTE)*

Liz Greene, *Midwifery Specialist Coordinator (1 WTE) (to March 2017)*

Charmaine Scallan *(1 WTE) (from August 2017)*

Judith Fleming, *Midwifery Specialist Coordinator (19.5hrs)*

Patricia Griffiths, *Secretary (27hrs)*

Key Performance Indicators

- Develop and deliver high quality, evidence based education and training programmes that respond to service needs.
- Appropriate accreditation/approval for all education and training programmes.
- Evidence of evaluation of all existing progrmames.
- Close working relationships with all stakeholders with evidence of Board of Management and Coordinating Group Meetings.
- Cost effective functioning of the CME.

Achievements in 2017

- In 2017 the CME delivered 125 programmes to 1,593 attendees. This includes CWIUH in-service training in CPR, and NRP of which there 51 programmes and 271 attendees. Compared to 2016, there was a 5% decrease in programme attendance. This decrease is attributed to the local in-house training that was prioritised to suport implementation of MN-CMS in the Rotunda and National Maternity Hospital. Attendances from outside the three Dublin Maternity Hospitals remains unchanged from the previous year at 18% (n=286).

Challenges for 2018

- Secure permanent WTE contracts for Midwifery Specialist Coordinators posts to ensure the CME can continue to deliver its remit.

Midwifery & Nursing: Practice Development

Head of Department

Ann Bowers (Acting)

Staff Compliment

1 WTE Practice Development Co-ordinator

3.5 WTE Clinical Placement Co-ordinators

3.5 WTE Clinical Skills Facilitators

(1.5 WTE: Neonatal Unit, 1 WTE: DS & 1 WTE: Ward Areas)

1 WTE Post-Registration Programme Co-ordinator

0.5 WTE Allocations Liaison Officer

1 WTE Research Midwife

Key Performance Indicators

- The development and maintenance of the clinical learning environment for Bachelor of Science (BScM), Higher Diploma in Midwifery (HDIM) Students and Bachelor of Science (BScN) in Nursing Students undertaking clinical placements at the CWIUH.
- Quality assurance in midwifery and nursing practice, including facilitating and performing regular clinical audit, promoting and supporting research and evidence-based practice.
- Practice Development issues in midwifery and nursing, particularly in relation to the autonomous role of the midwife and the promotion of pregnancy and childbirth as a normal healthy life event.
- Liaise with the Centre for Midwifery Education (CME) in the provision of continuing educational needs of existing Midwifery and Nursing staff.
- Collaboration with our affiliated HEIs: TCD & RCSI.
- Promotion and facilitation of Midwives Clinics.

Achievements in 2017

- Continued facilitation of the 4-year BSc in Midwifery (BScM), as well as the 18-month Higher Diploma in Midwifery (HDIM) Programmes in conjunction with Trinity College, Dublin (TCD)
  - 10 HDIM Students continued their training throughout 2017.
  - 11 BScM Students qualified September 2017.
  - 72 BScM Students on clinical placements throughout 2017.
- Continued facilitation and support of BSc Nursing Students on maternity placement from St James's and Tallaght (AMNCH) Hospitals.
- Developed content for and facilitated Clinical Skills Sessions on a weekly basis within the hospital for midwifery students to bridge theory and practice.
- PDD staff were involved in the successful recruitment and induction of over 30 midwives and nurses from abroad.
- Continued to support and guide clinical staff in order to provide an optimal learning environment for midwifery and nursing students.
- Continued to encourage staff to embrace evidence-based care and supporting the ethos of research throughout the hospital.
- Members of the Practice Development Team participate on a number of Committees within the hospital and TCD.
- Facilitation of a Midwives Clinic by the Practice Development Team (650 consultations in 2017).
- The entire Department were involved in the organisation of the annual Essence of Midwifery Care Conference to celebrate International Day of the Midwife in May "Making a Difference in Maternity Care".
- The Water Immersion Study (WIS) continued throughout the year. More staff became confident caring for women choosing to use water immersion for labour and birth.
- We celebrated 100 water births in April 2017. Women who had a water birth were invited back, with their water baby and partner to a celebration. Staff from the Coombe also attended.
- Further funding secured to enhance and promote a culture of Midwifery Research within the CWIUH.
- We welcomed new members of staff to the department: Ms Arathi Noronha (HDIM Clinical Co-ordinator) and Ms Joy Geraghty (CSF).

Challenges for 2018

- Contribute to the recruitment and retention of staff and students for CWIUH.
- Work with clinical staff, management, TCD and students to ensure that the CWIUH is a quality and enjoyable learning environment for midwifery and nursing students.
- Continue to meet the clinical learning needs of mid-

wifery and nursing students while on placement in the CWIUH.

- Continue to promote a positive and safe culture for students to learn and develop.
- Continue to support and assist midwifery and nursing staff involved in clinical teaching and preceptorship of midwifery and nursing students.
- Continue to support newly qualified midwives and nurses and midwives new to the CWIUH.
- Continue to promote the midwifery philosophy of "pregnancy, labour, birth and the postnatal period as healthy and profound experiences in women's lives" (Nursing and Midwifery Board of Ireland, 2015).
- To develop and ensure ratification of guidelines, particularly guidelines promoting spontaneous vaginal births, in an attempt to reduce intervention and improve spontaneous vaginal birth rates.
- Continue to promote midwifery as a career pathway for RGNs.
- Continue to facilitate midwifery and nursing educational programmes and updates in collaboration with the CME.
- Strengthen the Midwifery Research agenda within the CWIUH.
- Continue to promote, increase attendance at and facilitation of midwives clinics.
- To promote and support a positive culture of audit, research, professional development and education among midwifery and nursing staff in order to deliver safe, effective, evidence-based care to women and babies attending the CWIUH.

The PDD team would like to thank all midwives and nurses who have worked with students and new staff throughout 2017.

Postgraduate Medical Training – Anaesthesia

Head of Department

Dr Terry Tan

Postgraduate Tutor

Dr Sabrina Hoesni

The department continues to place a strong emphasis on facilitating learning and training. 9 specialist anaesthesia trainees from the national training scheme rotated through the department fulfilling their obstetric anaesthesia training requirement.

