Coombe Women & Infants University Hospital
Ospidéal Ollscoille Ban agus Náionán an Chúim

Excellence in the Care of Women and Babies
Foirfeacht i gCúram Ban agus Naíonán

ANNUAL CLINICAL REPORT

2019

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ANNUAL CLINICAL REPORT 2019

Professor Sharon Sheehan
Master/CEO

Ms Ann MacIntyre
Director of Midwifery Nursing

Mr Patrick Donohue
Secretary & General Manager

Dr John Kelleher
Director of Paediatrics & Newborn Medicine

Professor Tom D'Arcy
Director of Gynaecology

Dr Terry Tan
Director of Peri-operative Medicine

Professor John O'Leary
Director of Pathology & Molecular Medicine Research

Acknowledgements

Ms Laura Forde
Ms Emma McNamee
Ms Julie Sloan
Ms Mary Holden

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Introduction from the Master

Introduction from the Master

Welcome to this year's Annual Clinical Report, and my last as Master.

As a tertiary-referral university-teaching hospital, in 2019 we cared for 8434 mothers, 7746 of whom delivered 7929 infants weighing ≥500g and we performed 5139 gynaecological operations. The corrected perinatal mortality rate was 3.9/1000.

Our mission of "excellence in the care of women and babies" remained central to all activity at the Coombe and I wish to acknowledge the tremendous efforts of every member of staff throughout the year. We continued our focus on patient-centred care and our staff worked tirelessly to deliver this. It was a year filled with challenges and opportunities, with increased demand for care, greater patient complexity, ongoing staff shortages, restricted budgets and a continued public focus on maternity and gynaecology services. I wish to express my gratitude to our team of medical, midwifery and nursing, allied health professionals, support and administrative staff who worked together to ensure that we delivered safe, high-quality care to our women, babies and their families.

The Senior Management Team once again played a central role in ensuring the safe and smooth running of the Hospital and I would like to thank them for their dedication, diligence and commitment; Mr Patrick Donohue, Secretary and General Manager, Ms Ann MacIntyre, Director of Midwifery and Nursing and Mr John Robinson, Financial Controller. I am so 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 / Operations Manager and Ms AnneMarie Waldron, HR Manager, for their continued 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 patience and 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.

The Hospital is governed by a Board of Guardians and Directors, chaired by Mr John Gleeson. Throughout 2019, they 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.

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.

Throughout the year, a number of our wonderful staff members retired and they will be greatly missed. In particular, I would like to acknowledge the outstanding commitment and dedication of a number of our Department Heads and Senior Staff Retirees – Ms Frances Richardson, Assistant Director of Midwifery and Nursing, Ms Jacqui Barry O'Crowley, Chief Medical Scientist, Ms Lucy More O'Ferrall, Night Superintendent, Ms Mary Sweeney, Chief Medical Scientist, Ms Rosemary Grant, Principal Medical Social Worker and Ms Rosena Hanniffy, Assistant Director of Midwifery and Nursing (Infection Prevention and Control). They all witnessed huge changes in our services during their years at the Coombe and each was instrumental in advancing care for our patients. I would like to take this opportunity to thank them for their enormous contribution to the Hospital over the years and to wish them every happiness in their retirements. I would also like to offer my congratulations to each of their successors.

The recruitment process for the next Master was a key priority in the year and following interviews held in May 2019, we were delighted that Professor Michael O'Connell was elected by the Board of Guardians and Directors to serve as the next Master of the Coombe Women & Infants University Hospital. Professor O'Connell, a Consultant Obstetrician & Gynaecologist at the Coombe, will commence in post on January 1st 2020 and I look forward to working closely with him as we prepare for the handover.

We were delighted to welcome a number of new Consultant appointments to the Coombe during the year; Professor Nadine Farah (Obstetrics & Gynaecology), a consultant already working across the Coombe and Tallaght University Hospital, took up her new post based solely at the Coombe, Dr Workineh Tadesse (Obstetrics & Gynaecology) commenced in his

substantive post at the Coombe, Dr Catherine Hinds (Psychiatry / Perinatal Mental Health) commenced in her post at the Coombe and the Midland Regional Hospital Portlaoise, Dr Petar Popivanov (Anaesthesiology) commenced his substantive post at the Coombe and St James's Hospital, Dr Aoife Mullally (Obstetrics & Gynaecology), a consultant already working across the Coombe and Portlaoise, took up her new post based solely at the Coombe as Lead for Termination of Pregnancy Services and Dr Neil O'Gorman (Obstetrics & Gynaecology, Fetal Medicine) who will take up his new post in early 2020. We have also sought approval for the recruitment of additional Consultants and these we anticipate being in a position to appoint early in the new year.

I would like to congratulate Dr Meabh Horan and Dr Ailbhe McGrath who served 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 2019. 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 2019

2019 marked the fourth 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".

On January 1st 2019, new legislation, the Health (Regulation of Termination of Pregnancy) Act 2018, came into effect. The Coombe Women & Infants University Hospital, fully committed to providing Abortion Services under the new legislation, implemented a full abortion service from 4th February 2019. To ensure the provision of safe, high quality, sensitive and compassionate care to women, the Hospital had agreed that these services would be provided when satisfied that the necessary resources have been put into place. In this context, the full range of services were not available on 1st January 2019. At that time, the Act itself was not available, only one of a number of national guidelines had been finalised, no resources had been allocated to the Hospital for the implementation of these new services and information from the HSE in relation to the services had only been issued on Friday 21st December 2018, some of which were called "draft" and others which were inconsistent with Children First legislation. The Department of Health and the HSE had been notified of the hospital's consistent position and updated in relation to the challenges with implementation of these services. I would like to acknowledge the tremendous commitment of staff to ensure the development of a safe, high-quality service for women. I would also like in particular to thank Dr Aoife Mullally, Group Lead for Abortion Services, Ms Clare Smart, Gynae Services Coordinator, the Fetal Medicine Department, the Neonatologists, the Chaplains, the medical, midwifery and nursing staff and the Medical Social Workers for their work in establishing and supporting these services and the Options in Pregnancy Clinic.

2019 saw significant expansion and investment in Perinatal Mental Health Services, in line with the National Standards. We welcomed the approval for new posts across medical, nursing and allied healthcare professionals and we continue to seek funding for the infrastructure and resources necessary to facilitate these expanded services. I would like to thank Dr Joanne Fenton, Ms Ann MacIntyre, Mr Patrick Donohue and Ms Rosemary Grant for their work to ensure this much-needed expansion in services.

National Industrial Action by members of the Irish Nurses and Midwives Organisation began on Wednesday 30th January 2019 followed by a series of further strike days. During this time, many of the Hospital's services were directly affected. All elective surgery, antenatal, gynaecology and paediatric Outpatient Clinics were cancelled for the initial strike days. Theatre remained open for emergency and urgent cases, and derogations were granted for a number of critical areas including the Delivery Suite and the Neonatal Centre. While activity was curtailed, patient safety remained our main focus and the Hospital's Senior Management Team met regularly with the Strike Committee throughout the Industrial Action, with good communication and working relationships proving essential. Our staff demonstrated immense resilience, dedication and commitment to ensure that our women and babies received the very best care and attention. I would like to acknowledge all of the people involved in keeping the hospital running so smoothly during those challenging days. Thankfully, national agreement was reached and further Industrial Action was averted.

The Hospital underwent a number of inspections and accreditation visits during the year. In June, the

National Clinical Lead for Healthcare Associated Infections / Antimicrobial Resistance and the national team visited the Hospital. They were impressed by the work undertaken at the hospital and made a number of recommendations in relation to HCAI including recommendations in relation to CPE screening and staffing, all of which are being progressed. The Hospital had an announced visit from the Health & Safety Authority on 26th July 2019, to appraise the Hospital of work they are undertaking in the area of manual handling.

As noted in last year's Annual Clinical Report, the hospital had undergone an unannounced inspection by HIQA in August 2018 in relation to compliance with the National Standards for Safer Better Maternity Care (2016) with a focus on the management of Obstetric Emergencies. The draft reports received were very complimentary of the practices at the Hospital, specifying that of the 21 judgements (assessments) made during the inspection, CWIUH is fully compliant with 19 judgements (90.5% compliance rate), substantially compliant with one judgement (record of staff training) and non-compliant with one judgement (infrastructure). The final report is expected in 2020. We continue to work with the HSE to progress the necessary upgrades and expansion of our infrastructure.

The Hospital's Laboratory Department underwent its annual inspection by the Irish National Accreditation Board on 14th November. The assessors commended the staff for the services provided. A small number of non-conformances were noted relating to equipment, which have been corrected and I would like to acknowledge the hard work of all the staff throughout the year.

Our Quality, Patient Safety and Risk Team worked tirelessly throughout the year and I would like to thank Ms Evelyn O'Shea, Quality Manager, Ms Anna Deasy, Clinical Risk Manager, Ms Michelle McTernan, Clinical Risk Manager and Ms Niamh Dunne, Patient Liaison Manager 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.

LEAN methodology continued to be employed across the hospital with many more staff achieving qualifications in this area of quality improvement. In addition, a number of quality improvements were undertaken within the Hospital throughout the year which demonstrated great results. I would like to express my gratitude to all of the staff for their tremendous teamwork on these Quality Improvement Projects driving improvements in Obstetric Anal Sphincter Injuries (OASIs), Reducing Group 1 Caesarean Sections, Reducing Opioid Consumption after Caesarean Section, Implementing an Information, Exercise and Peer-Support Group to improve postoperative outcomes for urogynae surgical patients, reducing Postpartum Haemorrhage (PPH), and a host of other QI projects across the hospital.

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.

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. In particular, I would like to thank Prof Nadine Farah, Dr John Kelleher, Dr Terry Tan, Dr Sabrina Hoesni and Dr John O'Leary for their commitment to maximise the training opportunities for all of our NCHDs.

Staffing recruitment and retention across midwifery and nursing staff remained a major focus throughout the year, with a sustained increase in appointments across the year. 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 years 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 2020.

As part of an initiative in line with our Dignity at Work Policy, a cohort of staff received formal training to enable them to act as Support Contact Persons. These staff members will be available to support other staff members who may wish to avail of additional support persons, in addition to their line managers, HR or the Employee Assist Programme.

In recognition of the ongoing need for investment in our infrastructure, a number of refurbishment

and upgrading works were completed throughout the year, including the redevelopment of the Rita Kelly Conference Centre, completion of CSSD refurbishments, upgrading of St Monica's Ward, in addition to a number of projects which are continuing into 2020 including the continued redevelopment of the Neonatal Intensive Care Unit and HDU, the Mortuary and the main Outpatients Department. The dedication and teamwork displayed by all involved in these projects allowed us not only to complete the works in a timely manner, but to do so while maintaining a full and safe service for our patients. I would like in particular to acknowledge the hard work of Mr Patrick Donohue and Mr Serge Panzu.

The design phase of the Laboratory extension project continued throughout the year and work has also commenced on the expansion of the Women's Health Unit and the specification for the Ambulatory Gynaecology Unit – to add an additional floor to the existing Colposcopy Building, to inform the Design Team. During the year, work also commenced on the design for the Operating Theatre Project. In addition, design work continued for the Bereavement Suites on St Gerard's Ward and the new ER facility. Other areas of the Hospital, including St Patrick's Ward have been prioritised for refurbishment and development and despite not receiving funding in 2019, it is hoped that funding will be secured in 2020.

The Infrastructure Review of the Hospital's IT Systems was completed which has highlighted significant issues that require addressing. These urgent requirements have been formally escalated to the Dublin Midlands Hospital Group and the HSE ICT (OCIO) has indicated that they will look to support the Hospital in implementing the recommendations.

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

Throughout 2019, we continued to work closely with the Dublin Midlands Hospital Group and I would like to sincerely thank Mr Trevor O'Callaghan, Group CEO, and our other colleagues in the Group and the HSE for their support to the Hospital.

Our Services

Patient complexity continued to increase throughout 2019, and I would like to express my gratitude to the Consultants, NCHDs, Midwives, Nurses, Healthcare Assistants, Allied Health Professionals, Support Staff and Administrative Staff who enabled the Coombe to meet the demands of complex care.

Attendances at our Antenatal Clinics and Gynaecology Clinics grew significantly during the year. 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 Children's Health Ireland, Crumlin and the all-island service, extending our services to include mothers and babies from the North of Ireland, continued to flourish.

We continued to provide a dedicated consultant-provided Maternal Medicine Clinic in 2019 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. Approval for a Consultant Obstetrician & Gynaecologist with a special interest in maternal medicine has been sought and we would hope to appoint early in the new year.

The incidence of Gestational Diabetes continued to rise this year, affecting more than 12% of all pregnancies. Work to manage the increased burden of this disease on antenatal services across the multidisciplinary team has continued and we welcome the appointment of Dr Neil O'Gorman, who will join this service in the New Year. I would like to acknowledge the tremendous efforts of the team, Prof Sean Daly, Prof Brendan Kinsley and all of the multi-disciplinary team of midwives, nurses, dieticians and administrative staff who manage the increased demands and continue to streamline the services and drive improvements in care.

Staff on the Delivery Suite focussed on delivering 1:1 care and drove continuous quality improvements throughout the year. Birth Reflections continued to develop in 2019 under the direction of Ms Ann Fergus, aimed at women planning delivery or who have delivered within the past year. The feedback from women remains incredibly positive since its introduction. I would like to thank Dr Aoife Mullally, Labour Ward Lead, Ms Nora Vallejo, Ms Sinead Finn, Ms Ann Fergus, Ms Ita Burke, Ms Fidelma McSweeney and all of the staff of the Delivery Suite and Maternity Floors for their tremendous work during the year.

We introduced a new Ultrasound Service during the year for evaluation of possible DVT, thanks to Prof Mary Keogan and the Radiology Department, women no longer have to travel to St. James's Hospital for this service.

Throughout 2019, the Neonatal Intensive Care Unit continued to provide highly specialised care 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 136 very low birth weight infants (<1500g). I would like to thank Dr John Kelleher, Director of Paediatrics and Newborn Medicine, Ms Bridget Boyd, Ms Mary O'Connor, Ms Anne O'Sullivan and all of our Neonatal Staff for their continued hard work and dedication, most especially during the refurbishment and redevelopment works.

We continued to provide a most extensive Surgical Gynaecology Service throughout the year and more than ever, due to increased demand for Gynaecology Services, we remain committed to expanding our capacity at the Coombe. These waiting lists 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 Hospital's Gynaecology Waiting Lists are collected by the National Treatment Purchase Fund and reported nationally, however NTPF funding in 2019 continued to focus on Theatre Waiting Lists rather than Outpatient Waiting Lists. It is hoped that this funding will be extended to Outpatient Services next year.

Throughout the year, we were delighted to continue our expanded Outpatient Gynaecology Clinics led by Prof Nadine Farah to care for patients who were waiting the longest for care. In addition to these clinics, we continued our Ambulatory Hysteroscopy Service, extending the model to “See and Treat” with the introduction of MyoSure. Feedback from patients and staff has been extremely positive. Progression of the plans for the new Theatre Development remains essential to increase the overall capacity for Gynaecology. We welcomed the commitment from the HSE and DOH to the development and we worked closely with the HSE throughout the year to progress these plans.

In 2019, we successfully launched the GP-led Clinics within the Hospital. Such clinics have helped to alleviate existing pressures on the Gynaecology Outpatient Services, ensuring that women whose care could be managed at the Primary Care level, 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. Sincere thanks to the GPs and our staff who have worked together to maximise attendances at these clinics.

The Strategy for Gynaecology at the Coombe Women & Infants University Hospital forms an integral part of the overall Hospital Strategy. It is fully aligned to the mission of "excellence in the care of women and babies", and is underpinned by the Hospital's core values. Consistent with HSE and HIQA Standards, the National Maternity Strategy and the National Women & Infants Health Programme, the Gynaecology Strategy has focussed on access to effective care, seeking to ensure that the woman is seen by the right person, in the right place at the right time.

A sustainable and effective model of care is required, where the increasing demand for care can be met, and the risks associated with waiting for care are eliminated. The strategy therefore looks not only at current demands, but also looks to the future to address how the growth in demand will be matched. A multi-faceted approach has been adopted, one which addresses the current waiting lists but importantly, also prevents the accumulation of further waiting lists.

Ultimately, the strategy seeks to ensure that all national targets for outpatient and inpatient waiting times are achieved. It must start by clearing the backlog of patients waiting, while simultaneously developing capacity to prevent the re-accumulation of waiting lists. It is underpinned by appropriate staffing, training and infrastructure. It focuses on four key areas, with each of these priorities requiring investment: referrals, Outpatient Services, Ambulatory Gynaecology and Gynaecology in-patients and day-cases.

Working closely with the Dublin Midlands Hospital Group, the National Women and Infants Health Programme and HSE Estates, the Coombe Women & Infants University Hospital has developed a comprehensive suite of measures to successfully deliver a world-class, woman-centred model of care for gynaecology and cervical disease. Critical to this is the redevelopment of the Operating Theatre Department at CWIUH, endorsed by HIQA following their inspection in 2015, in addition to a 2nd floor extension to the Women's Health Unit and Consultant expansion. Cognisant of the need to establish Termination of Pregnancy Services in Ireland in 2019, the investment in the development of this world-class facility at the Coombe to include the National Cervical Screening Centre is both time-sensitive and imperative. The refurbishment of the Operating Theatres and the expansion of existing Ambulatory Gynaecology services at CWIUH are essential to meet the needs of the National Cytology Centre as even more women will seek to access care here.

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. Approval for further Consultants, in addition to Nursing staff and

Administrative support, has been sought.

I wish to thank Professor 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, Ms Clare Smart, Ms Olivia McCarthy, Ms Martina Ring and all of the staff who continue to build our extensive Gynaecology and Laboratory services.

As a leading Hospital for research in all aspects of women and infants' healthcare, our focus on research and innovation continued throughout 2019. The Research Laboratory at the Coombe maintained its international reputation for cutting edge molecular medicine with grant income in this area exceeding €55 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 2019 with the Hospital hosting a number of conferences throughout the year.

To celebrate the International Day of the Midwife, a study day was held to showcase a number of projects undertaken by our midwives including research, audit and quality improvement initiatives. In addition, a number of midwives shared their experiences of working in the hospital and across other sites, showcasing multicultural diversity.

An OASIs Study Day took place in the hospital in June, organised by the OASIs Quality Improvement Team. Speakers included local and national experts in the field and was aimed at raising awareness of OASIs and highlighting the reductions in OASIs rates across the hospital.

This year's Guinness Lecture Symposium was held in October with the theme of Peri-Operative Medicine and Anaesthesia. Organised by Dr Terry Tan and Dr Steve Froese, Professor Robert Dyer, Professor of Anesthesiology, University of Cape Town, New Groote Schuur Hospital, South Africa, delivered the Hospital's 49th Guinness Lecture entitled From Queen Victoria to the Duchess of Cambridge, which was a most thought-provoking lecture. It was very well attended and the feedback from the event was very positive. It was the first symposium held in the newly refurbished Rita Kelly Conference Centre and the venue with its new seating arrangements was superb. I would like to express my sincere gratitude to the organisers and to Mr Patrick Donohue, Secretary and General Manager, and Mr Serge Panzu, Hospital Engineer, for their tremendous work to ensure the refurbishments ran smoothly and that the new venue is such a success.

Professor John Kingdom, Department Chair and Staff Obstetrician and Clinican-Scientist, Maternal-Fetal Medicine Department of Obstetrics & Gynaecology, University of Toronto, visited the Hospital in November and delivered a most informative lecture on "Invasive Placentation: The Toronto Experience".

Keen to develop a state-of-the-art clinical skills laboratory, we were delighted to receive a Paul simulator at the end of the year from Friends of the Coombe. This simulator will transform the way in which doctors and neonatal nurses will develop and maintain their critical clinical skills. We are extremely grateful to Friends of the Coombe and all who generously donated. We look forward to expanding our simulation training facilities in the new year.

Annual Service of Remembrance

In April, the Annual Service of Remembrance was held 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 Events and Health & Well-being

Raising awareness of the importance of Workplace Health and Well-being remained a key focus of the Hospital in 2019, with numerous events organised to encourage and support staff to stay healthy, eat well and exercise. 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.

In September, 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.

Coombe Diversity Day took place in the Rita Kelly Conference Centre in November. It was a celebration of the many different cultural and ethnic backgrounds of our staff. Staff showcased their heritage by preparing delicious cuisine and dressing in traditional clothing. In addition, staff also entertained us with traditional song and dance and the event was a tremendous success.

We were delighted to continue our partnership with Outlandish Theatre who staged a number of events and workshops throughout the year.

Once again, Christmas brought lots of excitement to the Hospital. I would like to thank the Chairman, Mr John Gleeson, who had the much wanted job of judging the Christmas Cake competition. Closer to Christmas, the landings and stairwells of the Hospital were filled with the sounds of the Coombe Choir. I would like to thank all of the staff for their enthusiasm and sense of fun in spreading cheer across the hospital during the festive season.

National Context

For much of the year, women and infants' services continued to dominate the national, and indeed international news headlines.

CervicalCheck

Throughout 2019, the National Cervical Screening Programme continued to face the unprecedented challenges that had begun in April 2018. Initially two issues arose in relation to the programme including the reliability of Cytology and the communication with patients of the results of reviews conducted by the programme upon diagnosis of cervical cancer. Following on from the publication of the Scally Report in September 2018, there has been a continued focus on Cervical Screening Services, including Cytology and Colposcopy. In addition to further reviews by Dr Scally, an international expert panel review led by the Royal College of Obstetricians and Gynaecologists and the British Society for Colposcopy and Cervical Pathology was commissioned, with the aggregate RCOG report published by the Minister for Health, Simon Harris, in December 2019. The report of the Expert Panel concluded that the programme has saved the lives of many of those who participated in the Review, that the programme is working effectively and that women can have confidence in the programme. For 308 of the 1,034 participants, the Review found a different cytology result from the original CervicalCheck result. The Expert Panel noted that these findings are in line with those seen in the English screening programme. The Panel emphasised that it is important to recognise the serious impact that screening failures have on the lives of women and their families. However, it also acknowledged that failures are, unfortunately, inevitable given the limitations of cytology-based screening and should not be taken to suggest the programme overall is not working. While the Review also found that in a small number of cases, there was suboptimal colposcopy management, it concluded that women can have confidence in the clinical standards, which apply to the day-to-day practice of colposcopy across the country.

Nationally the CervicalCheck screening programme has continued despite extensive backlogs and on-going delays with the introduction of primary HPV testing. The Hospital has continued to see exponential growth in the demands for Colposcopy and Cytology services, in addition to patient phone calls and attendances. We 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 2019 was 33,200, significantly increased from the previous year's total of 31,800. HPV triage for low grade abnormalities continued to expand and develop.

I would like to acknowledge the work performed by all of those involved in the Hospital in the delivery of work to the CervicalCheck programme. Increased demands on both Cytology and Colposcopy services have persisted since 2018 and the staff have continued to work tirelessly to meet these demands. In particular, I would like to thank Professor John O'Leary, Ms Martina Ring, Ms Mary Sweeney, Ms Roisin O'Brien, Mr Stephen Dempsey, Professor Tom D'Arcy, Ms Olivia McCarthy, Ms Aoife Kelly and all of the medical, Midwifery and Nursing, Laboratory, Administrative and Support Staff for their dedication and commitment.

We welcome the establishment of the National Cervical Screening Centre on the campus of the Coombe Women & Infants University Hospital, in tandem with the expansion of Women's Health Services here. Reassuringly, the HSE has recognised that investment in the development of women's care at the Coombe has never been more critical.

Vaginal Mesh

The impact of the Chief Medical Officer's report to the Minister for Health entitled "The use of Uro-gynaecological Mesh in Surgical Procedures" which was published in November 2018, continued to be felt across the Urogynaecology Services at the Coombe. Throughout the year, there were no transvaginal or transobturator tapes performed, nor were any mesh surgeries undertaken. The national implementation of the recommendations in the CMO's report is ongoing.

I would like to thank all of the members of the Urogynaecology MDT Team at the Hospital, Professor Chris Fitzpatrick, Dr Aoife O'Neill, Dr Mary Anglim, Dr Gunther von Bunau and Ms Eva Fitzsimons who had undertaken work to revise the consent procedures and patient information leaflets, in addition to auditing the services. Patients continue to be seen in the

Urogynaecology Clinic and Physiotherapy Department and plans to enhance these services are continuing.

National Maternity Strategy

Following on from the launch in January 2016 of Ireland's first ever Maternity Strategy, and the establishment of the National Women and Infants Health Programme (NWIHP) in January 2017 to ensure its implementation, the Hospital continued to work closely with NWIHP throughout 2019.

The National Maternity Experience Survey was launched in October as a joint initiative by HIQA, the HSE and the Department of Health. All mothers who deliver their babies in October 2019 in the 19 maternity units will be contacted by post early in 2020 to share their experiences of the care they received while pregnant, at the time of birth and after the baby was born. Our staff were busy encouraging as many of our Coombe mothers as possible to participate in the survey and share their experiences. We look forward to seeing the results next year.

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.

Coombe and Midlands Regional Hospital Portlaoise

During the year, work continued on the development of a collaborative clinical network across the Coombe and the Midlands Regional Hospital Portlaoise. I would like to thank Prof Michael O'Connell, Mr Michael Knowles, Mr Trevor O'Callaghan and the staff on both sites for their continued support and commitment.

New Children's Hospital and the Coombe

Work continued at pace on the development of the New Children's Hospital on the St James's Hospital campus. The Board met with Professor Martin White, Children's Health Ireland Neonatology Lead, and the Chairs of the three children's hospitals' medical Boards. 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 to tri-location.