The formal educational component consists of:

- An Introduction to Obstetric Anaesthesia course delivered by senior staff
- College of Anaesthetists exam preparation
- Departmental CEPD schedule, which includes obstetric and non-obstetric related topics
- Departmental morbidity meetings/case-based discussions meetings
- Multi-disciplinary morbidity/case based meetings

The focus in 2018 will be the implementation of the new Special Interest year in Obstetric Anaesthesia fellow, and post CSST fellow training positions. These positions will include training modules such as:

- Working as part of a multidisciplinary Fetal-Maternal medicine team providing care to high risk parturients
- Active role in clinical governance/risk management of the department – this includes overseeing all audit and quality improvement projects
- Management of obstetrical pain
- Service evaluation projects
- Clinical research

Postgraduate Medical Training – Obstetrics & Gynaecology

Head of Department

Dr Nadine Farah

I would like to acknowledge Dr Brendan Mc Donnell in co-ordinating rosters during the period from January to July 2017 and Dr Azy Khalid in co-ordinating rosters during the period July to December 2017.

Key Performance Indicators

All Doctors in training are assigned to a team and a named trainer.

- January to July we had 5 SPRs, 5 Registrars, 4 Junior Registrars and 12 SHOs.
- August to December we had 9 SPRs, 2 Registrars, 4 Junior Registrars and 10 SHOs.

- We also have within our NCHD staff complement:
    - The Bernard Stuart Research Fellow
    - A UCD and a TCD lecturer
    - Clinical Fellow in Early Pregnancy Scanning
    - International Fellow in Urogynaecology
    - International Fellow in Maternal Medicine
- All Doctors in training (BST level) are prospectively allocated to a two year BST rotation with at least one year in the CWIUH and all BST 3 rotations spend at least 8 months in the CWIUH.
- Two Special Skills modules in Gynaecological surgery one rotating with six months in St James's Hospital and the other rotating with six months in Tallaght Hospital.

Challenges for 2018

- Maximisation of training opportunities in the context of the EWTD in view of reduced training time and increased staff complement.

Postgraduate Medical Training – Paediatric Medicine

Head of Department

Dr John Kelleher

Medical Training in Paediatric Medicine in 2017

Nine Specialist Registrars in Paediatrics rotated through the Department of Paediatrics & Newborn Medicine in 2017 in addition to a Higher Specialist Trainee Registrar in Neonatology. Each Specialist Registrar completed 6 months of a 12-month rotation, posts are July to July. The Specialist Registrars are encouraged to undertake specific research projects and participate in audits. Senior House Officers on the Basic Specialty Training Scheme also rotate through the Department. The Department of Paediatrics & Newborn Medicine is a tertiary level Neonatology Centre offering experience in intensive care as well as neonatal transport. Neonatal training is a core component of the Specialist Registrar Programme in General Paediatrics. In 2017 the CWIUH Department of Paediatrics welcomed our first ever Higher Specialist Trainee Registrar in Neonatology Dr David Staunton. Dr Staunton completed a 12 month rotation in neonatology over the years 2017 – 2018 as part of his planned future career as a consultant neonatologist.

The Neonatal Resuscitation Programme was coordinated by Ms Margaret Moynihan and Advanced Neonatal Nurse practitioner Ms Anne O'Sulllivan, with large numbers of candidates completing the NRP programme. The Hospital was also closely involved in the STABLE Neonatal Transport training programme under the guidance of our Consultant Neonatologist in Transport Medicine, Dr. Jan Franta.

Postgraduate Medical Training – Pathology

Head of Department

Professor John O'Leary

CervicalCheck Cytopathology Training School

The training school is based at the Coombe Women and Infants University Hospital, Dublin. The Training Centre provides education for Medical Scientists, Pathologists, Colposcopy nurses and Colposcopists working in the area of cervical screening. The training provided covers all areas including: screening, health economics, cytopathology, histopathology, HPV testing, molecular biology and pathology, colposcopy and gynae-oncology. Research is also central to the mission of the training school and researchers associated with the school are among world leaders in the area of HPV biology, cytopathology, molecular and HPV testing. Research work is aimed at informing the CervicalCheck programme.

123 people have been trained in the training school to date and 2 new accredited courses are being launched Q3 2018:

- Advanced Practitioner course for existing Medical Scientist working in cytopathology.
- New entrant Medical Scientists to be trained in Molecular cytopathology.

SpR in Histopathology

The hospital hosts one SpR every 6 months in Histopathology, Cytopathology, Morbid Anatomy and Molecular Pathology. Trainees gain wide experience in all the above areas of Pathology and encouraged to carry out basic scientific research and audit.

Trinity College Dublin, Academic Department of Obstetrics & Gynaecology

Head of Department

Prof Deirdre J Murphy

Support/Administrative Staff

Ms Cristina Boccardo, *Senior Executive Officer*

Academic Staff

Deirdre J Murphy, *Professor*, *Head of Department*, *Consultant in Obstetrics*

Richard Deane, *Associate Professor*, *Consultant Obstetrics & Gynaecology*

Sean Daly, *Clinical Professor*, *Consultant Obstetrics & Gynaecology*

Oxana Hughes, *Clinical Lecturer*, *Obstetrics & Gynaecology*

Zibi Marchocki, *Clinical Lecturer*, *Obstetrics & Gynaecology*

Rebecca Conlan-Trant, *Clinical Tutor / Research Fellow*

Clare Dunney, *Research Midwife / TCD Tutor*

Noreen Gleeson, *Honorary Senior Lecturer*, *Consultant Gynaecology*

Tom D'Arcy, *Honorary Senior Lecturer*, *Consultant Obstetrics & Gynaecology*

Gunther von Bunau, *Hon Lecturer*, *Consultant Obstetrics & Gynaecology*

Mary Anglim, *Hon Lecturer*, *Consultant Obstetrics & Gynaecology*

Cliona Murphy, *Hon lecturer*, *Consultant Obstetrics & Gynaecology*

Mona Joyce, *Special Lecturer*, *Consultant Gynaecology*

Grant income to 2017

- HRB Mother & Baby Clinical Trials Network 2016-2020; €2.4 Million, Co-Principal Investigators D Murphy (obstetrics) & E Molloy (neonatology).
- HRB Primary Care Research Centre (RCSI/TCD) €4 Million, Co-investigator D Murphy.