Role of Voluntary Hospitals

We continued to work closely with the Voluntary Healthcare Forum (VHF) throughout the year. The Voluntary Healthcare Forum (VHF) Plenary Session was held on 4th March. Dr Catherine Day, Chair of the Independent Review Group (IRG) spoke to the forum members about the IRG's Report on the Role of Voluntary Organisations in Publicly Funded Health Services. At the meeting, the VHF was given a mandate from the members to progress the recommendations made in the report. Following this, the Master was invited to attend a meeting of the VHF with the Department of Health and Sláintecare. The VHF had also met with the HSE on foot of the report. I would like to acknowledge the great work undertaken by Ms Patricia Doherty and Mr John Gleeson, Chair of the VHF, to drive cohesion among the voluntary organisations in conveying the importance of our collective role in the future of healthcare in Ireland.

National Neonatal Encephalopathy Action Group

A National Neonatal Encephalopathy Action Group was established during the year as a joint initiative by the State Claims Agency, the National Women & Infants Health Programme and the HSE. Its purpose is to reduce avoidable instances of Neonatal Encephalopathy through the identification of causes and risk factors, and driving initiatives to eliminate or mitigate same. The inaugural meeting was held in the State Claims Agency on 14th August 2019 and I was delighted to have been invited to join this group, representing the hospital and the Dublin Midlands Hospital Group.

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, is live in four hospitals around the country. It was anticipated that the rollout of this project to our Hospital would commence in 2019 however this has been delayed nationally and we await confirmation of a definite timeline from the National Project Office.

Coroner's Amendment Act

The Coroners (Amendment) Act came into force on Monday 16th September. It requires mandatory reporting to a coroner and a mandatory inquest in all cases of maternal death. It also requires mandatory

reporting to a coroner of all stillbirths, intrapartum deaths and perinatal deaths. This will undoubtedly place an enormous burden on the already overstretched and under-resourced perinatal pathology services nationally.

Awards

I would like to congratulate Dr Rebecca Finnegan, Specialist Registrar in Paediatrics, and winner of the Master's Medal for her presentation entitled "48 No More", which looked at reducing the length of time taken to read blood cultures in neonates. In addition, I would like to congratulate all of the other NCHDs who submitted abstracts and presented their research at the Master's Medal.

Congratulations also to Dr Paul Hession, and his supervisor, Dr Terry Tan, awarded the Dr James Clinch Prize for Audit for their work entitled "Pre-operative reconciliation of regular medications: the development of a guideline for the Pre-Assessment Clinic". I would like to thank all of the staff who submitted their audits for consideration.

At the National Patient Safety Office Conference, Ms Evelyn O'Shea, Quality Manager, and the QI Team won second prize for their project to reduce Opioid Consumption after Caesarean Section. I would like to congratulate everyone involved for their hard work in achieving this success.

Going forward in 2020

As we face into 2020, there is little doubt that we will be presented with a new set of opportunities and challenges, 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 further development of Women's Health Services on our campus is imperative and the opportunities before us are exciting and timely.

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.

As I complete my last year in office, it has been my great privilege to serve as Master of the Coombe Women & Infants University Hospital over the past seven years and I again thank the Board and all of the staff for their exceptional support. I am indebted to each member of our staff who comes to work every day to provide the very best care for our women and infants. I am incredibly proud of our "Coombe Family", and I thank you from the bottom of my heart for all you have done over the past seven years. I have been so fortunate to work alongside you. I would like to wish Professor Michael O'Connell every success as he takes over the reigns, leading this wonderful institution, and I look forward to supporting him as we draw closer to our bicentenary in 2026.

"Excellence in the care of women and babies" remains at the heart of our endeavours.

Professor Sharon Sheehan

Master/CEO

Awards

Awards

Master's Medal 2018 – 2019

Congratulations to Dr Rebecca Finnegan, Specialist Registrar in Paediatrics and winner of the Master's Medal for her presentation entitled "48 No More", which looked at reducing the length of time taken to read blood cultures in neonates.

Dr James Clinch Prize for Audit

Congratulations to Dr Paul Hession, winner of the Dr James Clinch Prize for Audit 2019. His audit was entitled "Pre-operative reconciliation of regular medications: the development of a guideline for the Pre-Assessment Clinic". (See Appendix V).

External Awards

2nd Prize - National Patient Safety Office Conference

Congratulations to the Reducing Opioid Consumption after Caesarean Section QI team on winning second prize at the National Patient Safety Office Conference. Ms Evelyn O'Shea, Quality Manager, presented the poster on behalf of the team and the judges were very impressed with the project.

Awards to Midwives, Nurses and Students in 2019

Ann Louise Mulhall Scholarship Award

Joy Geraghty

Mary Drumm Scholarship Award

Megan Sheppard

Best Clinical Educator

Bronagh O'Connell
Maria Sweeney
Shona Kennedy

Awards to Midwifery Students

Gold Medal BSc Midwifery

BSc 2014 – 2018 – Aoife Swann
BSc 2015 – 2019 – Edel Herbert

Silver Medals BSc Midwifery

BSc 2014 – 2018 – Alexandra Surgenor
BSc 2015 – 2019 – Emma Burke

Gold Medal Higher Diploma in Midwifery

2018 – 2019 – Sarah Glennon

Silver Medal Higher Diploma in Midwifery

2018 – 2019 – Katie O'Connell

Dr T Healy Awards – Best Overall Clinical Student Midwife

BSc 2014 – 2018 – Emma Thompson
BSc 2015 – 2019 – Edel Glennon
HDip 2018-2019 – Ciara Hourican

Congratulations to all of our Staff and Students for their outstanding achievements.

Prof Sharon Sheehan

Master/CEO

Executive Summary

Executive Summary

Obstetrical Activity

A total of 8434 mothers attended the Hospital in 2019, 7746 mothers delivering 7929 infants weighing ≥ 500, with 130 infants < 1500g. A total of 189 multiple pregnancies booked at the Hospital, comprising 183 sets of twins, five sets of triplets and one set of quadruplets.

Obstetrical Demographics

31.6% of mothers who booked in the Hospital in 2019 were born outside the Republic of Ireland; (highest in 7 years, lowest at 28.4% in 2014). 18.4% of mothers were unemployed; lowest in the last 7 years (highest in 2015: 24.3%). Communication difficulties were reported in 4.8% of mothers at booking (5.1% in 2018). 0.3% of mothers were < 18 years (similar to last year); 7.5% of mothers were ≥ 40 years (highest in 7 years; lowest in 2013: 5.7%). Nulliparae accounted for 42.0% of mothers (highest in the last 7 years). 25.7% of pregnancies were unplanned (26.9% in 2018); worryingly less than half of all mothers (48.0%) had taken pre-conceptual folic acid prior to booking for antenatal care; 8.9% were current smokers (highest in the last 7 years in 2013: 12.8%); 0.5% reported consuming alcohol at the time of booking (highest in 2014: 1.5%); 0.2% were taking illicit drugs or methadone (range over 7 years: 0.2% - 0.7%); 7.9% had a history of previous drug use (range over the last 7 years: 7.5% - 8.7%); 21.0% of mothers had a history of psychological/psychiatric disorders (lowest in 2015, 15.5%) including 4.1% with a history of post-natal depression. A total of 1.0% had a history of domestic violence (range over 7 years: 0.9% - 1.1%). At booking less than half (47.1%) were in the healthy weight range (lowest in the last 7 years), 1.4% were underweight (BMI < 18.5) and 31.0% were defined as overweight (BMI 25-29.9). Overall 20.3% were obese (Class 1-3), with 2.4% defined as morbidly obese (Class 3), (range over the last 7 years: 1.5 - 2.4%). 13.5% had history of one previous Caesarean Section at booking (range over the last 7 years: 12.2-13.8%) and 3.9% had a history of two or more sections (range over the last 7 years: 3.4 - 4.6%).

Obstetrical Interventions & Outcomes

The induction rate in 2019 was 38.2% (highest in the last 7 years, lowest in 2014 at 30.9%). The percentage of nulliparae having a spontaneous vaginal delivery was 39.2% (range over the last 7 years: 36.9% - 43.2%). The percentage of parous mothers having a spontaneous vaginal delivery was 63.2% (range over the last 7 years: 62.7% - 68.1%). The use of forceps has reduced slightly to 4.3%, higher in nulliparae than multiparae (8.4% v 1.1% respectively). Ventouse rates also reduced slightly in 2019 to 7.8% from 9.8% in 2018.

The rate of LSCS in 2019 (33.8%) the same as last year (lowest rate in last 7 years: 28.0% in 2013). The rate of LSCS in nulliparae (singleton with cephalic presentations) in spontaneous labour was 9.6%; induction in nulliparae significantly increased the risk of LSCS (32.5%). The overall VBAC rate for mothers with one previous LSCS continues to decline and was 19.3% in 2019 (highest in 2013: 34.1%). 68.8% of mothers with one previous LSCS (and no previous vaginal delivery) had an elective repeat LSCS (67.6% in 2018); the VBAC rate for mothers with one previous LSCS and at least one vaginal delivery was 46.8% (highest in 2013: 58.6%). There has been a marked decline in overall VBAC rates over the past 7 years.

The number of operative vaginal deliveries conducted in theatre rose slightly this year compared to last year (73 v 69 respectively). There were 7 Classical Caesarean sections performed in 2019 (range over last 7 years: 2-8).

A total of 1675 mothers had their booking appointments completed in the community-based clinics; 20.2% of all bookings, representing a slight decrease on the previous year (22.1% in 2018). Uptake of the Early Transfer Home (ETH) programme reduced slightly with 1798 women availing of this service, compared to 1989 in 2018. The DOMINO scheme continued its expansion in 2019 with 5% of women booking for this care. 68.0% of women in this scheme had a spontaneous vaginal delivery and the caesarean section rate for these women was 16.0%.

Exclusive breastfeeding rates (36.0%) remain low by international standards and have significant socio-economic and ethnic patterns; an additional 26.0% 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) had risen dramatically in recent years however 2019 saw a continued stabilisation of the rate (21.8%, 21.6% in 2018, with the range being 13.7 - 21.9% over the past 7 years). The rate of PPH in spontaneous labour and

induced labour reduced slightly compared to last year (12.6% and 21.5% v 13.1% and 21.9 % respectively). The rate of PPH in women delivered by caesarean section was 42.2% (lowest rate over the last 7 years, 26.9% in 2015). Emergency caesarean sections were associated with a higher rate of PPH compared to elective caesarean sections (48.3% and 36.9% respectively). The overall rate of PPH in twin deliveries was 45.7% (49.1 % in 2018). The incidence of manual removal of the placenta remained fairly stable in 2019 at 1.3%, and the percentage of women having a PPH fell in this group (65.0%; 70.0% in 2018).

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 increased rates that have been witnessed over the last number of years. Thankfully, the rate of blood transfusion fell in 2019 to 2.1% from 3.0% the previous year. 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, and the benefits of this work are evident.

The rate of severe maternal morbidity increased from 8.2 per 1000 women in 2018 to 9.8 per 1000 women in 2019 (76 women). Haemorrhage remains the leading cause of severe maternal morbidity. In 2019 there were 42 cases of Massive Obstetric Haemorrhage (40 in 2018) defined according to specific criteria (estimated blood loss > 2.5L and/or treatment of coagulopathy). There were five peripartum hysterectomies performed.

There were 203 obstetrical admissions to the High Dependency Unit (213 in 2018); 39.4% of these admissions were related to haemorrhage (46% in 2018) and 25% were due to hypertension/PET (44% in 2018). Of note 14 patients were admitted for MgSO4 for fetal neuroprotection for anticipated premature delivery. There were no cases of eclampsia. A total of 5 women were admitted to HDU with sepsis, with a further 10 cases of suspected sepsis, and there were 3 cases of septic shock. There were no cases of uterine rupture. Five women were transferred to ICU.

There were no maternal deaths.

There was a marked increase in the number of patients attending the Combined Clinic for Diabetes (972 in 2019, 908 in 2018). Increased BMI, demographic changes and revised diagnostic criteria have contributed to this continued increase. Oral hypoglycaemic therapy (Metformin) continues to result in a reduction in the number of women requiring admission and Insulin therapy. A total of 933 mothers developed Gestational Diabetes; 84 were treated with Insulin, 342 with Metformin, 123 with Insulin and Metformin, and 384 with Diet alone. There was a slight decrease in the incidence of infants born weighing ≥4500g in 2019 (1.2%; 1.3% in 2018) despite the significant increase in the incidence of Gestational Diabetes. The incidence of shoulder dystocia remains relatively unchanged over the last 7 years (0.7%).

The recorded incidence of third degree tears in vaginal deliveries fell compared to the previous year (1.8%, 2.6% in 2018). A total of 3 (0.06%) fourth degree tears were reported (7 in 2018). A Quality Improvement Team had been established to focus on reducing these injuries and the positive impact of this work was evident.

In 2019 there were 386 new referrals to the multidisciplinary Medical Clinic (408 in 2018). 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 (109), renal/ hypertensive disease (65), cardiac disease (41), liver/GI disease (35), connective tissue disease (42) and cerebrovascular / neurological disease (27). The number of women attending for preconceptual care was similar to the previous year (29 v 30 respectively).

A total of 181 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, led by Professor Sean Daly, forms part of a UK-based preterm birth network which seeks to expand the knowledge around this challenging area.

Early Pregnancy Assessment Unit (EPAU)

The Early Pregnancy Assessment Unit, led by Dr Mary Anglim, saw a total of 5363 attendances in 2019, significantly increased from the previous year; 2247 new and 3116 return attendances (2451 and 1727 respectively in 2018). Dr Jennifer Hogan completed her Clinical Fellowship in EPAU and Dr Alexandra Sobota commenced her Fellowship. A total of 1722 miscarriages were seen in the unit and of these that were not completed, 24% were managed conservatively, 43% were managed medically and 33% were managed surgically. A total of 84 ectopic pregnancies were diagnosed in the unit with 63% requiring surgical management.

Options in Pregnancy

2019 saw the establishment of the Options in Pregnancy Service, led by Dr Aoife Mullally, following the introduction of new legislation for Termination of Pregnancy. A total of 146 women attended the OIP Clinic throughout the year. The majority attending were referred as they were between 9 and 12 weeks' gestation or because they had a co-morbidity making them unsuitable for early medical abortion in the community.

Fetal Medicine

The Fetal Medicine service, led by Dr Caoimhe Lynch, has continued to develop in 2019 with a total of 29,658 scans performed (29,260 in 2018). All mothers booked at CWIUH are offered both routine dating and a 20-22 week structural scan. A total of 110 invasive prenatal procedures were performed. We introduced a facility for patients to avail of Non-invasive Prenatal Testing (NIPT) in 2017 and a total of 960 women availed of this test (752 in 2018).

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, 79 structural cardiac abnormalities were detected in addition to 15 major rhythm disturbances.

At the Multiple Birth Clinic, led by Professor Aisling Martin, a total of 189 multiple pregnancies were looked after in 2019; 183 sets of twins, five sets of triplets, and one set of quadruplets. 31% of twins were delivered at or beyond 37 weeks gestation.

In 2019 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 5.5/1000; the corrected PMR rate was 3.9/1000. The PMR this year now includes Terminations of Pregnancy. 11 of the 26 normally formed stillbirths weighed ≤ 2500g, with 10 of these weighing ≤1500g; abruption (8), cord accident (5), IUGR/ placental insufficiency (4) and infection (4) were the most common causes of death among the normally-formed stillborn infants. 3 deaths were unexplained. There was one intra-partum death; a baby with known Trisomy 18.

Congenital malformation (6) and extreme prematurity (5) with other problems were the causes of early neonatal death (11); 5 of the 11 early neonatal deaths occurred in normally formed infants, with all of these babies weighing ≤ 1000g. There were 8 late neonatal deaths; 5 of these occurred in normally formed babies, with 3 of these weighing less than 1000g. 2 neonatal deaths occurred in normally formed infants born weighing > 1000g: Group B Strep Sepsis (1) and extreme prematurity, NEC, pneumothorax and bilateral Grade III IVH (1).

There were 938 admissions to the Neonatal Centre (1026 in 2018). The decrease likely reflects the increased role of the Neonatal Unit Nurse Liaison who facilitates the care of certain newborns on the postnatal wards alongside their mothers. 2019 saw the completion of a two-year Bayley developmental follow up for the cohort of inborn VON babies and babies with HIE born in 2017. The Tongue Tie clinic, established in late 2018, continued to assist mothers with breastfeeding and provided onsite frenotomy for tongue tie if required.

136 infants were reported to the Vermont Oxford Network in 2019. The overall survival for VLBW infants in 2019 was 88.8% and importantly survival of VLBW infants without specified morbidities was 66.4%. There was a dramatic increase in the use of any breastmilk and/or a diet of exclusive breastmilk in the VON babies at discharge from NICU (72.4% and 52.8%). The incidence of severe IVH/PIVH was increased at 8.2% (5.1% in 2018) compared to VON at 6.3% but within the statistical predicted range for a NICU like the Coombe. The incidence of chronic lung disease at 36 weeks (14.7% v VON 19.8%) was increased at 14.7% (11.6% in 2018), but remained lower than VON which was 19.8% and appears to correlate with the low rate of invasive ventilation. In 2019, only one baby received ibuprofen for Patent Ductus Arterious (PDA) treatment. No babies required ligation. The use of paracetamol for echocardiographic targeted early therapy of PDA was 10.6% compared to 2.9% 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. There was a significant increase in the number of babies with Retinopathy of Prematurity (ROP) in 2019 that necessitated Anti-VEGF (Evastin) therapy, performed onsite (6; 1 in 2018). A further 3 infants were transferred to CHI Crumlin for laser therapy (1 in 2018). The incidence of severe ROP increased to 5.4% from 1.4% the previous year (3% VON). This increased rate is still within with statistical predicted range for a NICU similar to the Coombe.

10 inborn infants were classified with HIE grade II/III; all were treated by Total Body Cooling according to TOBY trial criteria; 6 infants have had normal neurodevelopmental follow-up to date, one infant has global delay, one infant was diagnosed with Cerebral Palsy, one infant was diagnosed with Group B Strep sepsis and died, and the outcome data on one infant is unknown.

Gynaecology

In 2019 there were 5139 gynaecological operations performed (5071 in 2018). The Gynaecology service, led by Professor Tom D'Arcy, provided by consultants based in the CWIUH across this hospital, St. James's Hospital and Tallaght University 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.

The Ambulatory Gynaecology Clinic, led by Professor Nadine Farah, continued to expand throughout 2019. During the year, 874 women attended the service. It operates a "See and Treat" model of care, whereby women have access to transvaginal ultrasound, hysteroscopy, biopsy and treatment if required, at the same consultation.

There has been a marked increase in the number of minimal access surgeries performed in the hospital over the last seven years. The overall number of laparoscopic hysterectomies (laparoscopic-assisted vaginal, total, subtotal and radical hysterectomy) increased compared to the previous year (96; 69 in 2018), the number of open hysterectomies (vaginal, total abdominal, subtotal and radical hysterectomy) also increased (60; 40 in 2018). A total of 697 tubal/ovarian surgeries were performed laparoscopically in 2019, with and additional 72 open procedures.

Urogynaecology operations fell slightly again in 2019 (367; 377 in 2018) linked to the ongoing national pause on mesh procedures. Treatment options for women with complex pelvic floor dysfunction continued with both vaginal and advanced laparoscopic interventions. The Urogynaecology Service, led by Professor Chris Fitzpatrick, continued to hold Urogynaecology MDT meetings during the year which were most beneficial. Intravesical hyaluronic acid instillations for bladder hypersensitivity continued during the year and there was an increase in the number of botox treatments for refractory Detrusor Overactivity (44; 38 in 2018).

There were 2152 first visit attendances at the Coombe Colposcopy Clinic in 2019, an 8.3% increase compared to 2018, and 4454 return visits, which represented an 11% increase on the previous year. A total of 614 excisional procedures were performed in the clinic and 110 in theatre. A total of 33,200 cytology specimens were processed through the Laboratory in 2019, compared to 31,814 in 2018.

Gynaecological surgical complications during 2019 included uterine perforation (6), bladder/urethral injury (2), transfer to HDU (1). There was one reported incidence of blood transfusion > 5l. 4 patients required transfer to ICU.

Peri-operative Medicine

During 2019, 3158 epidurals were sited in labour; the epidural rate was 40.8%, (highest in the last 7 years in 2015, 42.5%); 98.7% of elective Caesarean sections and 95.0% 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 continues to be 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 2019; 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 and elective caesarean sections.

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 Dr Terry Tan, have continued to attract anaesthetic trainees and the Hospital had been selected by the College of Anaesthesiologists 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 Cellular and Molecular Cytopathology Training School 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 €55m over the past 5 years. In 2019, the Laboratory hosted 8 postgraduate students pursuing PhD degrees. The Molecular Pathology Group published 15 peer reviewed journal articles with 25 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), Professor Mairead Kennelly (UCD Centre for Human Reproduction), Professor Deirdre Murphy (TCD), Professor Sean Daly (TCD), Professor Richard Deane (TCD), Professor Michael Carey (TCD) and Professor Jan Miletin (UCD) 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 2019 the Hospital hosted/co-hosted a series of highly successful multidisciplinary conferences (see Introduction for details) including the Midwifery & Nursing Study Day, the Prematurity Awareness Symposium and the Guinness Lecture Symposium.

Professor Sharon Sheehan

Master/CEO

Hospital Overview

Members of the Board of Guardians and Directors – 2019

Board Members	Date of Election
John Gleeson	2013 (Chair from January 2014)
Carol Bolger	2013
Prof Michael Carey	2012
Anne Marie Curran	2016
Theresa Daly	2019
Mary Donovan	2014
Prof Robbie Gilligan	2016
Dr Eimear Mallon	2018
Michael O'Neill	2014
Ger Prendergast	2019
Maura Quinn	2014
Prof Michael Turner	2013

Ex-Officio Members

THE LORD MAYOR OF DUBLIN

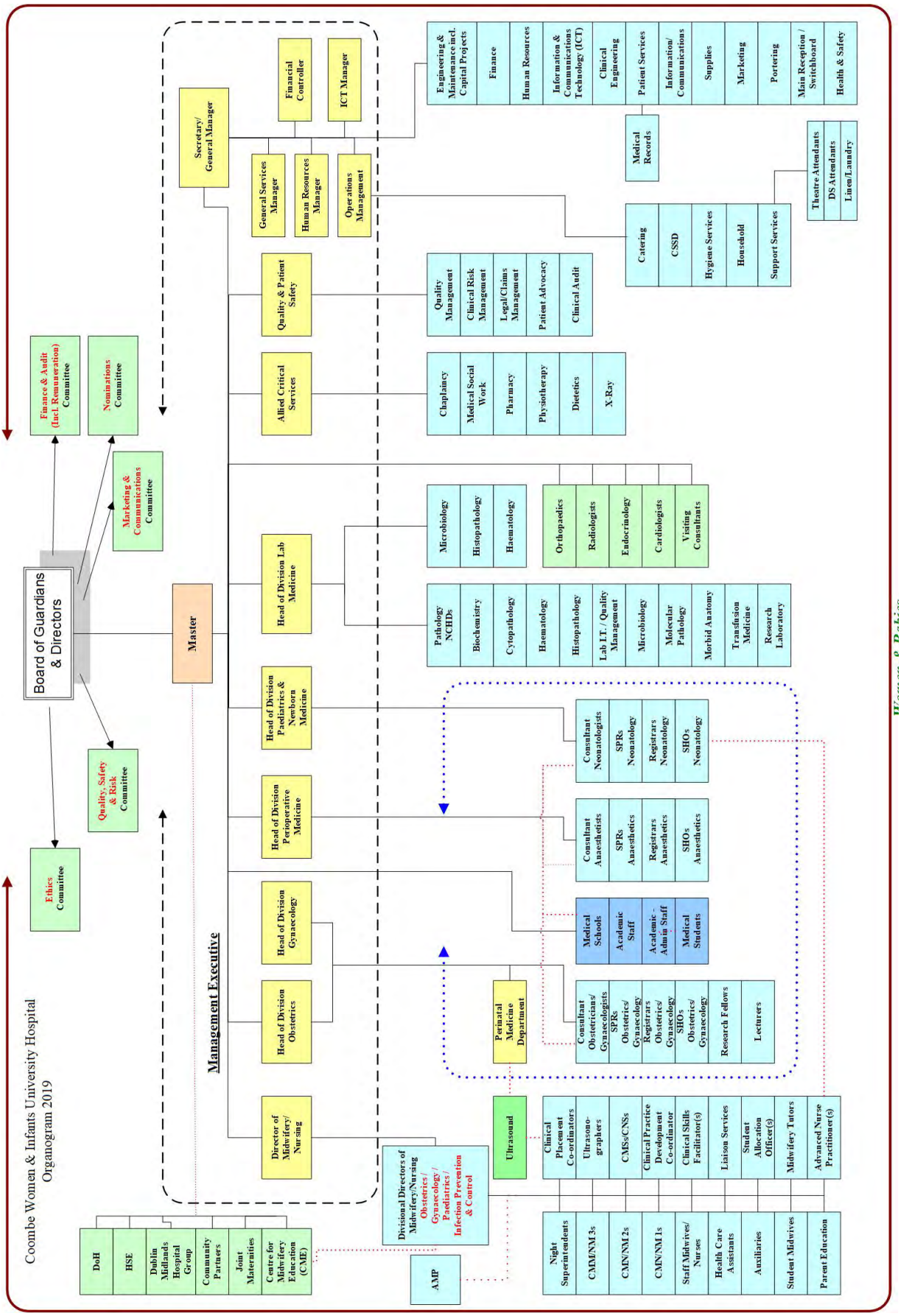
Lord Mayor Nial Ring
(In office from June 2018 – June 2019)

Lord Mayor Paul McAuliffe
(In office from June 2019 – February 2020)

MASTER / CHIEF EXECUTIVE OFFICER

Prof Sharon Sheehan
(from January 2013)