Achievements in 2017

- Invited plenary addresses at International & National meetings:
  - Prof D Murphy. Manual rotation for Operative Vaginal Delivery. Invited Plenary, British Maternal Fetal Medicine Society Annual Conference, Amsterdam, March 2017.
  - Prof D Murphy. Caesarean section, A time for Reflection. Perinatal advances Conference. Invited Plenary, Prague, Czech Republic, September 2017.
  - Prof D Murphy. Labour – the final frontier. Invited Plenary, Irish Perinatal Society Annual meeting, October 2016.
- Invited International Assessor:
- Prof D Murphy, Chair, Academy of Finland Health Research Awards.
- Prof D Murphy, NIHR Biomedical Research Centre Core Funding awards (Budget £800 Million).
- Peer-review publications in high impact journals and textbooks.

Publications, Presentations & Grants in 2017

TCD Academic Staff

Original Publications in Peer-Review Journals

1. Impey LWM, Murphy DJ, Griffiths M, Penna LK on behalf of the Royal College of Obstetricians and Gynaecologists. Management of Breech Presentation. BJOG 2017; DOI: 10.1111/1471-0528.13365.
2. Impey LWM, Murphy DJ, Griffiths M, Penna LK on behalf of the Royal College of Obstetricians and Gynaecologists. External Cephalic Version and Reducing the Incidence of Term Breech Presentation. BJOG 2017; DOI: 10.1111/1471-0528.14466.
3. Mahmood UT, O'Gorman C, Marchocki Z, O'Brien Y, Murphy DJ. Fetal scalp stimulation (FSS) versus fetal blood sampling (FBS) for women with abnormal fetal heart rate monitoring in labor: a prospective cohort study. J Matern Fet Neonatal Med 2017;DOI: 10.1080/14767058.2017.1326900
4. Levine TA, Grunau RE, Seguardo R, Daly S, et al. Pregnancy-specific stress, fetoplacental haemodynamics and neonatal outcomes in women with SGA pregnancies; secondary analysis of the PORTO trial. BMJ Open 2017 ;7(6):e015326.
5. Burke N, Burke G, Breathnach F, Daly S, et al. Prediction of caesarean delivery in the term nulliparous woman: results from the prospective multicentre Genesis study. AJOG 2017: 216(6):e11.
6. Hehir MP, Breathnach FM, Hogan JL, Daly et al. Prenatal prediction of significant intertwine birthweight discordance using standard second and third trimester sonographic parameers. Acta Obstet

Gynecol Scand 2017; 96(4): 472-478.

7. Monteith C, Flood K, Mullers S, Daly S et al. Evaluation of cerebro-placental ratio as a potential predictor for adverse outcome in SGA foetuses. AJOG 2017; 216(3): e6.

International Textbooks

8. Murphy DJ. Assisted Vaginal Delivery. In High Risk Pregnancy: Management Options. Cambridge University Press, 2017.
9. Murphy DJ. Malpresentation, malposition and cephalopelvic disproportion. In Oxford Textbook of Obstetrics & Gynaecology. Ed S Arulkumaran. Oxford University Press, 2017.
10. Murphy DJ. Labour: Normal and Abnormal Labour. In Obstetrics by Ten Teachers. 20th Edition. Eds Kenny & Myers, CRC Press, Taylor & Francis Group, London 2017.
11. Murphy DJ. Operative Delivery. In Obstetrics by Ten Teachers. 20th Edition. Eds Kenny & Myers, CRC Press, Taylor & Francis Group, London 2017.

UCD Centre for Human Reproduction

Head of Department

Professor Michael Turner

Staff Complement

Professor Michael Turner – *Professor of Obstetrics and Gynaecology*

Ms Laura Bowes – *Administrator*

Dr Niamh Daly - *Clinical Lecturer (From July 2014 - June 2017)*

Dr Eimer O'Malley – *Clinical Lecturer (From July 2017- to date)*

Professor Mairead Kennelly - *Consultant in Obstetrics and Gynaecology*

Professor Jan Miletin - *Consultant Neonatologist*

Professor Chris Fitzpatrick –*Consultant in Obstetrics and Gynaecology*

Professor Michael Carey – *Consultant Anaesthetist*

Professor Aisling Martin - *Consultant in Obstetrics and Gynaecology*

Professor Nadine Farah - *Consultant in Obstetrics and Gynaecology*

Professor Tom D'Arcy - *Consultant in Obstetrics and Gynaecology*

Professor Anne Doolan - *Consultant Neonatologist*

Research Fellows

Ms Shona Cawley (PhD)

Dr Niamh Daly (PhD)

Dr Maria Farren (MD)

Ms Rachel Kennedy (PhD)

Dr Eimer O'Malley (MD)

Ms Ciara Reynolds (PhD)

Established in 2007, the UCD Centre for Human Reproduction at the Coombe Women and Infants University Hospital was recognised in 2015 by the Academic Council as one of the university's designated research centres. The Director is Professor Michael Turner and the Centre's Advisory Board include: Dr Brendan Egan, Prof Chris Fitzpatrick, Prof Mairead Kennelly, Prof Richard Layte, Prof Aisling Martin, Prof Jan Miletin, Prof Ann Molloy and Prof Carel le Roux.

The main research focus of the Centre is on modifiable pregnancy risk factors including maternal obesity, gestational diabetes mellitus, aberrant fetal growth, poor maternal diet, inadequate folic acid supplementation, cigarette smoking, infection and physical inactivity. Since 2010, Professor Turner has served as the National Lead for the HSE Clinical Programme in Obstetrics and Gynaecology and, as a result, the Centre has also provided leadership on maternity services implementation science projects.

Research

1. Dr Maria Farren completed her randomised control trial which showed that in women with a family history of diabetes mellitus a pseudovitamin, Inisotol, taken orally from early pregnancy did not decrease the number of women who developed Gestational Diabetes Mellitus. This study was published in Diabetes Care. It is an important finding clinically because Inisotol is expensive and it means that resources will not be wasted on an ineffective, expensive intervention. Dr Farren was funded by the Professor Bernard Stuart Scholarship and awarded her MD in 2017.
2. Dr Patrick Maguire completed his prospective observational clinical studies on the development of a customised Sepsis Six Box for the Irish Maternity Early Warning System (IMEWS). He also completed an audit of the IMEWS in the setting of a High Dependency Unit and studies on the role of biomarkers in the management of infection in the pregnant woman. This work led to two national reports for the HSE and was incorporated into the first NCEC guideline in obstetrics. Dr Maguire submitted his MD in 2017.
3. Using the hospital's computerised database, Dr Aoife McKeating completed her review of periconceptual Folic Acid supplementation in women who delivered a baby in the Coombe in the years 2009-13 inclusive. In particular, she focused on supplementation in obese women. Dr McKeating's papers have been cited in the first National Maternity Strategy Report and have contributed to the public health review of folic acid supplementation policies currently underway. Dr McKeating was funded by the HSE Crisis Pregnancy Programme and awarded her PhD in 2017.
4. Ms Laura Mullaney completed recruitment to a prospective observational study examining the relationship between maternal nutrition and both birth weight and body composition trajectories between early pregnancy and nine months postpartum. This research provides important new data on dietary intakes in early pregnancy and will help in the design of future intervention studies. Ms Mullaney was awarded her PhD in 2017.
5. Funded by Safefood, Ms Shona Cawley undertook a prospective observational study of periconceptual

folic acid supplementation, dietary folate and maternal blood folates in women booking for antenatal care. Ms Cawley's work has already been cited in the National Maternity Strategy Report and has been cited by national policies for the prevention of NTDs. Ms Cawley was awarded her PhD in 2017.