Organisational Chart



Members Of Staff

Consultant Obstetricians / Gynaecologists

Professor 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
Professor Thomas J D'Arcy
Professor Deirdre Murphy
Professor Michael O'Connell
Dr Gunther Von Bunau
Professor Mairead Kennelly
Dr Cliona Murphy
Professor Aisling Martin
Dr Caoimhe Lynch
Dr Aoife O'Neill
Professor Nadine Farah
Dr Shobha Singh
Dr Muhammad Waseem Kamran
Dr Aoife Mullally
Dr Niamh Maher
Dr Iram Basit*
Professor Richard Deane
Dr Workineh Tadesse
Dr. Mark Hehir*

Consultant Anaesthesiologists

Dr Terry Tan (Director of Perioperative Medicine)
Dr Niall Hughes
Dr Steven Froese
Dr Nikolay Nikolov
Dr Rebecca Fanning
Dr Sabrina Hoesni
Dr Stephen Smith
Dr Petar Popivanov*
Professor Michael Carey
Dr Patrick Scanlon

Consultant Neonatologists

Professor 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 Francisco Meza*

Consultant Paediatrician in Palliative Medicine

Dr Mary Devins

Consultant Radiologist (Adult)

Professor Mary T. Keogan

Consultant Radiologist (Paediatric)

Dr Eoghan Laffan
Dr Clare Brenner

Director of Pathology

Professor John James O'Leary

Consultant Histopathologist

Dr Colette Adida
Dr Filip Sokol*

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

Dr Catherine Hinds

Consultant Orthopaedic Surgeons

Dr Paula Kelly

Dr Jacques Noel

Consultant Ophthalmic Surgeon

Dr Kathryn McCreery

Visiting Consultants

Dr Orla Franklin

Dr Enda McDermott

Dr Donal Brosnahan

Dr Thomas Lynch

Professor Andrew Greene

Dr Fiona Mulcahy

Dr Fiona Lyons

Dr Colm Bergin

Non-Consultant Hospital Doctors

Specialist Registrars in Obstetrics / Gynaecology

Dr Nikita Deegan

Dr David Crosby

Dr Syeda Farah Nazir

Dr Fiona O'Toole

Dr Lavanya Shailendranath

Dr Ikechukwu Uzochukwu

Dr Maebh Horan

Dr Irum Farooq

Dr Eimear McSharry

Dr Emily O'Connor

Dr Jennifer Hogan

Dr Amy O'Higgins

Dr Niamh Murphy

Dr Amy Fogarty

Dr Lucia Hartigan

Dr Rachel Elebert

Dr Deirdre Hayes Ryan

Dr Catherine O'Gorman

Registrars in Obstetrics / Gynaecology

Dr Sura Al Najjar

Dr Oxana Hughes

Dr Oladayo Oduola

Dr Zulfiya Mamaeva

Dr Sarah McDonnell

Dr Bogdan Muresan

Dr Amina Javaid

Junior Registrars in Obstetrics / Gynaecology

Dr Ailbhe Duffy
Dr Aleksandra Sobota
Dr Aisling Heverin
Dr Amaliya Morgan-Brown
Dr Aleksandra Sobota
Dr Sarah Petch
Dr Niamh Garry
Dr Gillian Corbett

TCD / Coombe Lecturers / Registrars in Obstetrics / Gynaecology

Dr Mei Yee Ng
Dr Catherine O'Gorman

UCD Lecturers / Registrars in Obstetrics / Gynaecology

Dr Eimer O'Malley

RCSI Clinical Tutor in Paediatrics

Dr Saira Tabassum

Bernard Stuart Fellowship

Dr Brendan McDonnell

Fellow in Maternal Medicine

Dr Dana Alshuwaikhat

Fellow in Urogynaecology

Dr Faiza Aldarmaki

Clinical Research Fellow in Early Pregnancy Ultrasound

Dr Jennifer Hogan

Senior House Officers in Obstetrics / Gynaecology

Dr Maryanne Breen
Dr Icchya Gyawali
Dr Niamh Garry
Dr Ronan Daly
Dr Sara El Nimr
Dr Sarah Petch
Dr Gary Faughnan
Dr Rebecca Grimes
Dr Sarah Milne
Dr Shannon Halpin
Dr Oliver O'Brien
Dr Olufemi Awojoodu
Dr Catarina Chaves
Dr Jayavani Penchala

Senior House Officers in General Practice

Dr David Kinlen
Dr Shona Browne
Dr Declan Donoghue
Dr Frank Fogarty
Dr Janelle O'Sullivan
Dr Caitriona Lee

Specialist Registrars in Paediatrics

Dr Jeanne Cloonan
Dr Heather Cary
Dr Meredith Kinoshita
Dr Rebecca Finnegan
Dr Sadbh Hurley
Dr Claire Murphy
Dr Carmel Moore
Dr Ailbhe McGrath
Dr Aoife Branagan
Dr Leah Halpenny
Dr Philip Stewart
Dr Lisa Flynn
Dr Rachel Mullaly
Dr Caroline Ahearne

Registrars in Paediatrics

Dr Hisham Ali
Dr Saira Tabassum
Dr Shiraz Elbashier
Dr Jsun Loong Wong
Dr Geneva Balanica
Dr Catalina Soroiu
Dr Elizabeth Larkin
Dr Ali Raba

Senior House Officers in Paediatrics

Dr Domhnall McGlacken-Byrne
Dr Ronan Maher
Dr Niamh Kennedy
Dr Anna Prendiville
Dr Zainab Elbishari
Dr Daniel Hardiman
Dr Ciara Lane
Dr Jennifer O'Carroll
Dr Laura Nagel
Dr Karen O'Neill
Dr Mohamed Mohamedsaeed
Dr Orla McNerney
Dr Faris Masaad
Dr Khurram Hanif
Dr Flora Puskas
Dr Evanne O'Halloran
Dr Katie Flinn
Dr Reged Sae Ali
Dr Abrar Haider
Dr Amna Dafaalla

Neonatal Tutor in Paediatrics

Dr Elinor Jenkins

Specialist Registrar in Anaesthetics

Dr. Ruairi Irwin
Dr Jonathan Roddy
Dr Ross Bowe
Dr Anna Impiumi

Senior Registrar in Anaesthetics

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

Registrar in Anaesthetics

Dr Sabina Stanescu
Dr Catalina Buzaianu
Dr Glenn Abela
Dr Iona Sirbu
Dr Sreeramulu Kotakondla
Dr Ruairi Irwin

Senior House Officers in Anaesthetics

Dr Conor Haugh
Dr Conor Gormley
Dr Brian Doyle
Dr Sean Carolan
Dr Neil McAuliffe
Dr Marike Rademan
Dr Shakti Sawh-Connolly
Dr Rory Linehan
Dr Gerard Browne
Dr Ben Cantan
Dr Mairead Marion Hennessy
Dr Patrick Yore
Dr Eanna Mac Gerailt
Dr Shauna Gallen
Dr Meghan Harbison

Specialist Registrars in Histopathology

Dr Peter De La Harpe Golden
Dr Sarah Ni Mhaolcatha

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 including Paediatric Outpatients*

Fidelma McSweeney, *Assistant Director of Midwifery & Nursing with responsibility for Maternity Services including Community Midwifery, Diabetes and Parent Education*

Frances Richardson, *Assistant Director of Midwifery & Nursing with responsibility for Gynaecology, Theatre, Colposcopy Services, Bereavement/Complaints not maternity related (Retired May 2019 - Raji Dominic from 1.07.2019)*

Shyla Jacob, *Night Superintendent Night Superintendent with responsibility for Prescribing, Haemovigilance, Perinatal Mental Health and Infection Prevention & Control.*

Lucy More O'Ferrall, *(Retired 31.03.2019), Night Superintendent Anitha Selvanayagam from 1.07.2019with responsibility for Health Care Assistants, Outpatients Department and Bereavement for the Maternity Services.*

Ita Burke, *Night Superintendent with responsibility for Delivery Suite, Birth Reflections, Resuscitation Officer and Clinical Nurse Specialists*

Advanced Nurse Practitioner – Neonatal Nursing

Anne O'Sullivan

Infection Prevention & Control Nurse

Rosena Hanniffy *(retired 8.12.19)*

Geraldine Chawke

Clinical Midwife / Nurse Managers 3

Ann Fergus, *CMM3 Delivery Suite & Birth Reflections Service*

Nora Vallejo, *Acting CMM3 Delivery Suite & Sinead Finn from 16.09.19*

Anitha Selvanayagam & Joanne Glover & Raji Dominic, *CMM3, Maternity Wards*

Ann-Marie Sliney, *(resigned 2.06.19) then Breege Joyce Acting, CMM3, Community Midwifery*

Mary O'Connor, *CMM 3, NNC*

Elaine McGeady, *CMM 3, Fetal Medicine & Perinatal Ultrasound*

Mary McDonald, *CMM 3, OPD*

Alison Rothwell, *CNM 3, Theatres*

Midwife Manager for PPGs, Audit, Statistics & Personnel

Anne Jesudason *on secondment from May 2019 – Then Joanne Glover Acting*

Midwifery Education

Ann Bowers, *CPC, Acting, Practice Development Co-ordinator - Paula Barry on secondment as Research Midwife - Paula Barry returned to post 17.06.19 and Ann Bowers returned to CPC post on 24.06.19*

Gwen Baker, *CPC*

Sarah Lodola, *CPC*

Natasha Joyce, *CPC*

Mary Rodgerson, *CPC*

Helen Saldanha Castelino, *St Patrick's Ward, CPC from 15.01.18, CMM 1 prior to this. Helen to Acting CMM3 Matetrnity – Gráinne Gillett commenced as CPC 2.12.19*

Arathi Noronha, *Post Registration Programme Facilitator*

Denise Kiernan, *Allocations Liaison Officer, 0.5 WTE*

Kevin Mulligan, *Co-ordinator Post Graduate Diploma in Intensive Neonatal Nursing Programme*

Joy Geraghty, *Clinical Skills Facilitator, Delivery Suite, Acting*

Clinical Midwife / Nurse Managers 2

Sangeetha Nagarajan, *CMM2 St. Gerard's Ward*

Mercy Ninan, *Gynae Day Ward*

Fiona Gilsenan, *Theatre*

Sarah Ann Walsh, *Theatre*

Aine Mathews, *Theatre*

Grainne Sullivan, *Delivery Suite*

Monica O'Shea, *Delivery Suite*

Noirín Farrelly, *Delivery Suite*

Fiona Noonan, *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 – then to ACMM3 on 16.09.19*

Carmel Healy, *Delivery Suite*

Mary McMorrow, *St Monica's Ward*

Rhoda Billones, *NNC*

Mary O'Connor, *NNC – (Substantive Post) Acting CMM3 in 2018- Permanent 7.06.19.*

Mary Ryan, *NNC (0.5 WTE)*

Nova Lacondola Quiapos, *Neonatal – promoted to CNM2 on 13.08.18*

Luisa Daguio – *NNU*

Manju Kuzhivelil, *Neonatal –promoted to CMM2on 1.11.18*

Ann Kelly, *NNC (0.5 WTE)*

Violeto Basco, *Neonatal, promoted to CNM2 13.08.18*

Ann Leonard, *St Patrick's ward*

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*

Nicole Mention, *Ultrasound*

Aoife Metcalfe, *Ultrasound (CMS Designate)*

Felicity Doddy, *Perinatal Diagnosis Co-ordinator, Ultrasound*

Sinead Gavin, *Ultrasound*

Janice Gowran, *Early Pregnancy Assessment Unit Megan Sheppard took over as CMM2 in Parent Education from 30.07.18*

Clare Smart, *Gynaecology Services Co-Ordinator*

Feba Paul, *Colposcopy (CMS Designate)*

Laura McGovern, *Gynaecological Oncology Liaison*

Sarah Gleeson, *CMS Designate, Bereavement resigned 30.06.19*

Haemovigilance Officer

Sonia Varadkar

Midwife Co-Ordinator High Risk Midwifery Team

Catherine Manning, *Candidate for AMP from 1.05.19*

Nora Vallejo, *Candidate for AMP FROM 14.10.19*

Clinical Midwife or Nurse Specialists (CMS / CNS)

Ethna Coleman, *CMS, Diabetes, resigned 6.01.19.*

Clíodhna Grady, *CMS, Diabetes, resigned 27.01.19*

Jane Durkan Leavy, *CMS, Ultrasound*

Christine McLoughlin, *CMS, designate, Ultrasound*

Siobhán Ni Scannaill, *CMS, Ultrasound*

Olivia McCarthy, *Colposcopy*

Feba Paul, *Colposcopy*

Aoife Kelly, *CMS, Colposcopy*

Yvonne McCudden, *Colposcopy*

Margaret Moynihan, *CMS, Adult & Neonatal Resuscitation*

Meena Purushothaman, *CMS, Lactation, Secondment in 2020*

Mary Toole, *CMS, Lactation*

Orla Cunningham, *CMS, Infectious Diseases*

Brid Shine, *CMS, Bereavement*

Susanne Daly, *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*

Joy Geraghty, *Delivery Suite*

Denise Murphy, *SCF from 2018*

Clinical Midwife / Nurse Managers I

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*
Geraldine Creamer Quinn, *St Patrick's Ward*
Minimol George, *St Patrick's Ward*
Deborah Duffy, *St Monica's Ward*
Marie Foudy, *St Monica's Ward*
Althea Noble, *St Monica's Ward*
Nerissa Kiernan, *Our Lady's Ward*
Eleanor Holland, *St. Joseph's Ward*
Bronagh O'Connell, *St. Patrick's Ward*
Elvicia Joby, *Our Lady's Ward*

On Secondment to Health Service Executive

Maureen Revilles, *Acting Director of Midwifery & Nursing, Portlaoise Hospital*
Anne Jesudason, *Project Manager, ONMSD Classroom Management System, NMPDU*
Judith Flemming, *on secondment to CME from Oct 15 to present*

Midwifery & Nursing Secretarial Support

Sarah Bux
Patricia Griffiths

Medical Social Workers

Rosemary Grant, *Principal Medical Social Worker (Retired)*
Tanya Franciosa, *Principal Medical Social Worker*
Denise Shelly, *Senior Medical Social Worker*
Sarah Lopez, *Senior Medical Social Worker*
Sorcha O'Reilly, *Senior Medical Social Worker*
Kate Burke, *Senior Medical Social Worker*
Gretchen Gaspari McGuirk, *Medical Social Worker*
Tara Lynch, *Medical Social Worker*

Physiotherapists

Anne Graham, *Physiotherapy Manager*
Clare Daly, *Physiotherapy Manager*
Julia Hayes, *Senior Chartered Physiotherapist*
Roisin Phipps Considine, *Senior Chartered Physiotherapist*
Anna Chrzan, *Chartered Physiotherapist*
Laura Ward, *Senior Chartered Physiotherapist*
Alyson Walker, *Senior Chartered Physiotherapist*
Sinead Boyle, *Senior Chartered Physiotherapist*
Gillian Healy, *Senior Chartered Physiotherapist*
Amanda Martins, *Physiotherapist*

Dietician / Clinical Nutritionist

Fiona Dunlevy, *Dietician Manager*
Niamh Ryan, *Senior Dietician (Diabetes)*
Roslyn Tarrant, *Clinical Specialist Dietician (Neonatology)*

Pharmacists

Mairead McGuire, *Chief Pharmacist I*
Peter Duddy, *Chief Pharmacist II*
Una Rice, *Senior Pharmacist, Antimicrobial Stewardship*
Orla Fahy, *Senior Pharmacist (Antimicrobial)*
Joanne Frawley, *Senior Grade Pharmacist*
Leanne Flynn, *Basic Grade Pharmacist*
Gayane Adibekova, *Pharmacy Technician*
Sarah Dunne, *Pharmacy Technician*
Lynsey McCarthy, *Pharmacy Technician*

Chief Medical Scientists

Martina Ring, *Laboratory Manager*
Stephen Dempsey, *Pathology Quality/IT*
Fergus Guilfoyle, *Haematology/Blood Transfusion*
Alma Clancy, *Microbiology*
Roisin O Brien, *Cytology*
Kate Thompson, *Histology*

Principal Biochemist

Ruth O'Kelly

Clinical Specialist Radiographer

Johannes Tsagae

Edwina Quinlan

Secretary & General Manager

Patrick Donohue

Financial Controller

John Robinson

Human Resources Manager

AnneMarie Waldron, *HR Manager*

Household Services Manager / Household Supervisor

Michael Cummins

Patient Services Manager

Ann Shannon

Deputy Patient Services Manager / Healthcare Records Manager

Niamh McNamara

Data Governance Manager

Siobhan Lyons

Operations & Hygiene Services Manager

Vivienne Gillen

Assistant Household Supervisor

Arlene Kelly

Olive Lynch

Rita Greene

Colm Harte*

Hospital Engineer

Serge Panzu Nianga

Head of Clinical Engineering

Karl Bergin

Research Project Managers

Lean McMahon*

Karen Power*

Quality Manager

Evelyn O'Shea

Clinical Risk Manager

Anna Deasy

Michelle McTernan

Michelle Lynch, *Legal & Claims Coordinator*

Patient Liason Manager

Niamh Dunne

Supplies Manager

Robert O'Brien

Catering Manager

Thomas Dowling

Chaplain

Renee Dilworth

Josette Vassallo, Chaplain*

Marketing & Communications

Mary Holden, *Communications Manager*

Aoife Walsh, *Marketing Manager*

Information Technology Manager

Melissa Lawlor

Health & Safety Officer

Tom Ryan

Reception

Brid Mangan, *Head Receptionist*

P.A. To Master / CEO and to Secretary & General Manager

Laura Forde

** Locum/Temporary position*

Staff Retirements in 2019

Ann Byrne
Assistant Clinical Risk Manager

Ann Murray
Domestic

Frances Richardson
Assistant Director of Midwifery & Nursing

Frank Kenny
Electrician

Jacqui Barry O'Crowley
Chief Medical Scientist

Lucy More O'Ferrall
Night Superintendent

Marian Lawrence
Grade IV Officer

Marie Herbert
Household Attendant

Mary Shannon
Senior Staff Nurse

Mary Sweeney
Chief Medical Scientist

Mary Warren
Grade III Officer

Paul Kelly
Painter

Rosemary Grant
Principal Medical Social Worker

Rosena Hanniffy
Assistant Director of Midwifery & Nursing (IPCC)

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 2019 for their enormous contribution during their years of dedicated professional service.

Prof Sharon Sheehan
Master / CEO

Director of Midwifery and Nursing

Director Midwifery & Nursing- Corporate Report 2019

Title of Post	In post on 31st December 2018 (WTE)	In post on 31st December 2019 (WTE)
Director of Midwifery & Nursing	1	1
Assistant Director of Midwifery & Nursing	6.55	5.85
Advanced Nurse Practitioner-Neonatal Nursing	1	1
Midwifery & Nursing Practice Development Co-ordinator	1	1
Postgraduate Neonatal Programme Co-ordinator	0.33	0.33
Clinical Midwife/Nurse Manager 3	10	8.36
Clinical Midwife/Nurse Manager 2	43.29	42.39
Clinical Midwife/Nurse Specialists	12.29	9.97
Clinical Skills Facilitators	3.74	5.06
Haemovigilance Officer	0.77	0.77
Clinical Placement Coordinators	4.23	4.44
Post Registration Programme Facilitator	1	1
Allocation Liaison Officer	0.5	0.5
Clinical Midwife/Nurse Manager 1	7.6	10.57
Midwives & Nurses	259.35	269.83
Midwifery Students	8	13
Advanced Midwife Practitioners Candidates	0	2
Total	**362.32**	**377.07**

Staff Complement

Total Complement for Midwives & Nurses as of 31st December 2019 was 392 WTE.

Key Performance Indicators

Quality of Midwifery & Nursing Care

- That every woman, baby and family experience safe, 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.
- Develop innovative dynamic resilient midwives and nurses.
- Workforce Planning and Development with a strong focus on recruitment, retention and succession planning resulting in a decrease in agency usage and a decrease in 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.
- Develop and nurture leadership and management capabilities in the Midwives and Nurses.
- 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 2019

2019 brought change and diversity to the Coombe Women & Infants University Hospital. January commenced with the Irish Nurses & Midwives Organisation Industrial Action for 'Safe Staffing and

Higher Pay Scale for Staff Nurses and Midwives', which commenced on Wednesday 30th January and was resolved on February 13th. It involved 3 days of strike action where all elective surgery, antenatal, gynaecology and paediatric outpatient clinics were cancelled for the first day of industrial action. Derogations were granted for the Delivery Suite, Assessment Unit, the Emergency Room and the Neonatology Department. Theatre was available for emergency and urgent cases. While activity was curtailed, patient safety remained the main focus and the provision of essential services to our patients continued through the assistance and help of the Multidisciplinary Team. The Hospital Senior Management Team and the Strike Committee met regularly throughout the Industrial Action and all staff maintained good communications and working relationships. The Enhanced Nurse/Midwife Practice salary scale was developed as a recruitment and retention tool and to help support the implementation of Sláintecare. The Director of Midwifery and the Midwifery Administration CMM III had meetings with the Nursing and Midwifery Staff regarding information sessions and updates on the enhanced contract.

In February under new legislation, the Health (Regulation of Termination of Pregnancy) Act 2018 Abortion Services was introduced and implemented. Sincere thanks to the commitment of staff who ensured that a safe, high-quality sensitive and compassionate service was given to the women and their families.

The National Maternity Experience Survey was launched on 1st October 2019 as a joint initiative by HIQA, the HSE and the Department of Health. All mothers who delivered their babies during the month of October in the 19 maternity units will be contacted by post in March/April 2020 to share their experiences of the care they received while pregnant, at the time of birth, and after the baby was born. All our staff midwives & nurses with support from the administration staff and our Patient Advocate encouraged as many of our Coombe mothers as possible to participate in the survey and share their experiences. A delegation from HIQA, the Department of Health and the National Women & Infants Programme visited the Hospital on the 17th October to answer any queries regarding the survey and to give updates on its implementation. They met with staff and thanked them for supporting the survey.

Multiple projects and upgrades continued throughout 2019: the Mortuary Project, the Rita Kelly Lecture Theatre in the Coombe Education Centre, the Outpatients Department and essential maintenance work in the High Dependency Unit and the Neonatal Intensive Care Unit. Sincere thanks to all involved in the projects and to all Managers and staff for ensuring that continued care was given to all the women & babies and families throughout the upgrades.

The care, support and passion 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 2019 and the achievements listed in the various clinical reports would not have been possible without the dedication and commitment of all the staff. Sincere thanks to the ADoM&Ns for their Leadership & Management, and of course their continued support, help and kindness that they continually gave to all the staff throughout the year. A very sincere thanks to all the CMM/CNMs, CN/MSs, CSFs and all the staff for their hard work, dedication and caring ethos that they bring everyday to the women, babies, families and colleagues.

Workforce Planning

January began with a Staff Gathering to present rotation and each departmental CMM III presented their opportunities to develop staff and showcase current quality initiatives that are being developed within their department.

Our Total Whole Time Equivalent (WTE) increased to 392, thanks to 6 new posts from NWIHP, CNS and CMS from the National Perinatal Mental Health Initiative and an AMP post from the NMPDU. Three Assistant Directors of Midwifery & Nursing retired in 2019, taking with them well over 100 years of Midwifery & Nursing Leadership and Management experience. We were delighted that the success of our succession planning enabled the recruitment of two of our CMMs, Raji Dominic and Anitha Selvanayagan as ADoM&Ns. To continue to encourage succession planning, the ADoN&Ms are rotating on days and nights and the CMM IIIs support by carrying the bleep 157. The Midwifery Executive also re-designed the reporting structure ensuring that clear support structures are in place for all staff midwives and nurses and managers in the CWIUH. The ADoM&N in Infection Prevention and Control was advertised both in Ireland and the UK with no success. The AMP candidates, Catherine Manning in High Risk and Nora Vallejo in Models of Care (Maternity Strategy) commenced during the year. We are delighted that we will have two leaders in both the Normal and High-Risk Midwifery Care.

The expansion of the Perinatal Mental Health Team was welcomed. Two CNSs, a new Psychiatric Consultant and Psychologist joined the Team. Four Staff Midwives underwent the adaptation programme successfully registering with the Nursing & Midwifery Board of Ireland (NMBI), thanks to Practice Development, Clinical Skills Facilitators and the CMM IIs & Staff Midwives on the Maternity floors. The CWIUH Team comprising of Midwives and Human Resources attended the Nursing and Midwifery Healthcare Job Fair in the RDS on March 30th and the Healthcare Fair in London on April 13th. There were 10 Staff Nurses interested in the Midwifery Programme. Sincere thanks to HR for their continued

support throughout the year with recruitment and retention. For 2019, there were 63 new staff recruited and 54 resignations of which 3.85WTE retired including 3 ADoM&Ns.

Midwifery / Nursing Education

Seventeen Student Midwives commenced their Internship in January. Twenty-two of our Student Midwives who graduated in September accepted permanent posts and commenced in September, October and November. This is a fantastic reflection of the support, guidance and education that the students received from their preceptors, staff midwives & nurses and clinical managers throughout their programme. Sincere thanks to all staff for the support they give each day to the Student Midwives. Fifteen Higher Diploma Student Midwives commenced their programme in September, an increase of nearly 50%. This was a great achievement supported by our Post Registration Facilitator, the Human Resource Team and our Communications Officer. Three Erasmus student midwives from Denmark spent six weeks in the CWIUH for their elective placement.

To celebrate International Midwives Day 2019 a symposium was organised by the Practice Development Team. The Midwives, Nurses and Student Midwives presented with the theme being 'Multicultural Diversity'. The meeting was well attended by the Multidisciplinary Team.

Approval and funding from the Nursing & Midwifery Planning Development Unit (NMPDU) secured funding for 32 midwives and nurses to continue and/or commence study at Diploma/Post Graduate Diploma/ MSc level and High Dependency Maternity Care module and Lactation IBLCLC Course. This financial support is critical to the Continuous Professional Development of the midwives and nurses. Innovation NMPDU funding for iPads for DS and NICU for Medication Management was also supported. This was an innovation of the Delivery Suite staff, Neonatal Unit staff and Pharmacy. The Maternity Care Metrics commenced in St. Monica's Ward and Our Lady's Ward with the support from the Nursing and Midwifery Planning & Development Unit, the CMM IIs and the CSFs. This will enable collection of data regarding KPIs in Midwifery care. Close links were developed with TCD to form a Research Collaboration Team and is in the process to develop a Coombe Research Team to support Staff Midwives and Nurses who are undertaking MScs and PgDip programmes in September 2020.

The 6th Annual Regional Nursing & Midwifery (NMPDU) Conference was held in Tallaght in September. Fidelma Mc Sweeney (ADoN&M) and Megan Sheppard (CMM II Parent Education) presented "The implementation of a new model of antenatal education in a combined Community & Tertiary Maternity setting" at the conference. Three Staff involved in Parent Education trained in *'Solihull Approach'*, this is an area-based parenting model which uses the social learning theory in the design of parenting programmes. Seven Staff attended and the DoM&N was a judge in the conference poster presentations. The DoM&N attended the AON Governance meeting in Croke Park in October and the Leadership Lecture in the RCSI in November.

The Clinical Skills Facilitator commenced in Theatre in May to support new staff and the rotation of the newly qualified midwives with ongoing education in close collaboration with the Delivery Suite and the Maternity Wards. Toolbox education sessions, supported by the clinical skills facilitators, continued with the focus on IMEWS training, escalation process and documentation. Four Staff Midwives became champions in the implementation and auditing of the IMEWS Clinical Handover. IMEWS audits have been completed by the Clinical Skills Facilitators and further teaching sessions are being organised. Toolbox sessions with a focus on Maternal and Neonatal emergencies continue with support from the MDT Team and the Resuscitation Officer. NEWS audits continue in St. Gerard's Ward under the supervision of the CMM II.

The Flu Team composed of the Occupational Health Nurse, Clinical skills Facilitators, Clinical Placement co-ordinators and the Communication Officer reconvened and the aim this year was to vaccinate over 65% of the staff in the CWIUH. They were successful and achieved 70%. A structured timetable for vaccination clinics was organised in different venues within the hospital for the month of October. This enabled easy access for staff. Sincere thanks to the Flu Team for ensuring that staff were offered every opportunity and encouragement to be protected against the Flu.

A Training Programme *'Babies requiring palliative care'* was given with the support of Children's Health Ireland (CHI) and our NICU staff to the midwives and nurses in St Gerard's ward. The feedback from the staff was very positive.

The Neonatal Christmas party was held on Saturday 14th December and 30 families attended, it was a great success with Santa in attendance also.

Quality Improvement / Risk Issues

A LEAN study day was led by Fidelma Mc Sweeney (ADoM&N) who has achieved the Black Belt in LEAN. Twenty staff attended from the MDT, Physiotherapy, Human Resources, Anaesthetics, Pharmacy, Healthcare Assistants, Diabetic midwives and nurses from Gynaecology. Five White Belt LEAN projects commenced in January; Parent Education, St. Patrick's Ward, CMS Bereavement in St. Gerard's Ward, Anaesthetics and Dietetics. There are 2 Green Belt projects in progress;

OPD Project *"Using the lean process to reduce time wasting in the Emergency Room for better patient care and safer staff."*

Parent Education *"Introducing Birth Dynamics- A Package of Antenatal Education to support and empower women through their birthing experience"*.

A pilot project initiated by the Neonatal Team with the introduction of a lactation support Nurse 0.5WTE to support Mothers express within 2 hours of delivery. At the three and six month interval the numbers are indicating improvements in the time women received assistance, in the times colostrum was received in the Unit, and also in the increase of maternal supplies. The data suggests that EBM supply has increased along with maternal satisfaction.

The SAFE Project commenced in the Neonatal Department supported by the RCPI. SAFE stands for situation awareness for everyone. The Neonatal Team's aim is to identify subtle deterioration in babies in the SCBU and High Dependency population resulting in decreased transfer of babies from SCBU to HDU, HDU to NICU and decrease parental stress.

A quality improvement pathway was developed in the Neonatal Unit to address tissue-viability with the use of CPAP devices. This QIP continues and a guideline was developed.

Other quality improvements such as *OASIs, Improving Discharge Information for Gynaecology patients, Improving the Induction of Labour Experience for Women, Improving Surgical Site Infection Rate for Women having a C-section* continue with ongoing education sessions, debriefing and audit. The importance of sustaining long term improvements is vital at maintaining quality care. The QI team organised a hugely successful Study Day on the Prevention & Management of 3rd & 4th Degree Tears in June. Experts from the Coombe, NMH and the Pelvic Floor Clinic presented their work to over 50 multidisciplinary delegates from the Coombe and other hospitals.

The Women's Health Unit has revised their discharge policy and the attendance policy in line with hospital policy for both Colposcopy and Hysteroscopy. Patients who DNA will be discharged back to their GP, a letter is also sent to the GP and the patient. The CMS in the Urodynamic Clinic carried out a pilot project *'Nurse-Led pessary clinic'* which was very successful and a business plan is being developed for permanent implementation and upskilling of more staff.

Challenges

- Recruitment of Student Midwives for the HDip Programme in Midwifery continues to be a challenge and a concern. We strive each year to fill the 25 places with wonderful support from Human Resources, Communications Officer and Practice Development Team. These concerns continue to be raised to the DMHG, NWIHP and the HSE.
- Facilitate a mechanism to ensure post graduate education is intrinsically linked to clinical practice – Midwifery Research Group with academic partners.
- Re-structure of Community Midwifery in line with Sláintecare and supported by the cAMP.
- Development of the Women's Health Unit.

Going forward into 2020 let our **Values** continue to 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 in working together and respecting and supporting each other

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

Appointment of the New Master

I would like to take this opportunity to congratulate Professor O'Connell on his election as the next Master and sincerely wish him the very best.

Sincere thanks to Professor Sharon Sheehan for her support, guidance, wisdom, kindness and wonderful Leadership to us all throughout her Mastership.

Ms Ann MacIntyre

Director of Midwifery and Nursing

Activity Data

Dublin Maternity Hospitals – Combined Clinical Data

Professor 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	7746
Mothers delivered < 500 grams & miscarriages	559
Gestational Trophoblastic Disease	15
Ectopic pregnancies	114
Total mothers	**8434**

** Does not include all spontaneous miscarriages*

2. Maternal Deaths 0

3. Births ≥ 500g

Singletons*	7568
Twins*	345
Triplets	12
Quadruplets	4
Total	**7929**

**excludes babies <500g*

4. Obstetric Outcome (%)

Spontaneous vaginal delivery	54.3
Forceps	4.3
Ventouse	7.8
Caesarean Section	33.8
Induction	38.2

5. Perinatal Deaths ≥ 500g

Antepartum Deaths	32
Intrapartum Deaths	1
Stillbirths	33
Early Neonatal Deaths	11
Late Neonatal Deaths	8
Congenital Anomalies	16*

** 7SB, 6 END, 3LND*

6. Perinatal Mortality Rates ≥ 500g

Overall perinatal mortality rate per 1000 births	5.5
Perinatal mortality rate corrected for lethal congenital anomalies	3.9
Perinatal mortality rate including late neonatal deaths	6.6
Perinatal mortality rate excluding unbooked cases	5.2
Corrected perinatal mortality rate excluding unbooked	3.5
Corrected perinatal mortality rate excluding those initially booked elsewhere	3.3

7. Age

Age (Years)	Nulliparous* N	Parous* N	Total N	Total %
< 20 yrs	109	21	**130**	**1.7**
20-24 yrs	401	207	**608**	**7.8**
25-29 yrs	660	664	**1324**	**17.1**
30-34 yrs	1141	1526	**2667**	**34.4**
35-39 yrs	722	1676	**2398**	**31.0**
40+ yrs	171	448	**619**	**8.0**
Total	**3204**	**4542**	**7746**	**100.0**

**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

Age (Years)	Nulliparous N	Parous N	Total N	Total %
Para 0	3204		**3204**	**41.4**
Para 1		2734	**2734**	**35.3**
Para 2-4		1725	**1725**	**22.2**
Para 5+		83	**83**	**1.1**
Total	**3204**	**4542**	**7746**	**100.0**

9. Country of Birth & Nationality

Country	N	%
Ireland	5444	70.3
Britain	223	2.9
EU	709	9.1
EU Accession Countries 2007	195	2.5
Rest of Europe (including Russia)	160	2.1
Middle East	42	0.5
Rest of Asia	511	6.6
Americas	191	2.5
Africa	248	3.2
Australasia	19	0.2
Uncoded	4	0.1
Total	**7746**	**100**

10. Socio-Economic Groups

Socio-Economic Group	N	%
Higher Profession	775	10.0
Lower Profession	2704	34.9
Clerical	1047	13.5
Skilled	818	10.6
Semi-Skilled	544	7.0
Unskilled	306	4.0
Unemployed	1463	18.9
Unsupported	44	0.6
Military	5	0.1
Not Classified	35	0.5
Not Answered	5	0.1
Total	**7746**	**100**

11. Birth Weight

Grams	Nulliparous N	Parous N	Total N	Total %
500 – 999	29	28	**57**	**0.7**
1000 – 1499	41	32	**73**	**0.9**
1500 – 1999	48	53	**101**	**1.3**
2000 – 2499	177	184	**361**	**4.5**
2500 – 2999	542	597	**1139**	**14.4**
3000 – 3499	1108	1479	**2587**	**32.6**
3500 – 3999	1044	1641	**2685**	**33.9**
4000 – 4499	279	546	**825**	**10.4**
4500 – 4999	25	72	**97**	**1.2**
≥ 5000	2	2	**4**	**0.1**
Total	**3295**	**4634**	**7929**	**100**

12. Gestational Age

Weeks	Nulliparous N	Parous N	Total N	Total %
< 26 weeks	17	14	**31**	**0.4**
26 – 29 weeks + 6 days	32	36	**68**	**0.9**
30 – 33 weeks + 6 days	50	65	**115**	**1.4**
34 – 36 weeks + 6 days	237	248	**485**	**6.1**
37 – 41 weeks + 6 days	2919	4256	**7175**	**90.5**
42+ weeks	36	12	**48**	**0.6**
Not Answered	4	3	**7**	**0.1**
Total	**3295**	**4634**	**7929**	**100**

13. Perineal Trauma after Spontaneous Vaginal Delivery (SVD)

	Nulliparous		Parous		**Total**	
	N	%	N	%	**N**	**%**
Episiotomy	382	28.6	137	4.8	**519**	**12.3**
First degree tear	197	14.7	638	22.2	**835**	**19.9**
Second degree tear	587	44.0	855	29.8	**1442**	**34.3**
Third degree tear	36	2.7	25	0.1	**61**	**1.5**
Fourth degree tear	0	0.0	1	0.0	**1**	**0.0**
Other	723	54.1	1197	41.7	**1920**	**45.7**
Intact	78	5.8	798	27.8	**876**	**20.8**
Total Spontaneous Vaginal Deliveries	**1335**		**2870**		**4205**	

14. Third Degree Tears (N = 92)

	Nulliparous	Parous	**Totals***	
	N	N	**N**	**%**
Occurring spontaneously	36	25	**61**	**66.3**
Associated with episiotomy	26	2	**28**	**30.4**
Associated with forceps	17	2	**19**	**20.6**
Associated with ventouse	8	1	**9**	**9.8**
Associated with ventouse + forceps	3	0	**3**	**3.3**
Associated with O.P. position	5	2	**7**	**7.6**
Total Third Degree Tears	**64**	**28**	**92**	

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

15. Perinatal Mortality in Normally Formed Stillborn Infants (N=26)

	Nulliparous	Parous	**Total**
Abruption	2	6	**8**
Cord accident	3	2	**5**
IUGR / Placental Insufficiency	1	3	**4**
Infection	2	2	**4**
Feto-maternal Haemorrhage	0	1	**1**
Placental Infarction	1	0	**1**
Unexplained	1	2	**3**
Total	**10**	**16**	**26**

16. Perinatal Deaths in Infants with Congenital Malformation (N = 13)*

	Nulliparous	Parous	Total
Chromosomal	1	5	**6**
Congenital Cardiac Disease	0	1	**1**
Neural Tube Defects	0	1	**1**
Thanatophoric Dysplasia	1	0	**1**
Arthrogryposis Multiplex Congenita	0	1	**1**
Renal Agenesis	0	1	**1**
Hydrops	0	1	**1**
Gestational Alloimmune Liver Disease	0	1	**1**
Total	**2**	**11**	**13**

** 7 SB, 6 END*

17. Neonatal Deaths ≥500g (N=19)*

	Nulliparous	Parous	Total
Congenital	3	6	**9**
Extreme Prematurity / Sepsis	2	1	**3**
Extreme Prematurity / IVH	3	0	**3**
Extreme Prematurity / Pulmonary Haemorrhage / IVH	0	1	**1**
Extreme Prematurity / NEC	0	1	**1**
Extreme Prematurity / Pulmonary Hypoplasia / Pulmonary Hypotension	1	0	**1**
Group B Strep Sepsis	1	0	**1**
Total	**10**	**9**	**19**

** 11 END, 8 LND*

18. Overall Autopsy Rate - 48%

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

20. Severe Maternal Morbidity (N= 76 mothers*)

	Nulliparous	Parous	Total
Massive Obstetric Haemorrhage	25	25	**50**
Renal / Liver dysfunction	5	4	**9**
Peripartum hysterectomy	3	2	**5**
Septic Shock	1	2	**3**
Pulmonary Embolus	2	2	**4**
Pulmonary Oedema	1	1	**2**
ICU	2	3	**5**
Other	1	4	**5**

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

21. Financial Summary at 31st December 2019

Income	€,000	€,000
Department of Health Allocation 2019	70,184	
Patient Income	10,040	
Other	4,643	
		84,687
Pay		
Medical	13,174	
Nursing	22,853	
Other	31,449	
		67,476
Non Pay		
Drugs & Medicines	2,339	
Medical & Surgical Appliances	5,445	
Insurances	100	
Laboratory	2,625	
Other	6,786	
		17,295
Net Surplus 2019		96
Taxes paid to Revenue Commissioners Year ended 31st December 2019		
PAYE & USC		11,695
PRSI EE		1,966
PRSI ER		5,214
Withholding Tax		151

Does not include any deficit balances carried forward from previous years

Statistical Summaries

Professor Sharon Sheehan, *Master*

1. Mothers Attending Hospital

	2013	2014	2015	2016	2017	2018	**2019**
Mothers delivered ≥ 500 grams	7986	8632	8220	8233	7975	8154	**7746**
Mothers delivered < 500 grams and Miscarriages*	563	632	649	589	586	578	**559**
Gestational Trophoblastic Disease	14	6	8	6	24	16	**15**
Ectopic Pregnancies	89**	124	124	113	104	79	**114**
Total Mothers	**8610**	**9344**	**9001**	**8941**	**8689**	**8827**	**8434**

** Does not include all spontaneous miscarriages*

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

2. Maternal Mortality

	2013	2014	2015	2016	2017	2018	**2019**
Maternal Deaths	1[1]	1[2]	1[3]	0	0	1[4]	**0**

[1] *Cardiac arrest brought about by hyperkalaemia*

[2] *Amniotic Fluid Embolism (cardiac collapse & disseminated intravascular coagulopathy following amniotic fluid escape into the maternal circulation)*

[3] *Ruptured giant internal carotid artery aneurysm with systemic Fibromuscular Dysplasia*

[4] *Coroner's Report awaited*

3. Births ≥ 500g

	2013	2014	2015	2016	2017	2018	**2019**
Singleton	7810	8463	8042	8048	7786	7978	**7568**
Twins*	338	336	353	350	365	344	**345**
Triplets*	18	20	9	23	15	8	**12**
Quadruplets*	4	0	0	0	0	0	**4**
Total	**8170**	**8819**	**8404**	**8421**	**8166**	**8330**	**7929**

**excludes babies <500g*

4. Obstetric Outcomes

	2013	2014	2015	2016	2017	2018	**2019**
Induction of Labour	33.8%	30.9%	31.7%	33.9%	34.8%	37.0%	**38.2%**
Episiotomy	13.2%	13.2%	13.9%	15.5%	17.9%	17.9%	**17.2%**
Forceps Delivery	5.2%	5.2%	5.8%	5.3%	5.3%	4.8%	**4.3%**
Ventouse Delivery	8.5%	9.3%	9.0%	9.1%	9.6%	9.8%	**7.8%**
Caesarean Section	28.0%	27.8%	29.3%	31.3%	31.8%	33.8%	**33.8%**

5. Perinatal Deaths ≥ 500g

	2013	2014	2015	2016	2017	2018	2019
Stillbirths	31	41	29	21	27	20	**33**
Early Neonatal Deaths	29	13	19	18	22	16	**11**
Late Neonatal Deaths	6	2	7	6	11	5	**8**
Total	**66**	**56**	**55**	**45**	**60**	**41**	**52**

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

Overall perinatal mortality rate per 1000 births	5.5
Perinatal mortality rate corrected for lethal congenital anomalies	3.9
Perinatal mortality rate including late neonatal deaths	6.6
Perinatal mortality rate excluding unbooked cases	5.2
Corrected perinatal mortality rate excluding unbooked	3.5
Corrected perinatal mortality rate excluding those initially booked elsewhere	3.3

7. Statistical Analysis of Obstetric Population

7.1 Age

Age (Years)	Nulliparous* N	Parous* N	Total N	Total %
<20	109	21	**130**	**1.7**
20 – 39	2924	4073	**6997**	**90.3**
40+	171	448	**619**	**8.0**
Total	**3204**	**4542**	**7746**	**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	Total %
Public	422	580	**1002**	**12.9**
Semi-Private	2498	3605	**6103**	**78.8**
Private	284	357	**641**	**8.3**
Total	**3204**	**4542**	**7746**	**100**

7.3 Birthplace

Mother's Country of Birth	N	%
Republic of Ireland	5444	70.3
EU	1127	14.6
Non EU	1171	15.1
Uncoded	4	0.0
Total	**7746**	**100**

7.4 Parity

	Nulliparous* N	Parous* N	**Total** N	%
Para 0	3204		**3204**	**41.4**
Para 1		2734	**2734**	**35.3**
Para 2-4		1725	**1725**	**22.2**
Para 5+		83	**83**	**1.1**
Total	**3204**	**4542**	**7746**	**100**

7.5 Birth Weight

	Nulliparous* N	Parous* N	**Total** N	%
500 – 999	29	28	**57**	**0.7**
1000 – 1499	41	32	**73**	**0.9**
1500 – 1999	48	53	**101**	**1.3**
2000 – 2499	177	184	**361**	**4.5**
2500 – 2999	542	597	**1139**	**14.4**
3000 – 3499	1108	1479	**2587**	**32.6**
3500 – 3999	1044	1641	**2685**	**33.9**
4000 – 4499	279	546	**825**	**10.4**
4500 – 4999	25	72	**97**	**1.2**
> 5000	2	2	**4**	**0.1**
Total	**3295**	**4634**	**7929**	**100**

7.6 Gestational Age

	Nulliparous* N	Parous* N	Total N	Total %
< 26 weeks	17	14	**31**	**0.4**
26-29 weeks + 6 days	32	36	**68**	**0.9**
30-33 weeks + 6 days	50	65	**115**	**1.4**
34-36 weeks + 6 days	237	248	**485**	**6.1**
37-41 weeks + 6 days	2919	4256	**7175**	**90.5**
42+ weeks	36	12	**48**	**0.6**
Not Answered	4	3	**7**	**0.1**
Total	**3295**	**4634**	**7929**	**100**

8. Statistical Analysis of Hospital Population, 2013 – 2019

8.1 Age, 2013 – 2019

Age at Delivery (Years)	2013 (n=7986)	2014 (n=8632)	2015 (n=8220)	2016 (n=8233)	2017 (n=7975)	2018 (n=8154)	**2019 (n=7746)**
<20	2.1%	1.9%	1.9%	2.1%	1.7%	1.4%	**1.7%**
20 – 24	10.6%	9.3%	8.5%	8.6%	8.6%	8.5%	**7.8%**
25 – 29	22.7%	20.2%	19.9%	18.5%	18.5%	18.1%	**17.1%**
30 – 34	35.6%	36.1%	36.3%	36.4%	34.0%	34.3%	**34.4%**
35 – 39	23.4%	26.2%	27.3%	27.8%	30.4%	30.7%	**31.0%**
>40	5.6%	6.3%	6.1%	6.6%	6.8%	7.0%	**8.0%**

8.2 Parity, 2013 – 2019

Parity	2013 (n=7986)	2014 (n=8632)	2015 (n=8220)	2016 (n=8233)	2017 (n=7975)	2018 (n=8154)	**2019 (n=7746)**
0	38.7%	39.1%	38.5%	40.0%	40.9%	42.1%	**41.4%**
1,2,3	57.7%	57.7%	58.6%	57.0%	56.3%	55.2%	**55.9%**
4+	3.6%	3.2%	2.9%	3.0%	2.8%	2.7%	**2.7%**

8.3 Birth Weight, 2013 – 2019

Birth Weight (grams)	2013 (n= 8170)	2014 (n= 8819)	2015 (n= 8404)	2016 (n= 8421)	2017 (n=7975)	2018 (n=8154)	**2019 (n=7929)**
500 - 999	0.7%	0.6%	0.6%	0.6%	0.7%	0.6%	**0.7%**
1000 – 1499	1.0%	0.7%	0.6%	0.6%	1.0%	0.6%	**0.9%**
1500 – 1999	1.7%	1.5%	1.5%	1.5%	1.4%	1.5%	**1.3%**
2000– 2499	4.6%	4.3%	4.2%	4.0%	4.3%	4.8%	**4.6%**
2500– 2999	12.9%	13.9%	13.4%	13.9%	12.8%	13.5%	**14.4%**
3000– 3499	33.4%	34.0%	34.3%	33.9%	33.5%	32.9%	**32.6%**
3500– 3999	32.8%	32.9%	33.1%	33.0%	34.0%	33.1%	**33.9%**
4000– 4499	11.3%	10.4%	10.7%	10.8%	10.7%	11.7%	**10.4%**
>4500	1.6%	1.7%	1.6%	1.5%	1.5%	1.3%	**1.2%**
Unknown	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	**0.1%**

8.4 Gestation, 2013 – 2019

Gestation (weeks)	2013 (n=8170)	2014 (n=8819)	2015 (n=8404)	2016 (n=8421)	2017 (n=7975)	2018 (n=8154)	**2019 (n=7929)**
<28 weeks	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	**0.7%**
28 – 36	6.7%	6.2%	6.2%	6.0%	6.5%	6.4%	**6.7%**
37 – 41	92.3%	92.7%	92.8%	92.9%	92.2%	92.4%	**91.9%**
42+	0.4%	0.6%	0.4%	0.6%	0.7%	0.6%	**0.6%**
Unknown	0.0%	0.04%	0.1%	0.0%	0.1%	0.0%	**0.1%**

9. In-patient Surgery, 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Obstetrical	3308	3630	3590	3663	3544	3748	**3609**
Cervical	838	882	752	828	844	872	**902**
Uterine	2897	2696	2704	2761	2543	2564	**2656**
Tubal & Ovarian	1032	916	844	847	812	775	**769**
Vulval & Vaginal	522	408	361	423	360	427	**405**
Urogynaecology	336	328	329	365	410	377	**367**
Other	47	31	38	31	43	56	**40**
Total	**8980**	**8891**	**8618**	**8918**	**8556**	**8819**	**8748**

10. Outpatient Attendances, 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Paediatric	8690	8587	6829	6572	5545	6393	**4845**
Obstetrical / Gynaecological*	111204	110985	109201	105521	112074	111211	**109557**

**excludes Colposcopy and Perinatal Centre*

11. In-patient Admissions*, 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Obstetrics	16746	17637	16398	17006	16514	16709	**16479**
Gynaecology	1182	1028	966	943	812	737	**759**
Paediatrics	1124	1106	1052	1424	1105	1128	**1040**

**Figure based on discharges*

12. Bed Days (Overnight admissions), 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Infants	12200	11765	12673	14206	14503	13592	**12856**
Adults	43530	41198	40695	42329	39691	40199	**37917**

13. Day Case Admissions, 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Obstetrical	10092	12268	12453	12841	13160	13540	**12476**
Gynaecological	11997	9850	8510	8495	8185	7885	**8313**
Total	**22089**	**22136**	**20963**	**21336**	**21345**	**21425**	**20789**

14. Adult Emergency Room (ER) & Early Pregnancy Assessment Unit (EPAU), 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
ER	8136	9457	9573	9026	9351	9163	**9606**
EPAU	4368	4654	5106	4460	4213	4178	**5063**

15. Perinatal Day Centre Attendances (PNDC) & Perinatal Ultrasound (PNU)*, 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
PNU*	27732	26039	28161	28913	28858	29620	**29658**
PNDC**	11534	12217	13012	12471	12196	12648	**11528**

** refers only to scans performed in the Perinatal Ultrasound Dept.* *** excludes all telephone consultations with Diabetic patients.*

16. Laboratory Tests, 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Microbiology	44672	44514	42573	41639	44387	44764	**43781**
Biochemistry*	162045	205475	218565	216849	207686	213994	**216915**
Haematology	46877	50717	53961	55111	54298	51418**	**52640**
Transfusion	22866	25273	26537	26328	29464	29099	**30088**
Cytopathology	16774	27355	25589	26161	26185	31814	**33200**
Histopathology	5696	5877	6001	6331	6380	6796	**7092**
Post mortems	41	50	35	33	32	32	**35**
Phlebotomy	19931	21084	23641	25250	37870	38287	**39554**
Molecular Pathology (Gynae Screen)	2857	4442	7147	8369	7611	7800	**17000**

** includes POCT tests* ***counting method changed late 2017*

Perinatal Mortality and Morbidity

Professor Sharon Sheehan, *Master*
Dr John Kelleher, *Director of Paediatrics and Newborn Medicine*
Ms Julie Sloan, *Research Midwife*