6. Dr Niamh Daly was funded, in part, by Friends of the Coombe and completed an RCT evaluating an intensive medically supervised exercise intervention during pregnancy in obese women. As part of her study, Dr Daly conducted pioneering work on the preanalytical management of maternal plasma glucose measurements and has completed a national audit on the laboratory standards for Oral Glucose Tolerance Testing. This work has won several national and international awards and has resulted in high impact publications. Dr Daly submitted her PhD in 2017. Dr Daly also represented the speciality of obstetrics and gynaecology on the RCPI policy group on physical activity.
7. Ms Ciara Reynolds is conducting a RCT evaluating a customised smartapp to help women stop smoking during pregnancy. Ms Reynolds is planning to submit her PhD in 2018. This review will inform forthcoming HSE National Guidelines on smoking cessation.
8. Ms Rachel Kennedy is conducting a RCT evaluating a customised smartapp to improve the dietary quality of women in early pregnancy. Ms Kennedy is planning to submit her PhD in 2018.
9. Dr Eimer O'Malley has commenced her MD which is examining the association between plasma glucose and other biomarkers and birth weight. She has also, in addition, continuing the work on folate B12 and red blood cell folate.
10. Professor Turner continued his collaborative work with HSE Project Manager Dr Lean McMahon in developing and implementing the Irish Maternity Indicator System (IMIS) for hospital performance measurement, and with HSE Project Manager Dr Karen Power in developing NCEC guidelines for risk stratification in pregnancy. He also chaired the Department of Health Policy Group on Folic Acid for the prevention of Neural Tube Defects. During the year Professor Turner was also asked to serve as a Member of the HSE National Guideline Group on Smoking Cessation which has been commissioned by the National Clinical Effectiveness Committee.

List of Grants received in 2017

Title: CICER/HIQA (Collaborator)

Start/End Dates: 2017 to date

Funder: HRB

Amount: €2,500,000.00

Title: Folate Status in pregnant women: current situation on the island of Ireland

Start/End Dates: Feb 2015 – March 2017

Funder: Safefood

Amount: €171,337.00

Title: Behavioural intervention to promote smoking cessation in pregnancy

Start/End Dates: June 2015-September 2018

Funder: Friends of the Coombe

Amount: Circa €50,000.00

Title: Development of a smartapp to improve healthy eating in pregnancy

Start/End Dates: Jan 2015-April 2018

Funder: Dublin Institute of Technology

Amount: Circa €50,000.00

Title: Evaluation of IMEWS

Start/End Dates: 2015-16

Funder: Health Services Executive

Amount: Circa €100,000.00

Title: Building research capacity in the Maternal health And Maternal Morbidity in Ireland study: Second baby follow-up, Intervention development and testing, and Measurement of costs (MAMMI-SIM)

Start/End Dates: Oct 2016 (duration approx 40 months)

Funder: Health Research Board

Amount: €869,272.00

Prizes and Awards

Dr Niamh Daly et al, William Stokes Award for A Medically Supervised Pregnancy Exercise Intervention in Obese Women: A Randomised Controlled Trial

Dr Niamh Daly et al, Commendation for "Best patient lifestyle education project of the year". Irish Healthcare Awards 2017.

Academic Publications 2017

1. McCartney DMA, Byrne DG, Cantwell MM, Turner MJ. Cancer incidence in Ireland - the possible role of diet, nutrition, and lifestyle.
   J Pub Health 2017;25:197-213.

2. O'Higgins AC, O'Dwyer V, O'Connor C, Daly SF, Kinsley BT, Turner MJ.
   Postpartum dyslipidaemia in women diagnosed with gestational diabetes mellitus.
   Ir J Med Sci 2017;186:403-407. PMID: 27401735

3. Cawley S, Mullaney L, Kennedy R, O'Higgins AC, McCartney D, Turner MJ.
   Duration of periconceptional folic acid supplementation in women booking for antenatal care.
   Public Health Nutr 2017;20:371-379. PMID: 27702424

4. Allen-Walker V, Mullaney L, Turner MJ, Woodside JV, Holmes VA, McCartney DM, McKinley MC.
   How do women feel about being weighed during pregnancy? A qualitative exploration of the opinions and experiences of postnatal women.
   Midwifery 2017;49:95-101. PMID:28063622

5. Kennedy RAK, Mullaney L, Reynolds CME, Cawley S, McCartney D, Turner MJ.
   Preferences of women for web-based nutritional information in pregnancy.
   Public Health 2017;143:71-77. PMID:28159029

6. McKeating A, Turner MJ
   Prevention of Neural Tube Defects in Ireland (Editorial)
   Ir Med J 2017;110:577.

7. Anglim B, Farah N, O'Connor C, Daly N, Kennelly MM, Turner MJ.
   The relationship between maternal body composition in early pregnancy and foetal mid-thigh soft-tissue thickness in the third trimester in a high-risk obstetric population.
   J Obstet Gynaecol 2017;37:591-594. PMID:28366035

8. Cawley S, Farrell S, Byrne DG, Turner MJ, Clune B, McCartney D.
   Pilot evaluation of an online weight management programme.
   Ir Med J 2017;110:496. PMID:28657274

9. Farren M, DalyN, McKeating A, Kinsley B, Turner MJ, Daly S.
   The prevention of Gestational Diabetes Mellitus with antenatal oral inositol supplementation: a randomized controlled trial.
   Diabetes Care 2017;40:759-63. PMID:28325784

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A longitudinal study of haemoglobin in pregnancy in contemporary practice.
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Haemoglobin and dietary and supplemental intakes in pregnancy
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The relationship between body composition measured using advanced bioelectrical impedence analysis (BIA) and maternal BMI and weight trajectories
Junior Obstetrics and Gynaecology Society, ICOGPM, Lyrath Hotel, Kilkenny, December 2017

Achievements in 2017

- Maintaining research outputs for modifiable risk factors in pregnancy and maternity services quality improvements.
- Translating research output into National Healthcare Policies.

Challenges for 2018

- Improved teaching facilities.
- Application for maintaining recognition of the Centre by the Academic Council as a university research centre.

Hygiene Services

Head of Department

Vivienne Gillen, *Hygiene Services Manager*

Staff Complement

Household and Support Services Manager
2.2 WTE Assistant Supervisors
38.8 WTE Cleaners

Key Performance Indicators

- Hygiene Audits carried out by Ward Managers, Household Supervisors and Hospital Management.
- Waste Segregation and Recycling.
- Compliments and Complaints.

Overall Auditing	**90%**
Environmental Auditing	**92%**
Recycling Figure	**74%**

Waste Management:

- Total waste generated by Hospital in 2017 was 490 tonnes.
- Recycling figure has improved to 74%

Achievements in 2017

- Conclusion of cleaning review following lengthy negotiations. This review will result in a more efficient department with uniform allocation of duties.
- It will also result in the introduction of 24 hour cleaning in the Delivery Suite and NICU.
- Introduction of multi-task attendant night posts x 2, giving greater cleaning ability and flexibility to the night staff.
- Upgraded washing machine purchased for the laundry, allowing more efficiency.
- Plasma-Air machines x 3 installed which purify air in CSSD Department. These are mobile and can be used in areas of infection outbreaks.
- Introduction of the Medical Audits electronic auditing system to all management / wards and departments giving greater reporting ability.
- CSSD – repair to ceiling and new filtration unit installed. Automated doors installed.
- Baby Clinic given complete refurbishment.
- Maintained sick leave at 4.3%.
- Continuous upgrading of hand hygiene sinks during refurbishment programmes.

Challenges for 2018

- To maintain and improve on current hygiene practices across the campus.
- To identify and implement best available technologies to all aspects of Hygiene.
- To reduce the sick leave figure to 3.5%, in line with HSE requirements.
- Expand on the Medical Audits system with more programmes available.

Information Technology Department

Head of Department

Tadhg O'Sullivan, *IT Manager*

Staff Complement

Ms Emma McNamee, *Systems Administrator*
Mr Eamonn Sheridan, *Technical Support Officer*
Ms Carol Cloonan, *Technical Support Officer*
Mr Paul Barron, *Technical Support Officer (Fixed Term Contract)*
Ms Anne Clarke, *IT Midwife (0.5 WTE job-sharing)*

Key Performance Indicators

- Providing a high level of service to internal and external users of IT services.
- Providing high availability of equipment and services.
- Ongoing integration of systems and services.
- Ongoing provision of an effective statistical information service.

Achievements in 2017

- Ongoing maintenance of core operational and technical environment.
- Implementation of local and national ICT projects, including a new Digital Dictation system.
- Upgrade of core data storage (SAN) and Virtualisation infrastructure.

Challenges for 2018

- Increase in the level of complexity and demand for IT services, both internally and externally.
- Ongoing involvement in national ICT clinical and infrastructure projects, in particular preparatory work for MNCMS (Maternal & Newborn Clinical Management System).
- Upgrade of iPM (Hospital Information System).

Friends of the Coombe

Head of Department

Ms Ailbhe Gilvarry, *Chair*

Staff Complement

Liz Burke

Friends of the Coombe is deeply indebted to the many individuals and families who have tirelessly fundraised in aid of the charity. Their support is critical to the ability of Friends of the Coombe to fund projects which further the development of the Coombe Women & Infants University Hospital and its philosophy of family-centred care.

During 2017, Friends of the Coombe was accepted as a member of the Medical Research Charities Group, underpinning the charity's commitment to supporting research that relates to the care of women and babies at the Coombe Women & Infants University Hospital and further afield within the priority areas of health promotion; the drivers of high-quality, safe care and better patient outcomes; improvements in the delivery of care; and innovations in women and infants healthcare.

Examples of the support provided during 2017

- Neonatal Unit Assistance: Ongoing accommodation support for parents and staff attendance at key teaching and training conferences.
- Support for the voluntary Neonatal Support Group.
- Purchase of Cuddle Cots for use by bereaved parents.
- Research funding to facilitate The STOP project: Smoking cessation through optimisation of clinical care in pregnancy, a study being carried out by clinicians at the Coombe Women & Infants University Hospital.

Opportunities for 2018

- A one-year partnership with the annual Galway Cycle to raise funds to help the Coombe Women & Infants University Hospital develop hospice-style bereavement suites to create a family-friendly home away from home for bereaved parents. Our sincere thanks go to the Galway Cycle and its committee members for choosing Friends of the Coombe as their 2018 charity partner and for their commitment to helping us reach our target.
- Further engagement with the hospital and its departments in relation to equipment, education and research requirements.
- Continue to raise awareness.
- Build and protect reputation.
- Demonstrate need and highlight impact.

Appendix III

Outline History of the Coombe Women and Infants University Hospital

1770 Foundation stone laid on 10th October by Lord Brabazon for new general hospital in the Coombe.

1771 Hospital opened in the Coombe known as "The Meath Hospital and County Dublin Infirmary".

1822 Meath Hospital transferred to Heytesbury Street to a site known as "Dean Swift's Vineyard".

1823 Old Meath Hospital bought by Dr. John Kirby and opened in October under the name of "The Coombe Hospital".

1826 Maternity service founded in The Coombe Hospital by Mrs. Margaret Boyle.

1829 Hospital bought from Dr. John Kirby and opened on February 3rd as "The Coombe Lying-in Hospital".

1835 Dublin Ophthalmic Infirmary established in outpatient department (until 1849).

1839 Gynaecology ward opened in hospital.

1867 Royal Charter of Incorporation granted to the Coombe Lying-in Hospital on November 15th.

1872 Due to the benevolence of the Guinness family, a new wing, including gynaecology beds, known as "The Guinness Dispensary" opened on April 24th.