A. Overall Statistics

1. Perinatal Deaths ≥ 500g

Antepartum Deaths	**32**
Intrapartum Deaths	**1**
Stillbirths	**33**
Early Neonatal Deaths	**11**
Late Neonatal Deaths	**8**
Congenital Anomalies	**16***

** 7 SB, 6 END, 3 LND*

2. Perinatal Mortality Rates ≥ 500g

Overall perinatal mortality rate per 1000 births	**5.5**
Perinatal mortality rate corrected for lethal congenital anomalies	**3.9**
Perinatal mortality rate including late neonatal deaths	**6.6**
Perinatal mortality rate excluding unbooked cases	**5.2**
Corrected perinatal mortality rate excluding unbooked	**3.5**
Corrected perinatal mortality rate excluding those initially booked elsewhere	**3.3**

3. Perinatal Mortality by Mother's Age

Mother's Age at Delivery	Perinatal Deaths N	Perinatal Deaths %	PMR	**Total Births N**
<20 years	2	4.5	15.4	**130**
20-24 years	5	11.4	8.1	**617**
25-29 years	5	11.4	3.7	**1351**
30-34 years	15	34.1	5.5	**2722**
35-39 years	13	29.5	5.3	**2463**
≥40 years	4	9.1	6.2	**646**
Total	**44**	**100**		**7929**

4. Perinatal Mortality by Mother's Parity

Mother's Parity at Booking	Perinatal Deaths N	Perinatal Deaths %	PMR	**Total Births N**
Para 0	16	36.4	4.9	**3295**
Para 1	10	22.7	3.6	**2789**
Para 2-4	16	36.4	9.08	**1762**
Para 5+	2	4.5	24.1	**83**
Total	**44**	**100**		**7929**

5. Perinatal Mortality by Birthweight

Birthweight	Perinatal Deaths N	Perinatal Deaths %	PMR	**Total Births N**
500-999g	17	38.6	298.2	**57**
1000-1499g	6	13.6	82.2	**73**
1500-1999g	4	9.1	39.6	**101**
2000-2499g	6	13.6	16.6	**361**
2500-2999g	6	13.6	5.3	**1139**
3000-3499g	3	6.8	1.2	**2587**
3500-3999g	1	2.3	0.4	**2685**
4000-4499g	1	2.3	1.2	**825**
4500-4999g	0	0.0	0.0	**97**
5000g +	0	0.0	0.0	**4**
Total	**44**	**100**		**7929**

6. Perinatal Mortality by Gestational Age

Gestation	Perinatal Deaths N	Perinatal Deaths %	PMR	**Total Births N**
<26 weeks	15	34.1	483.9	**31**
26-29^{+6} weeks	5	11.4	73.5	**68**
30-33^{+6} weeks	5	11.4	43.5	**115**
34-36^{+6} weeks	4	9.1	8.2	**485**
37-41^{+6} weeks	14	31.8	2.0	**7175**
42 + weeks	0	0.0	0.0	**48**
Not Answered	1	2.3	142.9	**7**
Total	**44**	**100**		**7929**

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

Normally formed babies ≥34 weeks and ≥2.5kg	**7322**
Perinatal Deaths	**10**
PMR	**1.37**

8. Perinatal Mortality in Normally Formed Stillborn Infants (N= 26)

	Nulliparous	Parous	**Total**
Abruption	2	6	**8**
Cord Accident	3	2	**5**
IUGR / Placental Insufficiency	1	3	**4**
Infection	2	2	**4**
Feto-maternal Haemorrhage	0	1	**1**
Placental Infarction	1	0	**1**
Unexplained	1	2	**3**
Total	**10**	**16**	**26**

9. Intrapartum Deaths ≥500g 1 (Known Trisomy 18)

10. Perinatal Deaths in Infants with Congenital Malformation (N = 13)*

	Nulliparous	Parous	**Total**
Chromosomal	1	5	**6**
Congenital Cardiac Disease	0	1	**1**
Neural tube defects	0	1	**1**
Thanatophoric Dysplasia	1	0	**1**
Arthrogryposis multiplex congenita	0	1	**1**
Renal Agenesis	0	1	**1**
Hydrops	0	1	**1**
Gestational Alloimmune Liver Disease	0	1	**1**
Total	**2**	**11**	**13**

** 7 SB, 6 END*

11. Neonatal Deaths ≥500g (N= 19)*

	Nulliparous	Parous	**Total**
Congenital	3	6	**9**
Extreme Prematurity / Sepsis	2	1	**3**
Extreme Prematurity / IVH	3	0	**3**
Extreme Prematurity / IVH / Pulmonary	0	1	**1**
Extreme Prematurity / NEC	0	1	**1**
Extreme Prematurity / Pulmonary Hypoplasia / Pulmonary Hypotension	1	0	**1**
Group B Strep Sepsis	1	0	**1**
Total	**10**	**9**	**19**

** 11 END, 8 LND*

12. Overall Autopsy Rate 48 %

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

Division of Obstetrics

General Obstetric Report – Medical Report

Head of Division

Professor Sharon Sheehan, *Master*

1. Maternal Statistics

	2013	2014	2015	2016	2017	2018	**2019**
Mothers booking	8554	9333	8933	8647	8653	8608	**8284**
Mothers delivered ≥ 500g	7986	8632	8220	8233	7975	8154	**7746**

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

	2013	2014	2015	2016	2017	2018	**2019**	**N=8284**
Born in RoI	69.9	71.6	69.6	68.9	70.1	69.1	**68.4**	**5670**
Born in rest of EU	16.9	15.9	17.7	17.6	15.6	15.4	**15.2**	**1256**
Born outside EU	13.2	12.5	12.6	13.3	14.2	15.4	**16.3**	**1352**
Country not known	0.01	0.0	0.1	0.2	0.1	0.1	**0.1**	**6**
Resident in Dublin	65.7	64.6	63.7	63.3	62.6	63.0	**62.2**	**5150**
< 18 years	0.5	0.5	0.5	0.6	0.3	0.3	**0.3**	**28**
≥ 40 years	5.7	6.3	6.4	6.9	7.2	7.3	**7.5**	**620**
Unemployed	21.5	23.0	24.3	21.5	20.5	19.5	**18.4**	**1523**
Communication difficulties reported at booking	7.8	6.4	6.9	5.7	6.1	5.1	**4.8**	**398**

2.2 Maternal Profile at booking – general history (%)

	2013	2014	2015	2016	2017	2018	**2019**	**N = 8284**
BMI Underweight: <18.5	2.1	2.0	2.0	1.6	1.7	1.6	**1.4**	**117**
BMI Healthy: 18.5 – 24.9	51.6	52.5	51.6	50.7	49.3	48.1	**47.1**	**3901**
BMI Overweight: 25-29.9	28.9	26.8	29.2	29.3	29.7	30.3	**31.0**	**2566**
BMI Obese class 1: 30-34.9	11.0	9.9	10.8	11.9	12.3	12.7	**13.0**	**1079**
BMI Obese class 2: 35 – 39.9	4.3	3.9	4.2	4.4	4.5	4.9	**4.9**	**410**
BMI Obese class 3: ≥ 40	1.8	1.5	1.7	1.8	2.3	2.1	**2.4**	**197**
Unrecorded	0.3	3.5	0.4	0.2	0.2	0.3	**0.2**	**14**
Para 0	39.1	38.6	38.9	40.7	41.1	41.8	**42.0**	**3478**
Para 1-4	59.3	60.0	59.9	57.8	57.9	57.0	**56.9**	**4712**
Para 5 +	1.6	1.4	1.2	1.4	1.0	1.2	**1.1**	**94**
Unplanned pregnancy	31.2	27.7	28.9	27.6	26.6	26.9	**25.7**	**2128**
No pre-conceptual folic acid	56.6	52.6	54.1	52.9	49.6	51.4	**52.0**	**4307**
Current Smoker	12.8	10.5	11.1	10.0	9.4	9.5	**8.9**	**739**
Current Alcohol Consumption	1.4	1.5	1.1	1.0	0.7	0.7	**0.5**	**40**
Taking illicit drugs / methadone	0.7	0.5	0.3	0.2	0.3	0.2	**0.2**	**18**
Illicit drugs/Methadone ever	8.7	8.3	8.2	8.0	7.5	7.8	**7.9**	**652**
Giving history of domestic violence	0.9	1.0	1.0	0.9	0.9	1.1	**1.0**	**85**
Cervical smear never performed	21.7	18.7	19.9	19.1	19.2	20.0	**19.9**	**1646**
History of psychiatric / psychological illness /disorder	18.0	16.6	15.5	16.7	18.5	21.1	**21.0**	**1712**
History of postnatal depression	4.0	4.7	4.5	4.4	4.6	4.1	**4.1**	**341**
Previous perinatal death	1.7	2.3	1.6	1.5	1.7	1.5	**1.5**	**122**
Previous infant < 2500g	5.5	6.5	5.2	4.7	5.9	4.9	**5.4**	**452**
Previous infant < 34 weeks	2.7	2.7	2.4	2.1	2.6	2.1	**2.3**	**194**
One previous Caesarean section	12.6	13.8	12.9	12.7	12.7	12.7	**13.5**	**1117**
Two or more previous Caesarean sections	3.4	4.0	4.0	4.0	4.2	4.6	**3.9**	**321**

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

	2013	2014	2015	2016	2017	2018	**2019**	**N=7746**
Pregnancy Induced Hypertension	7.7	7.5	6.7	7.3	6.8	6.8	**6.2**	**478**
Pre-eclampsia	2.8	3.3	2.9	2.8	2.7	2.3	**2.6**	**199**
Eclampsia	0.06	0.00	0.02	0.05	0.00	0.0	**0.0**	**0**
Pregestational Type 1 DM	0.38	0.3	0.35	0.3	0.4	0.4	**0.4**	**31**
Pregestational Type 2 DM	0.23	0.17	0.32	0.2	0.3	0.3	**0.2**	**16**
Gestational DM	4.4	7.8	7.8	8.4	9.7	10.4	**12.0**	**933**
Placenta praevia	0.4	0.4	0.5	0.4	0.4	0.6	**0.4**	**28**
Abruptio placentae	0.3	0.2	0.4	0.2	0.1	0.4	**0.3**	**26**
Antepartum haemorrhage	5.6	6.6	5.3	5.7	5.3	4.8	**4.2**	**329**
Haemolytic antibodies	0.5	0.5	0.5	0.6	0.4	0.6	**0.4**	**34**
Hep C +	0.6	0.5	0.5	0.4	0.3	0.2	**0.2**	**12**
Hep B +	0.6	0.4	0.5	0.4	0.2	0.3	**0.2**	**16**
HIV +	0.3	0.2	0.3	0.2	0.2	0.1	**0.2**	**15**
Sickle cell trait	0.4	0.3	0.3	0.4	0.2	0.4	**0.3**	**21**
Sickle cell anaemia	0.02	0.1	0.02	0.05	0.03	0.05	**0.1**	**4**
Thalassaemia trait	0.4	0.3	0.5	0.3	0.4	0.3	**0.2**	**18**
Delivery < 28 weeks	0.6	0.5	0.5	0.5	0.5	0.5	**0.7**	**51**
Delivery < 34 weeks	2.7	2.2	2.2	2.1	2.2	2.1	**2.3**	**177**
Delivery < 38 weeks	13.9	13.6	14.3	13.9	14.5	15.5	**16.7**	**1290**
Delivery < 1500g	1.4	1.2	1.3	1.3	1.4	1.1	**1.4**	**110**
Delivery < 2500g	6.9	6.4	7.2	6.1	6.6	6.6	**6.7**	**518**
Unbooked mothers	1.3	1.6	0.9	0.7	1.0	1.1	**1.1**	**87**
LSCS	28.0	28.7	29.3	31.3	31.8	33.8	**33.8**	**2618**
Admissions to HDU	2.1	2.0	2.6	2.0	2.2	2.0	**2.2**	**169**
Severe Maternal Morbidity	0.5	0.5	0.4	0.8	0.7	0.8	**1.0**	**76**
Maternal Deaths (N)	1[1]	1[2]	1[3]	0	0	1[4]	**0**	**0**

[1] *Cardiac arrest brought about by hyperkalaemia*

[2] *Amniotic Fluid Embolism (cardiac collapse and disseminated intravascular coagulopathy following amniotic fluid escape into the maternal circulation)*

[3] *Ruptured internal carotid artery aneurysm with Systemic Fibromuscular Dysplasia*

[4] *Coroner's Report awaited*

3.1 Induction of Labour 2019

	Nulliparous		Multiparous		**Total**	
	N	%	N	%	**N**	**%**
Inductions	1482	46.3	1474	32.4	**2596**	**38.2**

3.2 Induction of Labour 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	2696	2664	2608	2789	2777	3016	**2596**
%	33.8	30.9	31.7	33.9	34.8	37.0	**38.2**

4.1 Epidural Analgesia in Labour 2019

	Nulliparous		Multiparous		**Total**	
	N	%	N	%	**N**	**%**
Epidural Analgesia	1860	58.1	1298	28.6	**3158**	**40.8**

4.2 Epidural Analgesia in Labour 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	3357	3530	3491	3112	3165	3314	**3158**
%	42.0	40.9	42.5	37.8	39.7	40.6	**40.8**

5.1 Fetal Blood Sampling in Labour 2019

	N=
< 7.20	32
> 7.20	397
Total	**429**

5.2 Fetal Blood Sampling in Labour 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	689	756	783	892	702	586	**429**
%	8.6	8.8	9.5	10.8	8.8	7.2	**5.5**

6.1 Prolonged Labour 2019

	Nulliparous		Multiparous		**Total**	
	N	%	N	%	**N**	**%**
Prolonged Labour	238	7.0	36	0.8	**274**	**3.5**

6.2 Prolonged Labour 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	277	316	320	284	275	236	**238**
%	3.5	3.7	3.9	3.4	3.4	2.9	**3.5**

7.1 Mode of delivery (%) – Nulliparae 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
SVD	43.2	41.1	40.8	38.9	37.8	36.9	**39.2**
Vacuum	16.1	18.2	17.7	16.9	17.6	18.1	**14.3**
Forceps	11.4	11.2	13.0	11.5	11.0	9.7	**8.4**
LSCS	29.6	29.7	28.4	33.2	34.0	35.7	**34.4**

7.2 Mode of delivery (%) - Parous 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
SVD	68.1	67.1	65.9	64.9	64.3	62.7	**63.2**
Vacuum	3.6	3.6	3.2	3.9	4.1	3.8	**2.6**
Forceps	1.4	1.3	1.4	1.2	1.4	1.2	**1.1**
LSCS	26.9	28.1	29.8	30.0	30.3	32.4	**33.3**

7.3 Mode of delivery (%) – all mothers 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
SVD	58.5	57.0	56.2	54.5	53.4	51.8	**54.3**
Vacuum	8.5	9.3	9.0	9.1	9.6	9.8	**7.8**
Forceps	5.2	5.2	5.8	5.3	5.3	4.8	**4.3**
LSCS	28.0	28.7	29.3	31.3	31.8	33.8	**33.8**

8. Episiotomy (%) 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
Nulliparae	27.7	27.8	29.6	32.0	34.5	33.8	**32.2**
Parous	4.0	3.9	4.0	4.4	6.4	6.4	**5.2**
Overall	13.2	13.2	13.9	15.5	17.9	17.9	**17.2**

9.1 Shoulder Dystocia (SD) 2019

	Nulliparous		Multiparous		**Total**	
	N	%	N	%	**N**	**%**
Shoulder Dystocia	27	0.8	24	0.7	**51**	**0.7**

9.2 Shoulder Dystocia (SD) & Birth Weight

	Mothers of babies < 4kg		Mothers of babies ≥ 4kg	
	N	%	N	%
Shoulder Dystocia	27	0.4	24	2.6

9.3 Shoulder Dystocia 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	64	53	56	53	51	65	**51**
%	0.8	0.6	0.7	0.6	0.6	0.8	**0.7**

10.1 Third Degree Tears

	Nulliparous		Multiparous		**Total**	
	N	%	N	%	**N**	**%**
Third Degree Tears (overall)	64	2.0	28	0.6	92	1.2
Third Degree Tears (vaginal deliveries)	64	3.0	28	0.9	92	1.8

10.2 Third Degree Tears 2013 - 2019 (Mothers delivered vaginally)

	2013	2014	2015	2016	2017	2018	**2019**
N	145	160	166	147	110	139	**92**
%	2.5	2.6	2.9	2.6	2.0	2.6	**1.8**

11.1 Fourth Degree Tears 2019

	Nulliparous		Multiparous		**Total**	
	N	%	N	%	**N**	**%**
Fourth Degree Tears (overall)	3	0.1	0	0	**3**	**0.04**
Fourth Degree Tears (vaginal deliveries)	3	0.1	0	0	**3**	**0.06**

11.2 Fourth Degree Tears 2013 - 2019 (Mothers delivered vaginally)

	2013	2014	2015	2016	2017	2018	**2019**
N	7	8	9	11	3	7	**3**
%	0.1	0.1	0.1	0.2	0.1	0.1	**0.06**

12.0 Primary Post Partum Haemorrhage (1˚ PPH) 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	1256	1256	1127	1483	1743	1765	**1691**
%	15.7	14.6	13.7	18.0	21.9	21.6	**21.8**

12.1 1˚ PPH – Spontaneous Labour

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Nulliparae	11.6	12.0	12.0	15.1	18.2	18.2	**16.7**	**1254**
Parous	8.3	7.4	8.3	8.4	8.8	9.4	**9.7**	**1789**
Overall	9.6	9.1	9.6	11.0	12.6	13.1	**12.6**	**3043**

12.2 1˚ PPH – Induced Labour

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Nulliparae	26.2	22.5	20.1	25.3	30.8	29.9	**30.7**	**1481**
Parous	10.8	9.6	10.9	10.9	12.1	13.3	**12.2**	**1474**
Overall	18.1	16.0	15.3	18.2	21.5	21.9	**21.5**	**2955**

12.3 1˚ PPH – SVD

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Nulliparae	7.6	7.9	7.5	10.2	11.5	11.9	**12.3**	**1335**
Parous	6.2	5.7	6.9	6.3	7.4	7.7	**8.0**	**2870**
Overall	6.6	6.3	7.1	7.4	8.6	9.0	**9.4**	**4205**

12.4 1˚ PPH – Ventouse

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Nulliparae	9.4	10.9	8.3	13.3	16.7	13.4	**20.7**	**487**
Parous	9.5	5.3	8.7	8.7	10.4	11.0	**5.2**	**116**
Overall	9.4	9.6	8.4	12.1	15.2	12.9	**17.7**	**603**

12.5 1˚ PPH – Forceps

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Nulliparae	21.9	18.6	18.2	19.4	29.6	31.2	**28.7**	**286**
Parous	19.1	17.6	22.9	21.3	16.4	15.3	**16.7**	**48**
Overall	21.5	18.4	18.9	19.6	27.5	28.8	**26.9**	**334**

12.6 1˚ PPH – Caesarean Section by parity

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Nulliparae	44.0	38.2	33.4	43.2	50.0	45.6	**48.0**	**1104**
Parous	30.2	27.7	23.1	34.1	41.8	38.5	**38.0**	**1514**
Overall	35.8	31.9	26.9	38.0	45.3	42.8	**42.2**	**2618**

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

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Elective	27.0	26.5	19.6	32.7	40.9	36.5	**36.9**	**1390**
Emergency	43.7	36.9	35.4	43.7	50.1	49.3	**48.3**	**1228**
Overall	35.8	31.9	26.9	38.0	45.3	42.8	**42.2**	**2618**

12.8 1˚ PPH – Twin Pregnancy

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Nulliparae	59.1	50.0	46.0	50.6	60.5	58.1	**51.8**	**85**
Parous	25.3	43.6	23.5	43.3	39.8	40.2	**39.8**	**88**
Overall	39.4	56.4	33.1	46.9	48.9	49.1	**45.7**	**173**

13.0 Manual Removal of Placenta (%) 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	135	94	108	95	77	86	**100**
%	1.7	1.1	1.3	1.2	1.0	1.1	**1.3**

13.1 1˚ PPH in Manual Removal of Placenta 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	82	59	58	64	48	60	**65**
%	60.7	62.8	53.7	67.4	62.3	70.0	**65.0**

14.0 Mothers Transfused 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	181	169	155	200	220	244	**163**
%	2.3	2.0	1.9	2.4	2.8	3.0	**2.1**

14.1 Mothers who received Massive Transfusions (> 5units RCC) 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	7	4	4	5	10	6	**6**
%	0.1	0.05	0.05	0.06	0.1	0.1	**0.1**

15. Singleton Breech Presentation 2013 - 2019

	2013	2014	2015	2016	2017	2018	**2019**
Number of breech in nulliparae	150	151	144	180	166	185	**184**
% LSCS for breech in nulliparae	96.0	98.7	97.9	93.9	94.6	97.3	**94.0**
Number of breech in parous	171	167	174	167	157	160	**175**
% LSCS for breech in parous	93.0	95.2	91.9	91.0	93.0	92.5	**92.6**
Total number of breech	321	318	318	347	323	345	**359**
Total % LSCS	94.4	96.8	94.6	92.5	93.8	95.1	**93.3**

16. Twin Pregnancy 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Number of Twin pregnancies in Nulliparae	71	76	76	87	81	86	**85**
% LSCS in Nulliparae	78.9	77.6	68.4	69.0	67.9	75.6	**84.7**
Number of Twin pregnancies in Parous	99	94	102	90	103	87	**88**
% LSCS in Parous	51.5	60.6	52.9	62.2	58.2	55.2	**60.2**
Total number of Twin pregnancies	170	169	178	177	184	173	**173**
Total % LSCS in Twin pregnancy	62.9	68.2	59.6	65.5	62.5	65.3	**72.2**

17. Operative Vaginal Delivery in Theatre 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Operative Vaginal Delivery in Theatre	88	89	83	91	80	69	**73**

18. Classical Caesarean Section, Ruptured Uterus, Hysterectomy in Pregnancy 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Classical Caesarean Section	4	3	6	2	6	8	**7**
Ruptured Uterus	0	2	0	0	3	2	**0**
Hysterectomy in pregnancy	2	0	2	5	3	6	**5**

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	108	1121	14.5%	9.6%
2	Nulliparous, single, cephalic, ≥=37 wks, induced and CS before labour	673	1644	21.2%	40.9%
A.	Nulliparous, single, cephalic, ≥=37 wks, induced	468	1439	18.6%	32.5%
B.	Nulliparous, single, cephalic, ≥ =37 wks, CS before labour	205	205	2.6%	100.0%
3	Multiparous (excl. prevCS) single, cephalic, ≥ =37wks, in Spontaneous Labour	31	1449	18.7%	2.1%
4	Multiparous (excl. prevCS) single, cephalic, ≥ =37 wks, induced and CS before labour	198	1476	19.1%	13.4%
A.	Multiparous (excl. prevCS), single, cephalic, ≥ =37 wks, induced	65	1343	17.3%	4.8%
B.	Multiparous (excl. prevCS), single, cephalic, ≥=37 wks, CS before labour	133	133	1.7%	100.0%
5	Previous CS, single, cephalic, ≥= 37wks	960	1141	14.7%	84.1%
6	Nulliparous, single, breech	173	184	2.4%	94.0%
7	Multiparous, single, breech (incl. prevCS)	162	175	2.3%	92.6%
8	Multiple pregnancies (incl. prevCS)	130	178	2.3%	73.0%
9	Abnormal Lies, single (incl. prevCS)	8	8	0.1%	100.0%
10	Preterm, single, cephalic (incl. prevCS)	175	363	4.7%	48.2%
	No Gestation entered	0	7	0.1%	0.0%
N	**Total CS/Total Mothers Delivered**	**2618**	**7746**	**100%**	**33.8%**

19.2 Vaginal Birth (%) after a single Previous Lower Segment Caesarean Section (VBAC) 2019

	Para 1	Para 1+	**Total**
VBAC	11.8	46.8	**19.3**
Elective LSCS	68.8	39.0	**62.5**
Emergency LSCS	19.3	14.2	**18.2**

19.3 Vaginal Birth (%) after a single Previous Lower Segment Caesarean Section (VBAC) 2013 – 2019

	2013 %	2014 %	2015 %	2016 %	2017 %	2018 %	**2019 %**	**2019 N**
Para 1	24.1	19.9	19.8	19.7	14.9	15.4	**11.8**	**95**
Para 1+	58.6	58.5	51.5	49.0	51.9	46.7	**46.8**	**102**
Overall	34.1	29.7	27.7	27.6	25.0	22.7	**19.3**	**197**

19.4 Caesarean Sections (%) 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
Nulliparae	29.6%	29.7%	28.4%	33.2%	34.0%	35.7%	**34.4%**
Parous	26.9%	28.1%	29.8%	30.0%	30.3%	32.4%	**33.3%**
Total	28.0%	28.7%	29.3%	31.3%	31.8%	33.8%	**33.8%**

20. Apgar score < 7 at 5 mins 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	97	74	70	67	70	60	**66**
%	1.2	0.9	0.8	0.8	0.9	0.7	**0.9**

21. Arterial Cord pH < 7 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	37	41	35	45	40	35	**34**
%	0.5	0.5	0.4	0.5	0.5	0.4	**0.4**

22. Admission to SCBU/NICU at 38 weeks+ 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	454	474	423	551	403	398	**341**
%	5.7	5.5	5.0	6.7	5.1	4.9	**4.4**

23. Born Before Arrival 2013 – 2019

	2013	2014	2015	2016	2017	2018	**2019**
N	31	36	29	28	32	31	**33**
%	0.3	0.3	0.3	0.3	0.4	0.3	**0.4**

24. Antepartum Haemorrhage (APH)*

	N=	PPROM	Preterm Labour	Preterm Delivery	Perinatal Deaths
Placental Abruption	15	3	4	11	2
Placenta Praevia	13	2	1	9	0
Other	301	20	22	49	4
Total**	**329**	**25**	**27**	**69**	**6**

** 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

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

Staff Complement

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

Deirdre Carmody, *CMS, Drug Liaison Midwife, Addiction Service, HSE, Dublin South, Kildare & West Wicklow Healthcare*

Dr Oxana Hughes, *Registrar (Jan-Jul 2019)*

Dr Gillian Corbett, *Registrar (Jul-Dec 2019)*

Tanya Franciosa, *Senior Medical Social Worker*

Genitourinary Medicine *(St James's Hospital)*

Prof Fiona Mulcahy

Dr Aisling Loy

Sinead Murphy *(HIV CNS)*

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 2019: 301 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.