1877 Coombe Lying-in Hospital rebuilt and reopened by the Duke and Duchess of Marlborough on May 12th.

1903 Weir Wing in hospital opened.

1911 Pembroke dispensary for outpatient care of children opened July 6th.

1926 Hospital centenary celebrated by first international medical congress to be held in Dublin.

1964 Foundation stone laid for new Hospital in Dolphin's Barn on May 14th by Minister for Health, Mr. McEntee.

1967 New Coombe Lying-in Hospital opened on July 15th.

1976 Celebration of the 150th birthday of Hospital held in October.

1987 Maternity service in St. James's Hospital transferred to Coombe Lying-in Hospital on October 1st.

1993 Hospital renamed the ‘Coombe Women's Hospital’ on December 8th.

1995 UCD Department of General Practice opened in February.

2001 175th Anniversary of the Coombe Women’s Hospital.

2008 Hospital renamed ‘Coombe Women & Infants University Hospital’ on January 1st.

2013 First Female Master took up position.

2017 Celebration of the Golden Jubilee of the “new” Coombe Hospital on the current site.

Appendix

Masters of the Coombe Lying-in Hospital/Coombe Women's Hospital/Coombe Women & Infants University Hospital

Richard Reed Gregory	1829 - 1831
Thomas McKeever	1832 - 1834
Hugh Richard Carmichael	1835 - 1841
Robert Francis Power	1835 - 1840
William Jameson	1840 - 1841
Michael O'Keeffe	1841 - 1845
John Ringland	1841 - 1876
Henry William Cole	1841 - 1847
James Hewitt Sawyer	1845 - 1880
George Hugh Kidd	1887 - 1893
Samuel Robert Mason	1894 - 1900
Thomas George Stevens	1901 - 1907
Michael Joseph Gibson	1908 - 1914
Robert Ambrose MacLaverty	1915 - 1921
Louis Laurence Cassidy	1922 - 1928
Timothy Maurice Healy	1929 - 1935
Robert Mulhall Corbet	1936 - 1942
Edward Aloysius Keelan	1943 - 1949
John Kevin Feeney	1950 - 1956
James Joseph Stuart	1957 - 1963
William Gavin	1964 - 1970
James Clinch	1971 - 1977
Niall Duignan	1978 - 1984
John E. Drumm	1985 - 1991
Michael J. Turner	1992 - 1998
Sean F. Daly	1999 - 2005
Chris Fitzpatrick	2006 - 2012
Sharon Sheehan	2013 - present

Appendix

Matrons & Directors of Midwifery & Nursing at Coombe Women & Infants University Hospital

Over a period of 151 years since the granting of the Royal Charter of Incorporation to the Coombe Lying In Hospital in 1867, there have been 16 Matrons or Directors of Midwifery & Nursing (DoM&N) as follows;

Mrs Watters	Matron	1864 – 1874
Kate Wilson	Matron	1874 – 1886
Mrs Saul	Matron	1886 – 1886
Mrs O'Brien	Matron	1886 – 1887
Mrs Allingham	Matron	1887 – 1889
Annie Hogan	Matron	1889 – 1892
Annie Fearon	Matron	1892 – 1893
Hester Egan	Matron	1893 – 1909
Eileen Joy	Matron	1909 – 1914
Genevieve O'Carroll	Matron	1914 – 1951
Nancy Conroy	Matron	1952 – 1953
Margaret (Rita) Kelly	Matron	1954 – 1982
Ita O'Dwyer	DoM&N	1982 – 2005
Mary O'Donoghue	DoM&N – Acting	2005 – 2006
Patricia Hughes	DoM&N	2007 – August 2016
Ann Mac Intyre	DoM&N	August 2016 - Present

Appendix

Guinness Lectures

1969 The Changing Face of Obstetrics
Professor T.N.A. Jeffcoate, University of Liverpool

1970 British Perinatal Survey
Professor N. Butler, University of Bristol

1971 How Many Children?
Sir Dougald Baird, University of Aberdeen

1972 The Immunological Relationship between Mother and Fetus
Professor C.S. Janeway, Boston

1973 Not One but Two
Professor F. Geldenhuys, University of Pretoria

1978 The Obstetrician/Gynaecologist and Diseases of the Breast
Professor Keith P. Russell, University of Southern California School of Medicine

1979 Preterm Birth and the Developing Brain
Dr. J. S. Wigglesworth, Institute of Child Health, University of London

1980 The Obstetrician a Biologist or a Sociologist?
Professor James Scott, University of Leeds

1981 The New Obstetrics or Preventative Paediatrics?
Dr. J. K. Brown, Royal Hospital for Sick Children, Edinburgh

1982 Ovarian Cancer
Dr. J. A. Jordan, University of Birmingham

1983 The Uses and Abuses of Perinatal Mortality Statistics
Professor G.V.P. Chamberlain, St. George's Hospital Medical School, London

1984 Ethics of Assisted Reproduction
Professor M. C. McNaughton, President, Royal College of Obstetricians and Gynaecologists

1985 Magnetic Resonance Imaging in Obstetrics and Gynaecology
Professor E. M. Symonds, University of Nottingham

1986 Why Urodynamics?
Mr. S. L. Stanton, St. George's Hospital Medical School, London

1987 Intrapartum Events and Neurological Outcome
Dr. K. B. Nelson, Department of Health & Human Services, National Institute of Health, Maryland

1988 Anaesthesia and Maternal Mortality
Dr. Donald D. Moir, Queen Mothers Hospital, Glasgow

1989 New approaches to the management of severe intrauterine growth retardation
Professor Stuart Campbell, Kings College School of Medicine & Dentistry, London

1990 Uterine Haemostasis
Professor Brian Sheppard, Department of Obstetrics and Gynaecology, Trinity College, Dublin

1991 Aspects of Caesarean Section and Modern Obstetric Care
Professor Ingemar Ingemarsson, University of Lund

1992 Perinatal Trials and Tribulations
Professor Richard Lilford, University of Leeds

1993 Diabetes Mellitus in Pregnancy
Professor Richard Beard, St. Mary's Hospital, London

1994 Controversies in Multiple Pregnancies
Dr Mary E D'Alton, New England Medical Center, Boston

1995 The New Woman
Professor James Drife, University of Leeds

1996 The Coombe Women's Hospital and the Cochrane Collaboration
Dr Iain Chalmers, the UK Cochrane Centre, Oxford

1997 The Pathogenesis of Endometriosis
Professor Eric J Thomas, University of Southampton

1998 A Flux of the Reds - Placenta Prevail Then & Now
Professor Thomas Basket, Nova Scotia

1999 Lessons Learned from First Trimester Prenatal Diagnosis
Professor Ronald J Wagner, Jefferson Medical College, Philadelphia

2000 The Timing of Fetal Brain Damage: The Role of Fetal Heart Rate Monitoring
Professor Jeffrey P Phelan, Childbirth Injury Prevention Foundation, Pasadena, California

2001 The Decline & Fall of Evidence Based Medicine
Dr John M Grant, Editor of the British Journal of Obstetrics & Gynaecology

2002 Caesarean Section: A Report of the U.K. Audit and its Implications
Professor J.J Walker, St James's Hospital, Leeds

2003 The 20th Century Plague: it's Effect on Obstetric Practice
Professor Mary-Jo O'Sullivan University of Miami School of Medicine, Florida

2004 Connolly, Shaw and Skrabanek - Irish Influences on an English Gynaecologist
Professor Patrick Walker, Royal Free Hospital, London

2005 Careers and Babies: Which Should Come First?
Dr Susan Bewley, Clinical Director for Women's Health, Guys & St Thomas NHS Trust, London

2006 Retinopathy of Prematurity from the Intensive Care Nursery to the Laboratory and Back
Professor Neil McIntosh, Professor of Child Life and Health, Edinburgh, Vice President Science, Research & Clinical Effectiveness, RCPCH, London

2007 Schools, Skills & Synapses
Professor James J. Heckman, Nobel Laureate in Economic Sciences
Henry Schultz Distinguished Service Professor of Economics, University of Chicago, Professor of Science & Society, University College Dublin

2008 Cervical Length Screening For Prevention of Preterm Birth
Professor Vincenzo Berghella, MD, Director of Maternal-Fetal Medicine, Thomas Jefferson University, Philadelphia

2009 Advanced Laparoscopic Surgery: The Simple Truth
Professor Harry Reich, Wilkes Barre Hospital, Pennsylvania; Past President of the International Society of Gynaecologic Endoscopy (ISGE)

2010 Magnesium – The Once and Future Ion
Professor Mike James, Professor and Head of Anaesthesia
The Groote Schuur Hospital, University of Capetown

2011 Pre-eclampsia: Pathogenesis of a Complex Disease
Professor Chris Redman, Emeritus Professor of Obstetric Medicine, Nuffield
Department of Obstetrics and Gynaecology, University of Oxford

2012 Non-invasive prenatal diagnosis: from Down syndrome detection to fetal whole genome sequencing
Professor Dennis Lo, Director of the Li Ka Shing Institute of Health Sciences, Department of Chemical Pathology, Prince Of Wales Hospital, Hong Kong

2013 A procedural approach to perceived inappropriate requests for Medical Treatment. Lessons from the USA.
Prof Geoffrey Miller, Professor of Pediatrics and of Neurology; Clinical Director Yale Pediatric Neurology, Co-Director Yale/MDA Pediatric Neuromuscular Clinic Yale Program for Biomedical Ethics

2014 "THE CHANGE", Highlighting the change in diagnosis and management in the past thirty years
Prof C.N. Purandare, MD,MA Obst.(IRL), DGO, DFP, DOBST.RCPI(Dublin),FRCOG(UK), FRCPI (Ireland), FACOG (USA), FAMS, FICOG, FICMCH, PGD MLS(Law), Consultant,Obstetrician & Gynecologist
President Elect FIGO

2015 Why you shouldn't believe what you read in medical journals
Dr Fiona Godlee, Editor in Chief, British Medical Journal

2016 'We are such stuff as dreams are made on': Imagination & Revolution – the Epiphany of a Photograph
Professor Chris Fitzpatrick, Consultant Obstetrician & Gynaecologist CWIUH, Clinical Professor UCD School of Medicine

2017 *'Women; the journey is far from over'*
Professor James Dornan, MD (Hons) FRCOG FRCPI, Chair Health & Life Sciences UU
Emeritus Chair Fetal Medicine QUB

Appendix V

Winner of the Dr James Clinch Prize for Audit 2017

Dr Robert McGrath, Neonatology Registrar

"Capillary blood gas analysis following low umbilical cord pH – A Completed Audit Cycle"

Introduction

While working as a Senior House Officer in Neonatology in CWIUH from July 2016-Jan 2017, I recognised that a significant amount of a house officers on call workload, and subsequently the Postnatal Liaison Nurse's time was spent performing capillary blood gas analysis in newborns who had an initial low umbilical cord blood pH.

Umbilical cord blood gas analysis is recommended in all high-risk deliveries i.e. Whenever there has been a concern about the baby either in labour or immediately following birth, by both the British and American Colleges of Obstetrics and Gynaecology.The baby born with a low cord pH and/or in a poor condition may have suffered a significant perinatal hypoxic insult. The generally accepted cut off value for a pathological acidosis (risk of seizures, moderate to severe HIE and cerebral palsy) is umbilical arterial pH ≤ 7.0.

At the time of the initial audit, Coombe Women & Infants University Hospital (CWIUH) local practice guidelines recommended that all babies delivered with a cord pH of <7.2 if in good condition should be left with the mother and have CBG analysis at 1 hour of age.

In general, I recognised that the majority of these infants were clinically well and that the results were normal on repeat after 1 hour of life as long as the baby had been kept warm and had been fed.

However there was a substantial amount of time consumed by performing this investigation – approx 30 minutes per test. This included explaining to the parent the need for the investigation, transporting baby to the neonatal unit via elevator to perform the CBG analysis, analysing results and subsequently transporting baby back to the postnatal ward and communicating the results to the parent. This 30 minutes approx would be greatly extended if interrupted during the process to attend to a more emergent task.

In addition to the time taken up by this test, there was also a negative impact on on mother-infant bonding due to the interruption of skin-to-skin or feeding in the initial hours of life. This is a time period during which research tells us that close contact between mother and infant may induce long-term positive effect on the mother-infant interaction, and every effort should be made to minimise disruption.

With this information in mind, under the supervision of the Neontal team, I designed and performed a retrospective audit of all CBG analysis performed within a calandar month to inform us of current practice, and potentially allow optimisation of future practice.

Methodology:

For the calendar month of July 2016, with assistance from the Biochemistry laboratory all paired arterial and venous umbilical cord blood gas samples analysed within CWIUH were retrospectively reviewed to identify those that fullfilled the criteria for repeat, with manual chart review performed thereafter to determine whether the local standard had been met.