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

Key Performance Indicators

- 26 women booked for antenatal care in 2019 tested positive for Hepatitis B virus, of whom 4 were newly diagnosed on antenatal screening. 11 women had a birth place in Eastern Europe, 9 were from Asia & South East Asia, 5 from Africa & 1 South America. 5 further women showed evidence of resolved infection & came under our care.
- 22 antenatal women tested positive for Hepatitis C, of whom 5 were newly diagnosed on antenatal screening, with 1 new diagnosis of re-infection (having been previously PCR negative). Of the 22: 7 were PCR positive and 14 were PCR negative, 1 woman was not tested. 15 women were born in Ireland, 6 originated in Eastern Europe, 1 was born in South East Asia. Of the 5 new diagnoses, 4 women originated from Eastern Europe & 1 from South East Asia, with an Irish lady becoming re-infected.
- 14 antenatal women tested HIV positive, 1 of whom was newly diagnosed (born in Ireland). 6 women in total originated from Africa, 4 from Eastern Europe, and 5 from Ireland. 1 woman was co-infected with genital herpes and 1 woman co-infected with Hepatitis C. 1 woman miscarried, 2 experienced intra-uterine deaths and 2 had preterm births at 29 and 31 weeks' gestation.
- 91 antenatal women received care with a history or outbreak in pregnancy of genital herpes virus. 34 women had positive PCR/antibody for HSV 1, 41 women had positive PCR/antibody for HSV 2, and 18 women had samples that could not be typed.
- 8 women confirmed positive for Treponema Pallidum, a welcome decrease on the previous year (17 in 2018). 4 women required treatment in pregnancy as new diagnoses, 1 of whom originated from Eastern Europe, 1 from Ireland, 1 from Europe & 1 from Africa. 2 of these new diagnoses were Early Infectious Syphilis, unusual to see in a pregnancy cohort. 1 subsequent woman required re-treatment & the remaining women had been appropriately treated previously.
- 62 antenatal women required follow up +/- repeat testing due to indeterminate serology attributed to cross-reactivity in pregnancy.
- One incidence of mother to child transmission of Hepatitis C in 2019*. Baby was born to a low-risk mum who was diagnosed in this pregnancy, highlighting the value of our hospital policy for universal Hepatitis C screening.

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 reduce future healthcare costs in this high risk patient cohort.

Addiction

Key Performance Indicators

38 women linked with the DLM and attended Team A Dr O'Connell in the CWIUH in 2019 (26 women delivered and 12 still pregnant on 31/12/19).

- 23 women were already linked to an Opioid Substitution Treatment (OST) programme and prescribed methadone. In addition, 4 women presented abusing heroin and not in treatment were started on an OST outpatient programme during their pregnancy and one woman started in the postnatal period. One woman started buprenorphine for codeine addiction in an OST outpatient programme during her pregnancy.
- There was one mid-trimester loss at 17 weeks' gestation.
- The DLM was linked in with 15 women who self-reported the use of cocaine, alcohol and/or cannabis in pregnancy and were not opiate dependant. From this cohort 9 women chose to attend Team A Dr O'Connell for their antenatal care.
- 5 women were admitted to residential drug stabilisation treatment programmes within the Community Addiction Service.

Opiate dependant women who were linked with the DLM, delivered 21 live babies in 2019. From this group of women: 5 women delivered preterm babies at less than 37 weeks' gestation.

- 12 babies were admitted to NICU/HDU/SCBU and of these, three babies were transferred to another hospital. The mean stay in NICU/HDU/SCBU was 16 days, ranging from 1 to 52 days.
- Of the 12 babies admitted to NICU/HDU/SCBU, 6 babies needed pharmacological treatment for Neonatal Abstinence Syndrome (NAS). The mean length of stay for babies who received pharmacological treatment for NAS was 39 days ranging from 29 to 52 days (not including 2 babies who were transferred to another hospital).

There continues to be a decrease in the number of women prescribed OST presenting to the CWIUH but within this cohort there is an aging heroin population who are presenting with more complex needs. Heroin and cocaine are the primary drugs of choice, cannabis is common, also the use of benzodiazepine either prescribed or abused. Mental health issues are prominent and we worked closely with the Perinatal Mental Health Team in the CWIUH to provide comprehensive care in meeting the needs of this group of vulnerable women.

The Senior Medical Social Worker (SMSW) meets with all patients who attend the hospital with current drug or alcohol addictions. This facilitates a focused and specialised service for all patients. The role of the MSW is to provide ongoing assessment and support to all patients throughout their pregnancy and in the immediate postnatal period, and is responsible for advocating for the discharge of patients to safe and supported environments.

The SMSW continued to be present at the weekly antenatal clinic which promotes the role within the MDT and increases patients' accessibility to the Medical Social Work service. The SMSW provides on-going inter-disciplinary and inter-agency education and training regarding working with women experiencing a current addiction and highlights trends of social complexities experienced by women in addiction which informs practice.

Additional KPIs

- Specialist service was also provided for additional women with high-risk pregnancies e.g. loss in pregnancy, sero-discordant couples, current STI, Tuberculosis.
- 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 2019

- Dr O'Connell will become the Master/CEO of CWIUH in 2020, much to the team's delight and our SMSW, Tanya will take up the position of Principal MSW and we wish her well in her exciting new role!
- CMS ID qualified as a Registered Midwife Prescriber with RCSI and is using this resource regularly, independently providing full care episodes for women attending our service.
- Shared care approach for a number of our high risk women, under the managed clinical network so they can now attend Portlaoise Hospital / GP services for part of their care, as well as managing referrals from Mullingar & Wexford maternity units.

- *'Normalising High Risk using a Team Approach'* was the title of a presentation made by Dr O'Connell & Orla Cunningham at the Department of Health, for the 19 DOMs and senior department officials, April 2019.
- CMS ID was invited to present to a national group of 'champion midwives for change', March 2019 & also at International Midwives Day, CWIUH May 2019.
- CMS ID was a finalist for Best Presentation at 'Society for the Study of Sexually Transmitted Diseases in Ireland' International Event, Nov 2019 with *'Syphilis in Pregnancy, Changing Trends?'* (Joint venture with Guide CNS).
- Hosted a tri-hospital educational study day 'Infectious Diseases, Pregnancy & Beyond' CME, Dec 2019.

Opportunities for 2020

- To have the CMS Infectious Diseases recognised as being at the level of Advanced Midwife Practitioner.
- The team will highlight and pursue the identified gap (in provision of patient-centred care) in relation to patients with infectious diseases. There is a need for a dedicated MSW to be appointed to work with patients with infectious diseases.
- Client-led changes to service provision.

**Babies born to mothers who booked late in 2019 will not have testing completed at time of report.*

Community Midwife Service

Heads of Department

Fidelma McSweeney, *Assistant Director of Midwifery*
Breege Joyce, *Acting CMM III*

Staff Complement

CMM III, 0 .75 WTE
CMM II, 1.5 WTE
Staff Midwife, 9.5 WTE
Clerical Staff, 2 WTE

Key Performance Indicators

- We ran 14 antenatal clinics each week.
- 1675 women were booked in community-based midwife-led antenatal clinics.
- 5590 follow-up appointments were seen in community-based midwife-led antenatal clinics.
- 1798 women availed of Early Transfer Home.
- 4417 postnatal visits were carried out in women's homes.
- The Community Midwifery Service also staff Professor Fitzpatrick's Naas Antenatal Clinic where:
  - » Women booked for CF Naas
  - » 1701 women attended for antenatal visits
  - » 215 women attended for a GTT

Domino Care

- 418 women booked for DOMINO care.
- 34% of DOMINO/ETH women were breastfeeding on day 5.
- The SVD rate for women who opted for Domino care was 68%.
- The LSCS rate for women who opted for Domino care was 16%.
- The Robson Group 1 LSCS rate for women who opted for DOMINO care was 14%.
- The assisted delivery rate for women who opted for DOMINO care was 16%.

Achievements in 2019

- In 2019 we continued to provide our current antenatal community clinics and Early Transfer Home Service while encouraging eligible women to avail of the DOMINO service. We maintained the number of women looking for the Domino Scheme from the previous year.
- We continued to provide 24/7 DOMINO Midwifery care in the hospital for women who have opted for the DOMINO model of care. This cover was curtailed on night duty due to staffing shortages.
- We liaised regularly with the Mental Health Team, Social Work and Lactation Consultants re care for these mothers.

Challenges for 2020

- We are working towards increasing the number of women booking in community-based Antenatal Clinics and hope to secure additional clinic facilities in our catchment area.
- 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.
- Staffing all aspects of Community Services will continue to be a challenge for 2020.

Delivery Suite

Heads of Department

Dr Aoife Mullally, *Obstetric Lead*
Ms Ita Burke, *A.D.O.M.*
Ms Sinead Finn, *A/CMM III (Author)*
Ms Nora Vallejo, *A/CMM III*

Staff Complement

CMM III - 1 W.T.E.
H. Diploma Midwifery Students and BSC 4th Year Interns
CMM II - 13.2 W.T.E.
HCAs – 6 W.T.E.
C.S.F. – 1.62 W.T.E
Portering/Attendant Staff
Staff Midwives - 48 W.T.E.
Clerical Staff

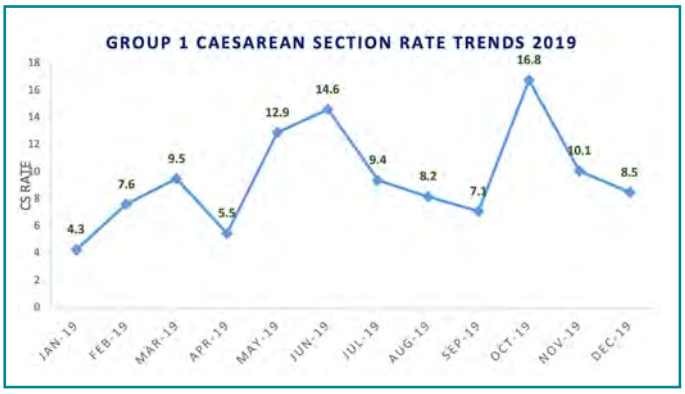
Key Performance Indicators

- Spontaneous vaginal birth rate of 54.8%. (51.89% in 2018).
- Rates of Instrumental birth 12.1%. (14.6% in 2018).
- Episiotomy rate at S.V.D. is 12.1% (11% in 2018).
- Rates of Obstetric Anal Sphincter Injury (OASI) in vaginal deliveries 1.85%. (2.6% in 2018).
- The induction rate is 38%.
- The overall P.P.H. rate is 22% (9.4% in S.V.D, 17% in venthouse, 26.9% in forceps)

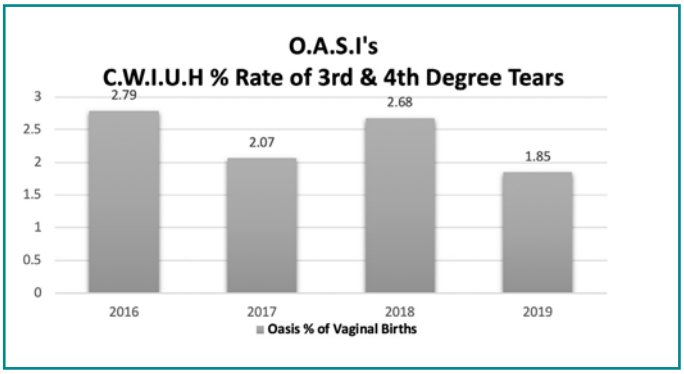
Achievements in 2019

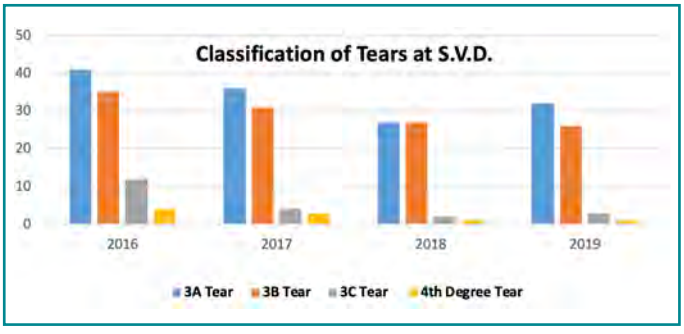
- Work continued on the Quality Improvement Project, initiated by the Multidisciplinary Team in 2018, to address the L.S.C.S. rate of the Robson Group 1 Classification. *(Primigravid women with a singleton pregnancy, presenting in spontaneous labour, at greater than or equal to 37weeks gestation and of a cephalic presentation, which result in an L.S.C.S delivery).*

  Following the introduction of a weekly MDT meeting to review the Group 1 c-sections, the rate fell to 12% in 2018 and further again to 9.4% in 2019.



- The OASIs Quality Improvement Project team established in 2016, focussing on the prevention of obstetric anal sphincter injuries at vaginal delivery, continued to have regular Multidisciplinary meetings and through a process of education and evaluation, have been very successful at reducing the rate of injury but also the severity of these injuries.





- Facilitating continuous one to one care and support from a Midwife for women in labour.
- Facilitating water immersion for labour and delivery. The Water Immersion Study is now completed and awaiting publication.

Challenges for 2020

- Midwifery Staffing, Recruitment and Retention remains a challenge for the Delivery Suite.
- Continue to prioritise and facilitate one-to-one Midwifery care for all women.
- To sustain the achievements of the weekly Caesarean Section Group.
- Maintain a focus on OASIs, to continue the regular meetings and to further reduce the overall rate to bring into line with the national rate of 1.8%.
- Introduce a Quality Initiative to observe, educate and evaluate the P.P.H rates of vaginal deliveries.
- Introduce a formatted plan for Obstetric Emergency Drills on the Delivery Suite.
- Review of Induction of Labour Policies as part of a Quality Improvement Scheme.

I would like to take this opportunity to thank all the staff of the Delivery Suite for their hard work and commitment throughout this year. I hope you all realise how much it is appreciated.

Thank You.

Combined Service For Diabetes Mellitus

Staff Complement

Professor Sean Daly, *Consultant Obstetrician/ Gynaecologist (Co-Author)*
Professor Brendan Kinsley, *Consultant Endocrinologist (Co-Author)*
Dr Emily O'Connor, *Obstetric Registrar*
Dr Gabriella Balan, *Endocrine Research Registrar*
Ailbhe McCarthy, *Diabetes Midwife (Co-Author)*
Diabetes Midwives
Dieticians

Key Performance Indicators

Total Women Attending Diabetes Service	972
Total Births (including Twins and Triplets)	985
IUDs in Diabetes Service	2
Total Coombe Births >500g	7746
Diabetes Service as % of hospital population	12.5%

Type 1

N=	31
Pregnancies	31
Coombe Births	25
Spontaneous Abortions	6
Delivered Elsewhere	0
Preterm Deliveries	3
Term Deliveries	22
Shoulder Dystocia	0
IUD	0
PND	0

Maternal Data (Type 1)

N=	31
Age (years)	33.7 ± 5.7
DM Duration (years)	15.7 ± 8.5
DM Complications	
Hypertension	6
Retinopathy	9
Nephropathy	3
Neuropathy	0
PET	2
PCOS	1
Gestation at OPD Booking (weeks)	8.3 ± 2.9
Booking HbA1c (IFCC)	52 ± 14
Delivery HbA1c (IFCC)	44 ± 7
Booking Fructosamine	305 ± 66
Delivery Fructosamine	242 ± 27
Caesarean Section	13 (52%)

Infant Data (Type 1)

N=	25
Gestation at Delivery (weeks)	38.0 ± 1.7
Term Deliveries	22
Pre-term Deliveries	3
Birth Weight (kg)	3662 ± 572
<4kg	19
4.0 – 4.449kg	4
4.5 – 4.99kg	2
>5kg	0
Suspected Macrosomia	4
Shoulder Dystocia	0
Congenital Abnormalities	1 (T21)
NICU Admissions	3

Type 2

N=	16
Pregnancies	16
Coombe Births	12
Spontaneous Abortions	4
Delivered Elsewhere	0
Pre-term Deliveries	3
Term Deliveries	8
IUD	0
NND	0

Maternal Data (Type 2)

N=	16
Age (years)	34.6 ± 5.8
DM Duration (years)	2.8 ± 1.6
DM Complications	
Hypertension	4
PET	0
PCOS	2
Gestation at OPD Booking (weeks)	9.1 ± 3.7
Booking HbA1c (%)	46 ± 13
Delivery HbA1c (%)	38 ± 5
Booking Fructosamine	257 ± 69
Delivery Fructosamine	222 ± 13
Caesarean Section	7 (63.6%)

Infant Data (Type 2)

N=	12
Gestation at Delivery (weeks)	36.6 ± 4.1
Birth weight (g)	2752 ± 725
<4kg	10
4.0 – 4.5kg	1
>4.5kg	0
>5kg	0
Prenatal Macrosomia	2
Congenital Abnormalities	0
IUD	0

Gestational Diabetes Mellitus

Pregnancies N=	933
Rx with Diet Only	384
Rx with Metformin Only	342
Rx with Insulin Only	84
Rx Insulin plus Metformin	123

Birth Weights (Based on Total GDM No. of Births)

<4kg	873
4 – 4.499kg	67
4.5 – 4.99kg	9 (1%)
>5kg	1
Suspected Macrosomia	109 (11.5%)
Suspected IUGR	46 (4.8%)

Gestational Diabetes Mellitus Total Group

N=	933
Coombe Live Births	955 (inc 31 sets of twins; 1 set of triplets)
Delivered Elsewhere	9
Spontaneous Abortion	0
Gestation at Delivery (weeks)	38.5 ± 1.5
Birth weight (kg)	3280 ± 579
Caesarean Section	339 (37.0%)
IUD	2
NND	0
Congenital Abnormalities	4 (refer to individual classifications)

Rx with Diet Only

N=	384
Coombe Live Births	400 (inc 19 sets of twins; 1 set of triplets)
Delivered Elsewhere	4
Gestation at delivery (weeks)	38.5 ± 1.6
Birth Weight (kg)	3269 ± 608
Suspected Macrosomia	59 (15.3%)
Caesarean Section	138 (36.1%)
Hypertension	2
Congenital Abnormalities	0
IUD	1

RX with Insulin Only

N=	84
Coombe Live Births	82 (inc 1 set twins)
Delivered Elsewhere	2
Spontaneous Abortion	0
Age (years)	34.1 ± 6.7
To Insulin (weeks)	25.3 ± 7.0
Gestation at delivery (weeks)	38.2 ± 1.6
Birth weight (kg)	3212 ± 608
Suspected Macrosomia	3 (10.3%)
Caesarean Section	29 (44.1%)
Hypertension	0
IUD	1
Congenital Abnormalities	1 (i) TGA with Sub Pulmonary VSD
Shoulder Dystocia	1

GDM on Metformin

N=	465
Metformin Only	342
Metformin plus Insulin	123

Metformin Total Group

Coombe Live Births	471 (including 12 sets of twins)
Delivered Elsewhere	6
Spontaneous Abortion	0
Gestation at Delivery (weeks)	38 ± 39
Birth weight (kg)	3297 ± 550
Suspected Macrosomia Rate	43 (9.4%)
Suspected IUGR	21 (4.6%)
Caesarean Section	165 (35.9%)
IUD	0
Shoulder Dystocia	2

Birth Weights Based on Total Metformin No.

<4kg	432
4 – 4.49kg	33
4.5 – 4.99kg	6
>5kg	0

Rx Metformin Only

N=	342
Coombe Live Births	350 (including 11 sets of twins)
Delivered Elsewhere	3
Spontaneous Abortion	0
Age (years)	33.2 ± 5.1
Gestation at Delivery (weeks)	38.6 ± 1.6
Birth weight (kg)	3295 ± 548
Suspected Macrosomia	34 (10.0%)
Suspected IUGR	13 (3.8%)
Caesarean Section	124 (36.6%)
PET	3
IUD	0
Congenital Abnormalities	3 (i) Transposition of the Great Arteries and VSD (ii) Bilateral SVCs (iii) Barths Syndrome
Shoulder Dystocia	1

Rx Metformin plus Insulin (Combined)

N=	123
Coombe Live Births	121 (including 1 set of twins)
Delivered Elsewhere	3
Spontaneous Abortion	0
Age (years)	34.1 ± 4.8
Gestation at Delivery (weeks)	38.5 ± 1.0
Birth weight	3303 ± 559
Macrosomia Rate	9 (7.4%)
Caesarean Section	41 (33.3%)
Hypertension	0
PET	2
IUD/NND	0
Congenital Abnormalities	0
Shoulder Dystocia	1

Acknowledgements

2019 saw numerous challenges and changes. We would like to acknowledge the departure of two CMS (Diabetes), Ethna Coleman and Clíodhna Grady and thank them for all their years of service and dedication to the Coombe. We wish them every success in the future. The changes continued with the introduction of a concise Thyroid Management and Referral Pathway which has contributed to continuity and quality of care for the women with Thyroid issues, supported by appropriate referral to Endocrinology in a timely and efficient manner.

As a service, we continue to request dedicated Clerical Staff for the Diabetes Service in order to alleviate the time the Diabetes Midwives are spending making and following up appointments (and more). This is with an aim to allow further professional enhancement within the Midwifery Team.

The Diabetes Midwifery Team identified ways to more accurately capture their workload using iPMS. This will augment the argument for further Clerical Support and we look forward to bringing this to workforce in support of same.

We look forward to the challenges that 2020 will bring and examining further efficiencies that could be introduced.

Early Pregnancy Assessment Unit

Head of Department

Dr Mary Anglim, *Consultant Obstetrician/Gynaecologist*

Staff Complement

Prof Nadine Farah, *Consultant Obstetrician/Gynaecologist*
Dr Jennifer Hogan, *SpR, until July 2019*
Dr Alexander Sobota, *Clinical Research Fellow, from July 2019*
Nicole Mention, *Midwife Sonographer*
Janet Kelly, *Midwife Sonographer*
Carol Devlin, *Secretary*

Key Performance Indicators

	Total		New	Return
EPAU Visits *	5363		2247 (42%)	3116 (58%)
Ongoing Pregnancy	1240	(23%)		
Pregnancy of Uncertain Viability	598	(11%)		
Miscarriages	1722	(32%)		
Pregnancy of Unknown Location	546	(10%)		
Ectopic Pregnancy **	167	(3%)		
Molar Pregnancy ***	23	(0.4%)		
Gynaecology	375	(7%)		

**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 Delayed and Incomplete Miscarriages*	
Conservative management	157 (24%)
Medical management	281 (43%)
Surgical management	215 (33%)
Total	**653**

**Excluding complete miscarriage*

Management of Ectopic Pregnancy	
Laparoscopy	53 (63%)
Medical Management (Methotrexate)	17 (20%)
Conservative Management	14 (17%)
Total	**84**

Achievements in 2019

- The unit provided training for NCHDs in transvaginal early pregnancy ultrasound and facilitated training for 3 Midwives completing the UCD EPAU Module and 1 Midwife completing a Masters in Ultrasound.
- 2 Poster Presentations, November 2019, ICOGPM meeting:
  - Women's experience of first trimester miscarriage: comparison of expectant, medical and surgical management. Dr Somaia Elsayed, Prof Nadine Farah.
  - Changing trends in practice in our EPAU service. B.A Muresan, A Sobota, M Anglim, N Farah, UCD Centre for Human Reproduction.

Fetal Medicine and Perinatal Ultrasound Department

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

Heads of Department

Professor Sean Daly, *Director of Perinatal Ultrasound / Fetal Medicine (Jan 2019 – Sept 2019)*
Dr Caoimhe Lynch, *Fetal Medicine Consultant, Director of Perinatal Ultrasound / Fetal Medicine from September 2019*
Bridget Boyd, *Assistant Director of Midwifery & Nursing with responsibility for Ultrasound Dept.*
Elaine Mc Geady, *Clinical Midwife Manager III*

Staff Complement

1.0 WTE Clinical Midwife Manager
3.82 WTE Clinical Midwife Specialists (CMS)
0.6 WTE Clinical Nurse Specialist (CNS)
6.37 WTE Midwife Sonographers
0.5 WTE Radiographers
1.0 WTE Prenatal Diagnosis Midwife CMM II
0.5 WTE Prenatal Diagnosis Staff Midwife
Ultrasound Administration Staff
Fetal Medicine Secretary
5 Consultant Obstetricians & Gynaecologists / Fetal Medicine Specialists

Key Performance Indicators

Productivity

A total of 29,658 ultrasound examinations were performed in 2019. This shows a continued increase from 2018. It includes 961 scans performed by Jane Durkan CMS at our outreach Ultrasound Service in Naas.

Table 1. Indicators for Ultrasound 2019

	Attendances
First Trimester / Dating Scans	**5823**
Structural Survey at 20-22 wks.	**7880**
Fetal Well-being Assessments (3rd Trimester /follow up)	**9242** Growth, Dopplers, LV **356** Cervical lengths **672** Placental sites **32** SUA **36** Pylectasis **1134** other (repeat dating / late bookers / follow-up views)
Total	**25,175**
NIPT	**960**
NT Screening	**0**
Fetal Medicine	**2142**
Fetal Echo	589 (included above)
Procedures	110 (included above)
Total – Ultrasound Dept	**28,277**
Naas Scans	
Dating	361
Anatomy and Third Trimester	630
Total	**991**
Overall Total	**29,268**

Table 2. Invasive Procedures

Procedure	N=
CVS	50
Amniocentesis	55
Amniodrainage	1

Table 3. Chromosomal abnormalities detected

Abnormality	N=
Trisomy 21	17
Trisomy 18	18
Trisomy 13	0
Monosomy X	0
Triploidy	3
Di George	1
Wolf-Hirschhorn Syndrome	1
Beckwith-Wiedermann Syndrome	1
Mucopolysaccharidosis Type VII (Sly Syndrome)	1
Tetrasomy 9p	1

Table 4. Diagnosis of Chromosomal anomalies

Chromosomal Anomaly	Indication for Invasive Testing and Outcome
Trisomy 21 : 17	4 Cystic Hygroma 1 Increased Nuchal Fold 12 High risk NIPT
Trisomy 18 : 18	5 High Risk NIPT 4 Cystic Hygroma 6 Multiple Structural Abnormalities 3 Small for Gestational Age
Triploidy : 3	1 Multiple Structural Abnormalities 2 Small for Gestational Age
Di George : 1	Cardiac Abnormality

Table 5. Structural Fetal Abnormalities detected antenatally

Neural Tube Defects	16 7 Spina Bifida 7 Anencephaly 2 Encephalocele
Cystic Hygroma	32
Facial Clefts	2
Cardiac	94 79 Structural Cardiac Abnormalities 15 Cardiac arrhythmia
Thorax	8 2 Diaphragmatic Hernias 4 Cystic Lung Lesions 2 Pleural Effusions
Abdominal wall defect	13 7 Gastroschisis 4 Omphalocoele 1 Pentalogy of Cantrell 1 Cloacal Exstrophy
Renal	38
Skeletal	13 5 Dysplasia 8 Isolated Talipes
Neurological	16
Total	**248**

Service

- Ongoing routine offering of a booking scan to women at their first visit.
- Ongoing routine offering of a fetal anatomy scan at 18-22 weeks to all women.
- The ongoing provision of an outreach Ultrasound Service in Naas.
- Perinatal Ultrasound quarterly multidisciplinary meeting co-ordinated and chaired by Felicity Doddy, CMM II on all ongoing high-risk cases.
- Fetal Medicine service and specialist rhesus service, multiple pregnancy service, fetal cardiology and preterm birth prevention service

Staffing / Professional Development

- Provision of on-going further education to enhance the service to women.
- 1 Midwife commenced the UCD Masters Programme in Ultrasound, Sept 2019.
- 1 Midwife completed Ultrasound Masters, Dec 2019.
- 1 Midwife Sonographer completed Graduate Certificate Ultrasound, July 2019.
- Rotational Staff Midwife Trainee Sonographer post commenced January 2019.
- First rotation post to commence rotation to OPD following ultrasound training.
- Completion of Perinatal Mental Health Certificate by CMM II.
- Ongoing development of guideline documents based on best practice, agreed and implemented at department level and available for viewing on Q pulse.
- Continued support, mentoring and Ultrasound training for staff Nurse Portlaoise – due to complete Masters Dec 2019.
- Commencement of Prenatal Diagnosis Staff Midwife post to support Prenatal Diagnosis CMM II.
- On-going on-site support and consolidation for Midwife Sonographer, Portlaoise 1 day per month.

Achievements in 2019

- Maintaining service provision to full capacity despite the reduced staffing numbers and increasing annual activity.
- Upgrading of Ultrasound Machine – E8 installed 2019.
- Continued funding for Education and Professional Development funded by Coombe Fetal Medicine.

Challenges for 2020

- Staff retention.
- Continued recruitment.
- Facilitate the staff members undergoing the Masters in Ultrasound.
- Training of Midwife Sonographers with view to commencing the Graduate Certificate in Ultrasound (UCD).
- Facilitate professional development.

Acknowledgements

In 2019, the obstetric ultrasound department continued to provide a routine dating ultrasound and routine fetal anomaly ultrasound to all women attending for antenatal care at the hospital. In addition, there was a significant number of third trimester fetal growth and well-being ultrasounds performed. This is a credit to our dedicated team of midwife sonographers and radiographers who continue to provide the highest quality care to women and their babies. In addition, I wish to commend them on their commitment to ongoing professional development and their successful achievements.

A prenatal diagnosis of a fetal abnormality is a challenging time for parents in their pregnancy. I would like to acknowledge my fetal medicine consultant colleagues and Dr Orla Franklin, paediatric cardiologist for their expertise and for their support. I would like to thank Ms Felicity Doddy and Ms Leanne Curtis our prenatal diagnosis co-ordinators who provide ongoing support to parents following the diagnosis. As a tertiary referral unit, they also provide support and co-ordinate shared antenatal care from maternity units outside Dublin for women whose baby requires

planned delivery in Dublin in order to facilitate urgent transfer to a paediatric surgical centre or specialised neonatal care. Over the last number of years, together with our neonatology colleagues, the fetal medicine service has developed a multi-disciplinary network with our paediatric sub-specialities in CHI, clinical genetics, radiology, medical social work and bereavement support teams to provide comprehensive care to women and their families following the prenatal diagnosis of a fetal abnormality. The Health (Regulation of Termination of Pregnancy Act) 2018, which commenced this year, allows for termination of pregnancy in Ireland where there is a prenatal diagnosis of a fatal fetal abnormality / life-limiting condition. There were 32 cases diagnosed with a life-limiting condition in 2019. In some of these cases, women opted for a termination of pregnancy and others chose to continue their pregnancy with perinatal palliative care.

Dr Brendan Mc Donnell, is our third Bernard Stuart Fellow in Perinatal Ultrasound. His PhD research with Dr Carmen Regan has achieved a number of publications to date and their RCT on Smoking cessation Through Optimisation of clinical care in Pregnancy will be completed in 2020.

I wish to acknowledge Professor Sean Daly, who as Head of Department for the past 2.5 years, together with Ms Elaine Mc Geady (CMM III) have contributed so much to the ongoing development of the Ultrasound and Fetal Medicine department. In December 2019, we appointed a sixth Fetal Medicine Consultant, Dr Neil O'Gorman and we look forward to welcoming him into the department in 2020.

Dr. Caoimhe Lynch
Director of Perinatal Ultrasound

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, *CMM II 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 194 women attend the clinic. Structural cardiac anomalies were detected in 79 cases and an abnormality of cardiac rhythm detected in a further 15 pregnancies. 19 structural cardiac abnormalities were associated with a chromosomal abnormality antenatally.

As in previous years the service continued to attract referrals from fetal-maternal medicine colleagues in 12 sites across Ireland with further expansion of the cross-border referral group from Northern Ireland. 27 (34%) anomalies were detected in women who were originally booked to deliver outside the Coombe. These pregnancies were re-booked to the Coombe to facilitate urgent cardiac surgical or catheter intervention in the immediate postnatal period.

Cardiac Diagnosis	N=
Hypoplastic Left Heart Disease	9
Hypoplastic Right Heart disease	3
Complete Atrioventricular Septal Defect	5
Ventricular Septal Defect	26
Tetralogy of Fallot	8
Transpostion +/- VSD	16
Coarctation +/- Arch hypoplasia / Interrupted Aortic Arch	3
Shone Complex	1
Rhabdomyomata	1
Double Inlet Left Ventricle	1
Tricuspid Stenosis	2
Mitral & Aortic Stenosis	2
Pulmonary Atresia with MAPCAs	1
Cardiomegaly/Cardiomyopathy	1
Arrthymia	
Supraventricular Tachycardia (Inc Atrial Flutter)	1
Atrial Ectopics	14

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.

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) which may cause haemolytic disease of the fetus or newborn (HDFN) in pregnancy involves antibody screening, quantitation where appropriate, paternal genotyping and fetal DNA typing when indicated. At risk pregnancies are followed at a dedicated clinic and care is guided by antibody levels and/or MCA Dopplers, as indicated.

An isoimmunisation guideline has been developed to aid streamlining the referral of cases requiring ultrasound surveillance. In 2019 women who had new onset isoimmunisation were monitored using serial antibody levels in their team clinics and referred to the Rhesus clinic if antibody levels reached the threshold for developing significant fetal anaemia. Previously affected and at risk mothers were managed in the clinic.

In 2019, 49 patients were referred to the Rhesus Clinic. Of these, 40 were diagnosed with red cell antibodies for the first time. 2 patients were diagnosed with multiple red cell antibodies. 1 woman received 2 intrauterine red cell transfusions, these were performed at another Hospital. 14 babies were DCT positive at birth, 11 requiring admission to the special care baby unit for phototherapy. 2 babies required phototherapy and IVIG. 1 baby required phototherapy, IVIG and blood transfusion.

Outcome of pregnancies with RCA

Haemolytic Disease of Fetus and Newborn – 49 women were referred to the service.

Table 1 – Neonatal Outcomes

Intrauterine transfusion	2
Affected neonates (DCT positive at birth)	14
SCBU admissions	11
Phototherapy only	9
Phototherapy, IVIG and RCC transfusion	1
Phototherapy and IVIG	1

Table 2 – Red Cell Antibodies (N = 34)

Antibody	Number of Patients Affected	DCT Positive	DCT Negative
Anti D	11	5	6
Anti c	5	3	2
Anti K	1		1
Anti WRA	2		2
Anti Cw	5		5
Anti E	10	4	6
Anti M	13	2	11
Multiple Antibodies	2		2
Anti D	11	5	6

Infant Feeding

Head of Department

Ms Ann MacIntyre, *Director of Midwifery/Nursing*

Staff Complement

Mary Toole, *1 WTE Clinical Midwife Specialist*
Meena Purushothaman, *1 WTE Clinical Midwife Specialist (Until December)*
Kathy Cleere, *1 WTE Acting CMM (from December)*

Key Performance Indicators

- Implementing and sustaining an environment that routinely provides breastfeeding supportive practices towards lifelong health and wellbeing, through compliance to the standards of the Baby Friendly Initiative (BFI).
- 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 risks & individualized preparation and planning.
- Comprehensive antenatal identification and follow-up of women with high-risk of lactation challenges through utilization of Antenatal Discussion /Checklist & Prenatal Lactation Self Assessment Tool.
- Facilitated high-risk Lactation Clinics to assist women with predicted challenges and developed Patient Information Leaflet on harvesting colostrum.
- Procured additional hospital grade freezers for the storage of harvested colostrum.
- Critical analysis of indicators for re-admission with breastfeeding challenges and corrective measures for prevention of recurrence of same in collaboration with Infection Control Team.

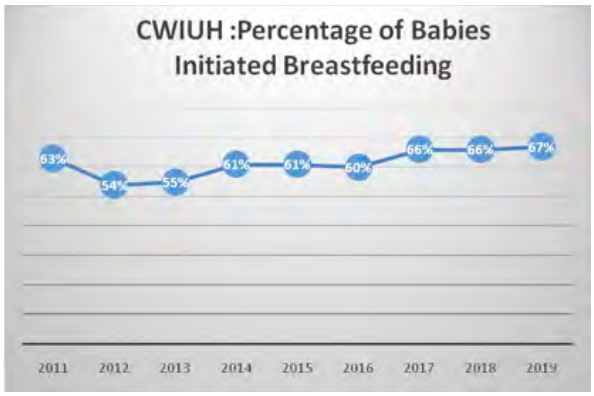
Achievements in 2019

- Promoting and supporting evidence-based practice in Infant Feeding in line with HSE/ National Infant Feeding Policy through structured action plans and support of Infant Feeding Steering Group.
- Developed individualized pathways for women through the implementation of the 'Making Every Contact Count' Framework.
- Provision of Skills Workshop and Clinics facilitating individual consultations.
- Facilitation of Staff Skills Workshops and inter-departmental education sessions for all staff including, doctors, midwives, healthcare assistants, students and non-clinical staff.
- Continued 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 & the Prenatal Lactation Self Assessment Tool, promoting the capacity of pregnant women to obtain, process and understand information and services needed to make appropriate infant feeding decisions.
- Active participation on the joint Infant Feeding Management Programmes in collaboration with the three Dublin Maternity Hospitals under the auspices of Centre for Midwifery Education.
- Reduction in excessive weight loss and associated re-admissions of Breastfeeding mothers & babies through early identification & implementation of individualized care plans during Antenatal & Postnatal period.
- Formalised pathway for referral of babies for assessment and division of anterior ankyloglossia within the CWIUH, in collaboration with Department of Neonatology.
- Follow up of post-frenotomy babies to promote and support exclusive breastfeeding.
- Prevention of violations to the code of marketing breastmilk substitutes through adherence to the National Infant Feeding Policy, staff education and provision of all scientific information sessions on formula by the dieticians.
- Supported and facilitated new Lactation Support Staff in NICU to facilitate provision of breastmilk to pre-term babies.

Table 1: Infant feeding Statistics 2013-2019

	2013	2014	2015	2016	2017	2018	**2019**
Total number of live births	8150	8781	8230	8244	8156	8305	**7799**
Number of babies initiated breastfeeding	4489 (55%)	5379 (61%)	5094 (61%)	5253 (60%)	5369 (66%)	5451 (66%)	**5193 (67%)**
Number of babies breastfeeding exclusively at discharge	2873 (35%)	3211 (37%)	3145 (38%)	3206 (38%)	3000 (37%)	3110 (38%)	**2784 (36%)**
Number of babies feeding partially/ combined feeding at discharge	1616 (20%)	1679 (19%)	1706 (21%)	1834 (22%)	1914 (23%)	1988 (24%)	**2014 (26%)**

Figure1: Percentage of babies Initiated breastfeeding



NB: The figures for 2012-2019 are calculated from computerised mothers' discharges whereas 2011 data is based on intention to breastfeed as opposed to breastfeeding initiated.

Figure 2: Breastfeeding Rates

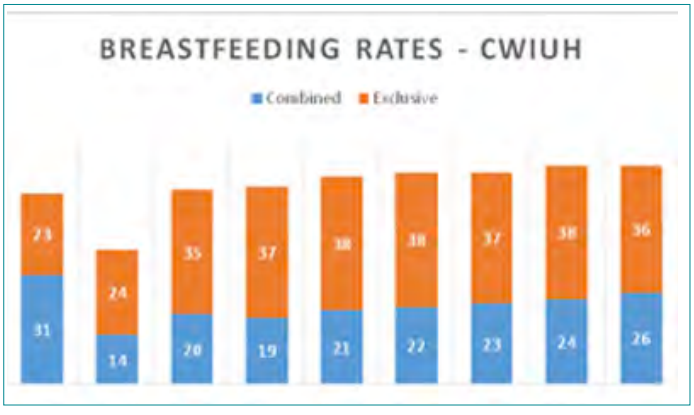
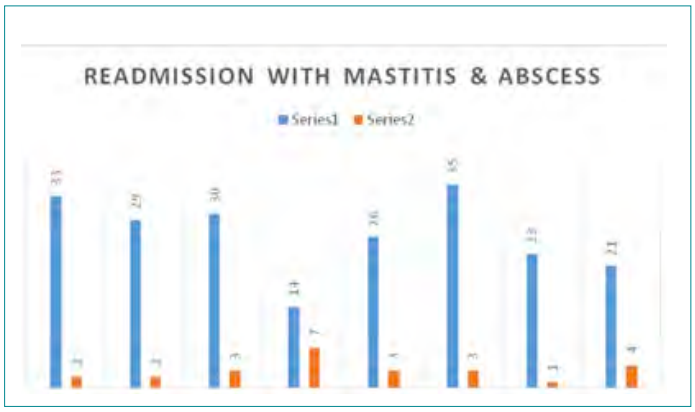


Figure 3: Readmission Rates



Challenges for 2020

- Increase in the demand for review and support of infants with suspected ankyloglossia and subsequent patient dissatisfaction.
- To meet the demand of expectation from mothers & families with increased awareness of breastfeeding.

Maternal Mortality 2000-2019

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
2018	1	8827
2019	0	8434
Total	12	175,677
Maternal Mortality Rate	**%**	**0.0068**

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

2018 Coroner's Report Awaited

Maternity Floors

Heads of Department

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

Raji Dominic, *ACMM III*

Helen Castelino, *ACMM III (Sept to Dec)*

Staff Complement

WTE 0.77 WTE CMM III
WTE 3.92 CMM II
WTE 7.48 CMM I
WTE 60.6 Staff Midwives
13.36 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 vary throughout the year depending on college/clinical commitments.

Key Performance Indicators

- To promote, nurture, lead and manage effective midwifery workforce ensuring the delivery of evidence-based, safe effective quality care to women and families who are the core of our organisation fulfilling our mission statement "Excellence in the care of Women & Babies".
- Promote belief, trust and confidence among midwives in their knowledge and skills. Encouraging midwives to be an advocate for women's preferences and choices. Be respectful and mindful of our multicultural cohort of women attending our services.
- 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 2019

Recruitment & Retention

- The continued commitment of recruitment and retention of midwifery staff was evident throughout 2019. Open communications and involvement of various departments allowed for a smooth and successful pathway in the recruitment process. 22 newly qualified students commenced a 2.5 year midwifery rotation. In order to support, guide and nurture this new cohort of staff a "Transition to Practice" was developed with assistance from CME and Practice Development Department. We welcomed 4 overseas midwives on an adaptation programme.
- The role of the Clinical Skills Facilitators has been paramount in supporting, mentoring, advising and in the development of staff.
- The Rotation was recommenced in small phases in Sept 2019.
- The Relaunch of 5 Year Midwifery & Nursing Vision Going Forward with Primary Drivers – Workforce, Education & Research, Leadership & Management, and Innovation took place in March 2019. All CMM3/CNM3 presented to approximately 40 staff showcasing individual departments. Leadership, values, beliefs and commitment in the provision of the highest quality of care for the mothers & babies in our care were the core foundations of the 5 year vision.
- With the launch of the National Maternity Strategy (2016), a hospital midwifery group comprising of midwifery clinical managers was established on how best to incorporate the strategy within the mission, vision and values of the hospital.

Midwives Clinics

The Domino Clinic was relocated to a newly-refurbished Crumlin Primary Care Centre, which was developed with the support of the Assistant Director of Public Health. This community-based provision of care has gone from strength to strength.

Lean Healthcare

The Lean Health Care programme achieved great success in the public domain from a local, national and international level in 2019. Lean HC has allowed for further development of strong MDT collaboration and partnerships.

Thus, allowing for transparency, engagement and empowerment of staff, job satisfaction and a smooth and timely delivery of safe, quality of care for the mothers and babies that we care for.

A) The White Belt Project from Dietetics department was accepted for poster presentation at the 10th International Symposium on Diabetes Hypertension, Metabolic Syndrome and Pregnancy in May 2019. **"Gestational Diabetes Mellitus Pathway of Diagnosis to Treatment.**

B) CMM2 M. Sheppard of Parent Education Department & I were invited guest speakers at the NMPDU DSKW 6th Annual Regional Nursing & Midwifery Conference. The theme was "Nurses & Midwives translating the Sláinte Care Vision into Practice. The topic chosen to best represent the theme was a detailed development of a project titled **" The Implementation of A New Model For Antenatal Education In A Combined Community-Based And Tertiary Maternity Setting© : Phase 1 of a Multi-Phased Quality Improvement Initiative".** This work show cased the detailed development of advancement in practice and the integration of services through the Department of Parent Education. Lean HC was used as the methodology of change. A systematic analysis of Parent Education services initially took place in 2018, which allowed for removal of waste from various aspects of the service. One of the key priorities was the provision of a package of care from an MDT perspective.

C) The Department of Anaesthesia won first prize for Oral presentation at the Society of Obstetric Anaesthetists (ISOA) **"Anaesthetists delivering epidural information at antenatal classes improves the quality of informed consent".**

D) I had the privilege to be an invited guest speaker at the Guinness Lecture Symposium in Oct 2019 where I presented **"CWIUH Lean Health Care Journey to Date".** This forum further developed an organisational interest in getting involved in the Lean HC concept with external guest interest also.

E) In Nov 2019, I for the first time independently facilitated an MDT group of 21 staff that undertook a White Belt training and project, with 7 projects to be completed. There was representation from Bereavement Services, St. Patrick's Ward, Delivery Suite, Parent Education, Department of Anaesthetics, Laboratory, Pharmacy and Diabetes Services. 4 members that completed training in Green Belt 2018 submitted to 2 projects entitled **"Releasing More Time to Care Effectively in the Emergency Room and "Introducing Birth Dynamics- A Package of Antenatal Education to support and empower women through their birthing experience".**

Refurbishment

- Renovation work was completed in St. Monica's Ward, Rooms 5 & 6 to support women in early labour, allowing more space, movement, low lighting in order to optimise physiological birth.

Homelessness

- In recent years the prevalence of homelessness has becoming extremely difficult, frustrating and challenging for service users and providers from a hospital level and for our wider community health care colleagues. As a collective, the aim is to ensure that families that are subjected to homelessness receive the appropriate care and dignity that can be provided. It was evident from caring for such families various gaps in provision of services were ever increasing. Addressing such gaps was of paramount importance. In an effort to ensure the organisation can strive to bridge these gaps, interagency collaboration gave the opportunity to commence addressing the presenting challenges. In May 2019, the Assistant Director of Public Health from Tallaght together with a designated team along with, Ms. Liz Piggott, Dublin Homeless Health Link, were invited to meet our MDT team. Our invited guests presented to the MDT group, a detailed presentation and national algorithm for the management of homelessness. This meeting was exceptionally beneficial as it allowed the group to explore and understand the needs and priorities of families experiencing homelessness. Additionally, this open dialogue allowed for stronger relationship building, whilst outlining where future service improvements are necessary.

Challenges for 2020

- Midwifery staffing retention and recruitment will continue to be a priority for 2020. Ongoing recruitment is imperative for the organisation. Our midwifery & HCA staff play a pivotal role in the provision of woman and family-centred safe effective care. We will continue to encourage, facilitate and support Continuous Professional Development of all staff with the support of the NMPDU.

- Engagement, guidance and support of the frontline staff & the MDT in quality initiatives with thorough training in Lean Methodology in all domains throughout the organisation. This dedicated drive of development, guidance, listening to and supporting staff with QIPs, fosters a culture that our mothers and babies are always at the centre of care planning,

whilst our staff have a voice to make change and provide safe effective and compassionate care.

- To promote and drive future planning within our community / inpatient services in line with the National Maternity Strategy 2016.
- To improve access to Parent Education services, and maintain interagency collaboration within the current WTE.
- To facilitate clinical audits and cooperative learning to improve the provision of safe effective care of woman and family-centred care.
- The continuous expansion and support of higher education for breastfeeding under the umbrella of International Board Certified Lactation Consultant (IBCLC).
- Promote & facilitate expansion of the role of the midwife and develop AMP candidates.
- To promote a shared multi-departmental perception of the importance of patient safety through continuously reviewing clinical incident reports and disseminating the learning points.

I would sincerely like to extend my heartfelt appreciation, gratitude and thanks to all members of staff for your engagement, dedication, tireless work and strong commitment to the women and babies that we care for.

Medical Clinic

Heads of Department

Dr Bridgette Byrne, *Consultant Obstetrician and Gynaecologist*
Dr Caoimhe Lynch, *Consultant Obstetrician and Gynaecologist*
Dr Carmen Regan, *Consultant Obstetrician and Gynaecologist*

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, *CMM II, High Risk Service Liaison Midwife*

Dr Sieglinde Muellers *(to July 2019) and* Dr Anne McHugh *(from July 2019), Fellows in Maternal Fetal Medicine, Rotunda Hospital and Coombe Women & Infants University Hospital / Columbia University NYC*

Dr Dana Alshuwaikhat, *(to December 2019) 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, *Pharmacist*

Key Performance Indicators

- Identification of at risk pregnancies with ease of referral and assessment.
- Ongoing database with audit of maternal and perinatal outcomes.
- Multidisciplinary evidence-based practice; weekly team meetings; quarterly MDTs.
- Tri-hospital meetings with other multidisciplinary teams to discuss complex and challenging conditions and cases.
- 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).
- National referral centre for patients with Sickle Cell Disease through the adult Haemoglobinopathy service at St James's Hospital.

Outcomes in 2019

- Maintenance of a high level of care for the most high risk patients:
  - Spontaneous vaginal delivery rate of 49%
  - LSCS rate of 41% (elective 23%)
  - Preterm delivery rate of 11% (1% between 28 and 32 weeks and 2% below 28 weeks)
  - NICU admission rate of 7.2%
  - Two neonatal deaths, both delivered at 23 weeks
  - No maternal deaths
- Generation of a Rapid VTE Assessment Tool to facilitate identification and individualisation of care for women at risk of thrombosis and thromboembolism in the antenatal and postnatal period.
- Catherine Manning, our High-Risk Liaison Midwife became an Advance Nurse Pratitioner Candidate for high-risk patients.

Challenges for 2020

- Continued development of care pathways between the Coombe Women and Infants University Hospital and St James's Hospital for optimization of care of high-risk patients and sick mothers, advocating for the development of a new Maternal Medicine post across both sites.
- Continued provision of optimal care to high-risk pregnant women throughout pregnancy, building referral base and preconceptual consultations.