This involved obtainining a report of all blood gases analysed during the month in question, manually identifying within this report all paired umbilical cord blood gas samples analysed and inputting them into a Microsoft Excel database, and further identifying those samples which fullfilled criteria for repeat based on the local practice guideline in operation at that time. Manual chart review of all neonatal charts in question was then performed to obtain descriptive data of each case and input into the Excel database for analysis.

As outlined previously, at the time of the initial audit, CWIUH local practice guidelines recommended that all babies delivered with a cord pH of <7.2 if in good condition should be left with the mother and have CBG analysis at 1 hour of age.

All babies with gestation <37/40 weeks, and/or who had been admitted to the Neonatal Intensive Care Unit during their inpatient stay were excluded from analysis.

After the results of the initial audit were reviewed and presented at departmental level in January 2017, the local practice guideline was altered with more stringent criteria decided upon to determine where CBG analysis was warranted. This guideline was implemented in January 2017, and I performed a subsequent retrospective re-audit for the calendar month of April 2017 shortly after commencing work as a Neonatology Registrar in CWIUH. The results of both initial and subsequent re-audits are outline below.

Initial Audit Results & Intervention

Within the audit period of July 2016, 281 paired umbilical cord blood samples were analysed, with 70 (24.9%) meeting the criteria for repeat at 1 hour of age. 15/70 were exluded from analysis.

Of the 55 included in analysis, 76% (42/55) had CBG performed of which 90% (38/42) had a normal pH >7.2 on analysis. 4 required further CBG testing beyond 1 hour of life due to persistent low pH, however were normal on repeat.

Of those 13/55 where local standard was not followed in 5/13 a clinical decision was made not to perform CBG analysis and 7/13 were inadvertantly missed.

Mean time to CBG from birth was 141mins. (Max 485mins, Min 62mins) All 55 babies had uncomplicated postnatal courses and were discharged home well.

After initial audit findings were reviewed at a departmental level, the CWIUH local practice guideline was altered, with more stringent criteria decided upon to determine where CBG analysis was warranted and to reduce the number of unnecessary tests performed on well babies, thus minimising interference with mother-baby bonding.

The updated guideline stated that in babies with an umbilical cord blood pH of <7.2 and >7.1, if in good condition should be left with the mother and have a documented medical review at 1-2 hours of age at the bedside, with CBG not required unless there are medical concerns. In babies with a pH <7.1 in good condition a documented medical review along with CBG analysis should be performed at 1-2 hours of age.

Re-Audit Methods & Results

For the calendar month of March 2017 all umbilical cord blood gas samples analysed within CWIUH were retrospectively reviewed along with chart review to assess whether the new local standard on low umbilical cord blood pH was was being met, and whether the guideline change had been successful on a clinical level, without effecting patient safety.

Within the re-audit period of March 2017, 238 paired umbilical cord blood samples were analysed, with 63 (26.4%) meeting the criteria for documented medical review or medical review with CBG analysis at 1-2 hours of age. 12/63 were excluded from analysis due to reasons of gestation or admission as outlined above in study inclusion criteria.

Of the 51 included in analysis, 39/51 (76.4%) had an umbilical cord blood pH <7.2 and >7.1, of which 32/39 (82%) had a documented medical review at a mean time of 106mins post delivery (Max 336mins, Min 53mins).

Of these 32, 2/32 had CBG analysis performed due to medical concern, and 2/32 had abnormal clinical examinations on medical review and were observed in the Neonatal Unit, however returned to the postnatal ward after a short period and did not require admission.

7/39 were inadvertantly missed and no medical review was performed, all of whom were well on subsequent discharge home. Of these, in 6/7 cases there was no Neonatal team member present at delivery. In each of the 7 cases on of the umbilical cord samples was within normal limits, while the other was abnormal.

12/51 (23%) had a cord pH of <7.1, 12/12 (100%) of whom had CBG analysis completed at a mean time of 127mins post delivery (Max 213mins, Min 97mins), all of which were normal. 1/12 requiring a further repeat due to persistent low pH, however this was normal on repeat.

Conclusion

The results of the initial audit gave detailed information which allowed the local practise guideline to be successfully altered, reducing the number of unnecessary tests in healthy babies and reducing interference with initial mother-baby bonding.

As evidenced by the results of the re-audit, after the guideline change was implemented, 77% less CBG tests were required, with 12/12 (100%) of those meeting criteria for repeat having the tests performed within the designated timeframe vs 42/55 (76%) in the initial audit perdiod.

Thus 39 less babies avoided an uneccessary medical prodcedure, without compromising patient safety - potentially 468 babies over the course of a calendar year.

Over the course of 12 months, this will mean there are approximately 468 less instances of interruption in baby-mother bonding in the initial hours of life, with the potential long-term benefit on mother-infant interaction protected.

With regards to the financial cost of the procedure, estimates from the biochemistry department for the upkeep of the gas analyser equipment put an approximate cost on a single CBG of approximately €7 per test, with a potential saving of €280 per month, or €3,330 per year.

The more significant and quantifiable benefit however is with regards to clinical workload, and the manpower cost of the procedure – a minumum of approx 20 working hours per month based on a procedure time of 30mins, or potentially 230 medical/nursing hours per year saved by this optimisation in practice.

This was a successful audit cycle – an area for improvement in clinical practice was identified, a change in practice implemented and a re-audit demonstrated this change to be successful at a clinical level while also reducing costs and clincial workload, without compromising patient safety.

Despite these positives however, there is room for improvement in future, in particular in reducing the number of missed medical reviews, by dentifying the reasons why they were overlooked and acting upon them.

ACTION PLAN

Action Required	Person(s) Responsible	Timeframe
Improved signposting on the Delivery Suites outlining the umbilical cord gas values at which medical review & repeat CBG are required.	Neonatal & Midwifery team on Delivery Suites	3 months
Midwifery education – if even one of the paired umbilical cord samples is <7.2, this is an abnormal result and requires communication to the neonatal team, so that the baby can be reviewed medically.	Neonatal & Midwifery team on Delivery Suites	3 months
Re-audit after these actions have been put in place to see if there has been a positive effect on the numbers of missed medical reviews.	Neonatal NCHDs	1 year

Audit Lead – please X to boxes to confirm you agree with the following:

X This action plan has been agreed with my audit supervisor

X This action plan has been agreed with all relevant stakeholders

Audit Supervisor – please X to box to confirm you agree with the following:

X I have seen and approved the above action plan