Diagnoses of new patients referred to the Medical Clinic

In 2019 there were 386 new referrals to the Medical Clinic

Thrombosis/Thromboprophylaxis	**53**
Pulmonary Embolism (Current Pregnancy)	2
History of VTE	42
Family History Venous Thrombosis/ Embolism	3
Deep Venous Thrombosis In Pregnancy	6
Clotting Factor Deficiencies	**31**
Bleeding Disorder Unknown Aetiology	5
Factor X Deficiency	2
Factor XII Deficiency	1
Von Willebrands Disease	6
Severe Haemophilia Carrier	5
Haemophilia Carrier	7
Family History Haemophilia	1
Partner With Factor Deficiency	4
Thrombophilia	**13**
Thrombophilia	9
Factor V Leiden	2
Protein S Deficiency	2
Platelet Disorders	**12**
ITP	10
Platelet Function Defect	2
Red Cell Disorders	**13**
Thalassemia	3
Sickle Cell Disease	5
Neutropenia/Leukopenia	1
Severe Anaemia	1
Polycythaemia	1
Hereditary Spherocytosis	2
White Cell Disorders	**3**
History of Leukaemia	2
History of Hodgkin's Lymphoma	1
Hypertensive Disease	**42**
Essential Hypertension	40
Severe PET	1
Early Onset PET	1
Cardiac Disease	**41**
Arrhythmias/Palpitations	8
Wolf-Parkinson-White Syndrome	1
Congenital Heart Disease	12
Heart Murmur	4
Mitral Valve Prolapse	6
Pulmonary Valve Stenosis	1
Aortic Regurgitation	1
ASD	2
VSD	1
Constrictive Pericarditis	1
Cardiomyopathy	1
Long QT Syndrome	1
Myocarditis	1
Pericardial Effusion	1
Renal Disorders	**23**
Chronic Renal Disease	7
IgA Nephropathy	1
Severe Proteinuria	6
Renal Transplant	4
Polycystic Kidney	2
Raised Creatinine	1
Persisent Haematuria	1
Post Nephrectomy	1
Respiratory	**7**
Sarcoidosis	3
Severe Asthma	2
Alpha-1 Antitrypsin Deficiency	1
Connective Tissue Disease	**42**
Systemic Lupus Erythematous	10
Ehlers-Danlos Syndrome	2
Rheumatoid Arthritis	17
Psoriatic Arthritis	3
Juvenile Arthritis	1
Ankylosing Spondylitis	1
Behcet's Syndrome	2
Positive Antinuclear Antibody	2
Auto-Immune Arthritis	1
Raynaud's Disease	1
Discoid Lupus Erythematous	1
Auto-Immune Disease	1
Cerebrovascular Disease/Neurological	**27**
History of Subarachnoid Haemorrhage	1

Benign Intracranial Hypertension	2
History of CVA	4
Multiple Sclerosis	8
Neuropathy	1
Brain Aneurysm	1
Cerebral Palsy	1
Dopa Responsive Dystonia	1
Brain Cavernoma	1
Brain Tumour	3
Cadasil Syndrome	1
Postural Orthostatic Tachycardia Syndrome	1
Seizures Unknown Cause	1
Syncope	1
Liver/GI	**35**
Ulcerative Colitis	13
Crohn's Disease	14
Bowel Cancer/ Resection	3
Pancreatic Cancer	1
Fatty Liver Disease	2
Liver Transplant	1
Abnormal Liver Function	1
Preconceptual Care	**29**
Genetic /Chromosomal /Metabolic	**5**
Conn Syndrome	1
Carrier of Mitochondrial Disorder	1
Turners Syndrome	1
Acute Porphyria	2
Other	**11**
Breast Cancer	2
Ewings Sarcoma	1
Hx of Degenerative Retinopathy	1
Post Gastric Bypass	1
Pituitary Adenoma	1
Progressive Myopia	1
Spina Bifida	2
Hereditary Haemorrhagic Telangiectasia	2

Publications

How much greater is obstetric intervention in women with medical disorders in pregnancy when compared to the general population? Keane R, Manning C, Lynch C, Regan C, Byrne B. Ir Med J 2019;112 (9):1001-4.

Analgesia, anaesthesia and obstetric outcome in women with inherited bleeding disorders. Boyd SC, O'Connor AD, Horan MA, Dicker P, Manning C, Lynch C, Regan C, Ryan K, Tan T, Byrne BM. *Eur J Obstet Gynecol Reprod Biol. 2019 Aug; 239: 60-63.*

Hairy Cell Leukemia Masquerading as Pancytopenia in Pregnancy. Shackleton L, Langabeer SE, O'Brien D, McCarron SL, Byrne B, Barry R, Flavin R, Bacon CL, Flynn CM. *Case Rep Hematol. Aug 21;2019:3238168.*

Multiple Birth Clinic

Head of Department

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

There were 189 multiple pregnancies booked at the Coombe in 2019. There were 183 sets of twins of which 154 were dichorionic diamniotic (DCDA), 28 monochorionic diamniotic (MCDA) and one set of monochorionic monoamniotic (MCMA) twins.

We had five sets of triplets in 2019, three IVF with the patient's own eggs, one with donor eggs and one conceived on clomiphene citrate. Two sets were TCTA and three sets were DCTA. We had one set of quadruplets.

Key Performance Indicators

Gestational Ages at Delivery

Overall, two sets of twins delivered elsewhere and were lost to follow up - both DCDA. There were two MCDA twin pairs that opted to travel for termination of pregnancy due to fetal abnormality and two miscarriages at 16 weeks' gestation. There is outcome data for the remaining 180 multiple pregnancies. Overall, 31% of twins delivered at or beyond 37 weeks' gestation, 35% DCDA and 3.6% MCDA. The vast majority of twins 83.5% delivered at or beyond 34 weeks, 86.8% DCDA and 53.6% of MCDA twins. Overall 8.5% delivered between 28 and 31^{+6} weeks and 2.3% 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=178	DCDA N=154	MCDA N=28	MCMA N=1	Triplets N=5
≥37	55 (30.9%)	54 (34.8%)	1 (3.6%)		0
34 – 36^{+6}	93 (52.3%)	79 (52%)	14(50%)	1(100%)as singleton	0
32 - 33^{+6}	9 (5.1%)	8 (4.6%)	1(3.6%)		1(20%)
28 – 31^{+6}	15 (8.4%)	10 (6.6%)	5 (17.9%)		3 (60%)
23 – $27+^{+6}$	4 (2.2%)	1 (0.7%)	3 (10.7%)		0
<23	2 (1.1%)	2 (1.3%)	4 (14.2%)		1 (20%)

*MCMA twins with OEIS in Twin 2 so the parents had radiofrequency ablation to the cord of that baby in the UK

Mode of Delivery >23 weeks' gestation

Mode of Delivery	All Twins N=176	DCDA N=152	MCDA N=24	MCMA	All Triplets N=4
SVD/SVD	29(16.5%)	25(16.4%)	4(16.7%)	0	0
SVD/Breech	7(4%)	7(4.6%)	0	0	
Breech/SVD	0	0	0	0	
Breech/Breech	1(0.6%)	1(0.7%)	0	0	
Instrumental	12(6.8%)	8(5.2%)	4(16.7%)	0	0
Vaginal delivery of both babies	49(27.8%)	41(26.9%)	8(33.3%)	0	2
El LSCS	68(38.6%)	62(40.8%)	6(25%)	0	1(25%)
Em LSCS	57(33%)	47(30.9%)	10(41.7%)	0	3(75%)
Vaginal/ Em LSCS	2(1.1%)	2(1.3%)	0	0	0
CS for one or both babies	127(72.2%)	111(73%)	16(66.7%)	0	4(100%)

Monochorionic Twins

There were 28 sets of monochorionic diamniotic twins in 2019 which is lower than previous years. All were spontaneous conceptions apart from three which were conceived through IVF. There were three cases of twin to twin transfusion syndrome. Two were Coombe patients and both underwent Laser in another hospital at 19 weeks' gestation. In one of these cases sadly there was demise of the Donor twin at 21 weeks and she went on to have an Emergency Caesarean section at 30^{+6} weeks' gestation and the surviving twin did well. In the second case the laser was successful and the patient had a PPROM at 29 weeks and went into preterm labour at 31^{+5} weeks and had uneventful vaginal deliveries of both babies. The babies did very well however the mother developed an ovarian vein thrombosis and septic pelvic thrombophlebitis and had a prolonged recovery. She was managed in conjunction with Haematology in another hospital and made a full recovery. The third patient was transferred from another hospital with Stage 2 TTTS. She had been treated with an amniodrainage in the other hospital at 23 weeks' gestation. She went into preterm labour at 27^{+1} weeks and was delivered by Emergency LSCS and all was well.

Sadly we had two MCDA twin pairs with fetal abnormalities and the parents chose to travel for termination of pregnancy. We had two missed miscarriages of MCDA twins at 16 weeks also. In one case one of the twins had demised at 11 weeks and the other, that had an increased nuchal translucency at 16 weeks (karyotype was normal) and in the other the mother came for her routine scan at 16 weeks and sadly a double fetal demise was diagnosed.

We had one set of monochorionic monoamniotic twins. Sadly our MCMA set of twins had a major fetal anomaly in T2. This baby had OEIS complex (omphalocoele, cloacal extrophy, imperforate anus and spinal defects). Given the high risk nature of the pregnancy and the increased mortality associated with cord entanglement in MCMA twin pregnancies the parents opted to travel to the UK for radiofrequency ablation to the cord of the abnormal baby in order to give the normal baby the best chance of a healthy outcome. She went on to have an uneventful pregnancy and spontaneous labour and delivery of a healthy baby at 36^{+6} weeks' gestation.

Dichorionic Diamniotic Twins

There was one set of DCDA twins who had a PPROM at 23^{+1} weeks and went into labour having vaginal breech deliveries of both babies. The Mum received steroids and MgSO4. The babies were 530g and 630g respectively and were transferred to the NICU where sadly T1 was an early neonatal death and twin 2 a late neonatal death.

We had one other set of DCDA twins where the Mother presented at 35^{+5} weeks' gestation with an unexplained demise of Twin 1. Twin 2 was a healthy male and was delivered by Caesarean Section.

Triplets

We had 5 sets of triplets. One of the mothers had IVF with donor eggs. She had an uneventful pregnancy until 21^{+6} weeks' gestation when she had a PPROM and unfortunately went on to deliver all three babies at 22^{+0} weeks. One baby was stillborn and the other two died shortly after birth.

The other four sets of triplets did very well delivering at 29^{+1}, 29^{+2},30^{+1} and 33^{+3} weeks' gestation respectively. All were delivered by LSCS. Three were emergency sections due to preterm labour, suspected abruption and abnormal umbilical artery Dopplers. The fourth was elective at 33^{+3} weeks.

Quadruplets

We had one set of quads conceived as a result of ovulation induction treatment. They were tetrachorionic tetraamnioric. Delivered electively at 30^{+5} weeks' gestation due to a fall off in growth of baby 1. The babies went to NICU and had uneventful courses and were discharged home well.

Options in Pregnancy Clinic

Clinical Lead

Dr Aoife Mullally, *Consultant Obstetrician/Gynaecologist*

Staff Complement

Clare Smart, *CMMII Gynaecology and Acting Options in Pregnancy Clinic Coordinator*

Leanne Curtis, *Staff Midwife*

Louise Rafferty & Aoife Metcalfe, *Ultrasound Services*

Miriam Strong & Emma O Neill, *(0.4 WTE) Grade V Clerical Support*

The Options in Pregnancy Service was established in February 2019 to provide abortion care in accordance with the Health (Regulation of Termination of Pregnancy) Act 2018. Women are referred electively to the clinic by their General Practitioner or community women's health provider. The majority of women are referred as they are between 9 and 12 weeks gestation or because they have a co-morbidity which makes them unsuitable for early medical abortion in the community. We are fortunate in being able to offer access to inpatient medical termination seven days a week and surgical termination Monday to Friday. Women with suspected complications of early medical abortion are also seen in this clinic. Women are offered follow-up appointments for insertion of LARCs.

Reasons for referral

Medical Termination of Pregnancy (MTOP)
Surgical Termination of Pregnancy (STOP)
Community MTOP Complication
Continued Pregnancy
DNA
Miscarriage +/- ERPC
Pregnancy of Unknown Location

Clinic Attendances

	New Appointments
February	5
March	6
April	8
May	18
June	9
July	13
August	12
September	13
October	21
November	23
December	18
Total	**146**

Challenges & Achievements

The development of this service has been contingent on the immense support we received from the Senior Management Team and from other departments within the hospital. Information on the service and how to access it was disseminated via the hospital website and informally to local community providers. The time-sensitive nature of abortion care has necessitated significant collaboration between primary care providers and our administration and clinical staff. Great care has been taken to ensure privacy and protection for both service users and service providers and to ensure that the service has been integrated into the hospital.

In-house information sessions, open to all staff, were held in January, explaining how the new service would work. Department and individual sessions also took place with staff working in the Emergency Room, the Gynaecology Wards and Theatre who have direct or indirect contact with women admitted for TOP or TOP related complications. These sessions included care

pathways for the care and management of women admitted for both medical and surgical termination of pregnancy and an understanding of conscientious objection.

The need to provide a better service for women with complications following community based ToP led to the development and implementation of a clear and safe pathway for women with complications that self-present to the ER and require follow-up care in the more appropriate environment of the Options in Pregnancy Clinic.

A Clinical Lead for Termination of Pregnancy Services and a Senior Social Worker with responsibility for the service were both appointed in 2019.

We would like to acknowledge the support of colleagues throughout the hospital but particularly in Perioperative Medicine, Theatre, St Gerard's ward and the Outpatient Department.

Future Plans

- Continue to update local guidelines and care pathways.
- Training for trainee medical staff and nursing/ midwifery staff to ensure the availability of trained staff in the future.
- Audit of quality of care from patient reported outcomes.

Aoife Mullally, *Clinical Lead*

Clare Smart, *Acting Clinic Co-ordinator.*

Adult Outpatients Clinics *(Excluding Colposcopy, Diabetic Service and External Clinics)*

Heads of Department

Professor Sharon Sheehan, *Master/CEO*
Ann MacIntyre, *Director of Midwifery/Nursing*
Mary Mc Donald, *Clinical Midwife Manager III (Author)*

Staff Complement

WTE CMM III
0.92 WTE CMM II
20 WTE Midwifes January 2019
16.4 WTE Midwives July 2019
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 which cares for women up to 24 weeks' gestation and for postnatal and gynaecology patients. The Early Pregnancy Assessment Unit is also located in the OPD.

The specialist outpatient services and clinics are reported separately for the purpose of the annual report.

Key Performance Indicators

Type of Appointment *(Appointments Offered minus Did not Attends)*	No of *attendances*	% *increase from 2018*
Antenatal Booking History Appointments Public/Semi-Private	6,635	+14.67%
Public/Semi-private Consultant Led Antenatal Appointment	34,404	+16%
Specialist Consultant-Led Antenatal Appointments(including Infectious Disease/Addiction, STOP, Fetal Cardiac, Prevention of Preterm Birth Clinics, Excluding Diabetic and Medical Clinics)	3,840	(Not reported in 2018)
Hospital Based Midwife Appointments (Midwifery Antenatal Clinics and Routine Anti-D Prophylaxis Clinic)	4,936	+4.4%
Total Gynaecology Appointments (Excluding Urogynaecology Clinic)	7,516	+6.8%
Emergency Room Attendance	9,606	+4.4%

Achievements in 2019

- The much anticipated and needed refurbishment of the Outpatients Department began in August. The hard work of the OPD staff and the excellent co-operation with the Contractors resulted in the continuation of full OPD services with minimal disruption to the public.
- The vacant Clinical Midwife Manager II post was filled in January by Ms Anitha Selvanayagam. She was replaced in June by Ms Jennifer Burke. The filling of this position led to an improvement in the overall management of the OPD services and allowed the CMM3 to fulfil her role and responsibilities to a greater degree.
- The OPD team were the recipients of a Quality Improvement Award from the Irish Hospice Foundation. This QI award worth €1,000 was part of their Hospice Friendly Hospital Programme. The award will go towards the provision of a "Solace Room " for the Early Pregnancy Assessment Unit.
- Two of the OPD staff began a Lean White Belt Project. The overall aim of this project was to improve the care provided to women in the Emergency Room. Two midwives also began the Early Pregnancy Ultrasound Scanning Module in UCD. This qualification will improve the care given to women in the Emergency Room.
- The planning for the new Emergency Unit/Unscheduled Attendance Unit began in 2019 with the OPD CMM III heavily involved in the Planning Team.

Challenges for 2020

- To continue to maintain full OPD Services while the Refurbishment Project is ongoing.
- To progress the provision of the "Solace Room " for EPAU provided for by the QI Award from the Irish Hospice Foundation.
- To continue involvement in the planning and development of the new Emergency Unit in order to ensure the provision of "fit for purpose" service.
- To continue to provide high-quality care to all women regardless of the challenges of staff recruitment and retention.
- To facilitate the delivery of Targeted Anti-D administration to Rhesus negative women.
- To further expand Midwifery Led Services in the OPD and to integrate with Community Midwifery Services /Primary Care Services in line with the Maternity Strategy 2016.
- To further improve the services of the Emergency Room.

Parent Education & Antenatal Classes

Head of Department

Ann MacIntyre, *Director of Midwifery & Nursing*
Fidelma McSweeney, *Assistant Director of Midwifery & Nursing*

Staff Complement

Megan Sheppard, *CMM II (Author)*
Kathy Cleere, *0.5 WTE Staff Midwife*
Ciara Whelan, *0.06 WTE Staff Midwife*
Aoibheann Tierney, *0.06 WTE Staff Midwife*
Clerical Support, *1 WTE*

Key Performance Indicators

- The provision of high-quality, evidence-based, antenatal education, based on the individual needs of parents, ensuring equitable access to all.
- Service alignment with recommendations from the Sláintecare Report (2017), National Maternity Strategy 2016-2026, HIQA Standards (2016) and Hospital Strategy.
- Education and clinical support for Higher Diploma Students and BSc Midwifery students.
- The provision of Midwives Clinic in the Outpatients Department.

Achievements in 2019

The Department of Parent Education underwent a systematic analysis of services in 2018 in order to eliminate waste and increase value to the service-user. A needs assessment of the customer was conducted which included analysis of feedback collected from both service-user and service-provider. As a result, service provision was restructured which facilitated MDT collaboration and a multidisciplinary approach to antenatal education. The delivery of a new package of education inclusive of Parent Education, Physiotherapy and Breastfeeding commenced in January 2019. In line with the recommendations of the Sláintecare Report 2017 for the integration of services, the availability of community-based classes in the outreach areas of Naas, Tallaght and Clondalkin were increased by 26.9% with an attendance rate of 90%. The classes in Tallaght were restructured in collaboration with primary care providers inclusive of Public Health Nurses and community-based Physiotherapists who now facilitate classes alongside Midwives and Anaesthesiologists from the CWIUH. The availability of one day Saturday classes (the preferred option for parents) increased by 84%.

Table 1: Changes as a result of the restructure

Improved access to parent education classes for first time parents.
Improved access to community based classes.
Remodelling of parent education classes to facilitate MDT involvement reducing duplication and ensuring consistent delivery and a collaborative approach to antenatal education.
Reduction in number of classes per package from 9 classes to either 3 morning classes / 4 evening classes or 1.25 day class inclusive of all components.
The introduction of a new module of education on the use of epidural analgesia in labour facilitated by the Department of Peri-operative Medicine and Anaesthesia.
Release of midwifery time to implement new QI initiatives addressing gaps in practice.

Table 2: Statistical analysis of availability of classes and attendances for the primiparous population

	2018	2019	% Increase
Total Availability of Classes (Per Package)	1660	**2174**	31%
Total Bookings	1777 (overbooked)	**1985**	11.7%
Total Attendances	1487	**1775**	19.4%
Availability in D8	1248	**1616**	29.5%
Total Attendances D8	1179	**1385**	15%
Availability Outreach classes	412	**523**	26.9%
Total	**308**	**390**	**26.6%**

Table 2.1

Total Attendances of those booked	90%
Total Attendance D8	89%
Total Attendances Outreach Areas	90%

Table 3: Further Services

Service	Attendances
Hospital Tour	285
Refresher Classes	125
VBAC Classes (Vaginal Birth after Caesarean)	75
Hypnobirthing	64
1:1 Classes	74
Early pregnancy class	460
Multiple Birth Classes	60

Table 4: Service User Feedback

Based on data collected by evaluation forms completed by each woman on completion of their antenatal education course and service-user feedback through Patient Advocacy Services:

Satisfaction with new model	90%
Increase in compliments through patient advocacy services	103%
Reduction in complaints through patient advocacy services	92%

Community Networks

- Representing the CWIUH on the Antenatal To Three Initiative steering committee D24.
- Representing the CWIUH on the Antenatal To Three Initiative breastfeeding committee D24.
- Representing the CWIUH on the Infant Mental Health Network (Clondalkin Branch).

The above networks are built on strong foundations of interagency collaboration and co-ordinate programmes in prevention and intervention to improve outcomes for children. Co-ordination spanning professional boundaries promote early intervention programmes that aim to promote healthy and holistic development of children. Our work in the maternity services forms part of an inter-disciplinary framework of intervention and integrated care.

Training and Development 2019

- 2 midwives completed LEAN Healthcare training at Whitebelt level. 2 Midwives undertook LEAN Healthcare training at Greenbelt level.
- 1 midwife completed Active Birth Teacher Training.
- 2 midwives completed Prenatal Yoga Teacher Training.
- 2 Midwives completed a foundation master class in Infant Mental Health.
- 3 midwives completed a foundation certificate in the Solihull approach.
- 2 midwives completed certificate in Preparation for Parenthood Facilitators Programme.
- Ongoing Train-The-Trainer programmes within the department for Antenatal Education Facilitation.

Challenges for 2020

- Improve access, quality, user satisfaction and efficiency of services through the development of integrated care while working within current resources.
- Improve availability of classes to all first time parents.
- The implementation of a structured toolkit for labour at organisational level, inclusive of parent and staff training module, to support women in labour and optimise physiological birth.

Acknowledgements

I would like to take this opportunity to sincerely thank the Parent Education Team for their ongoing commitment to ensuring the provision of the highest quality and standards of antenatal education to the families in our care. I would like to thank our colleagues in the departments of Physiotherapy, Infant Feeding, Dietetics and Anaesthesia for their support and dedication to the highly successful collaborative approach to antenatal education. Thank you also to our clerical support team Breda Naughton and Deborah McCartney for their incredible help and support throughout the year.

Finally a sincere thank you to senior midwifery management Ann MacIntyre DoMN and Fidelma McSweeney ADoMN for their continued leadership, support, and belief in all that we do.

Perinatal Day Centre

Heads of Department

Fidelma Mc Sweeney, *ADOMN*
Mary Mc Donald, *CMM III*

Staff Complement

Staff Midwife WTE 1.69
Phlebotomist WTE 0.41 (GTT Only)

Key Performance Indicators

Indicator	N=	% Change from 2018
Oral Glucose Tolerance Tests	4,907	-1.13%
Fasting/ Post Prandial Blood Tests	664	+34%
Diabetic Blood Sugar Results "phone –ins"	335	-58%
Other Blood Tests	1,167	+10%
CTG Fetal Monitoring	2,386	-12%
Antenatal steroid Administration	496	-2.6%
External Cephalic Version	63	-33%
Blood Pressure Series	1,148	-23%
Wound Review/ Dressings	306	-26%
Antenatal Visits/ Other Visits	500	+29%
Referral from Clinics	2,987	+18%
Referral from ER	38	+27%
Referral from GP	262	-42%
Other Referrals	523	+48%
24 Urine collection + BP Series	44	-67%
Postnatal reviews	642	-35%
Total Attendance Figures	**11,528**	**-10%**

Achievements in 2019

- Continuity of Midwifery personnel supported by the Outpatients Midwifery Team.
- Provided quality and safe care for women.
- Continued regular Phlebotomy Service (15 hours per week) for Glucose Tolerance Tests in the centre.
- Reduced the number of Diabetic "Phone Ins" through the implementation of work practices changes by the Diabetic Midwifery Team.

Challenges for 2020

- Sustain achievements.
- To continue to improve the woman's experience by advocating for improved Medical cover.
- Purchase a Phlebotomy chair, to improve the health and safety of staff and patients.

Preterm Birth Prevention Clinic

Head of Department

Professor Sean Daly, *Consultant Obstetrician/Gynaecologist*

There were 181 women who received care at the clinic and delivered in 2019. This is an increase of 23% on the 2018 figures. As in other years, the DNA rate was very low.

Women who present before 14 weeks are given the option to have a cerclage placed or to have surveillance with ultrasound and fetal fibronectin.

In general, women are seen for the first time and have cervical length measurements between 16-18 weeks. In each case, the risk is evaluated either by cervical length measurements alone or in conjunction with fetal fibronectin and utilizing the QUIPP app.

Individual care plans are made. Cervical sutures are placed up to 25 weeks in women whose cervix is less than 25mm or if the QUIPP indicates a high risk of preterm birth. After 25 weeks, cyclogest is given vaginally at a dose of 400mg nocte and continued until 36 weeks.

Results of singleton pregnancies managed at the PTB Clinic

There were two sets of twins and two sets of triplets seen at the clinic consequently there were 177 women who had singleton pregnancies managed at the clinic in 2019.

There were 143 (80.8%) women whose babies were born at term, while 34 (19.2%) women delivered babies between 20 and 36 weeks.

There were 2 live births that subsequently died, the first was born at 20^{+6} and weighed 320g. The second was born at 22^{+5} and weighed 450g. There were 3 intrauterine deaths among the 177 women who attended the clinic and all were induced. One of these occurred at 30 weeks and the baby weighed 1500g. The other two occurred at 24 weeks, one of these babies weighed > 500g.

Spontaneous labour occurred in 81 (45%) women and in only 7 (3.9%), spontaneous labour occurred at less than 34 weeks. 53 (30%) women had induction of labour. 43 (24.2%) women were delivered by LSCS with 29 (16.3%) delivered by elective LSCS.

There were 157 (88.7%) babies who were routinely transferred to the postnatal ward after delivery and 28 (10.2%) who required transfer to the SCBU/NICU.

There were no neonatal deaths in babies born after 23 weeks again this year.

Severe Maternal Morbidity & High Dependency Unit Report

Authors

Ms Julie Sloan, *Research Midwife*

Ms Nora Vallejo, *CMM III Delivery Suite*

Dr Bridgette Byrne, *Consultant Obstetrician and Gynaecologist*

Dr Aoife Mullally, *Labour Ward Lead*

Severe maternal morbidity (SMM) has been defined using the NPEC national audit criteria. The rate is increasing year on year and this trend reflects national and international figures. 76 women were identified out of 7746 women who delivered babies weighing 500 grams or more at the CWIUH in 2019, yielding a rate of 9.8 per 1,000. Massive Obstetric Haemorrhage (MOH) remains the predominant cause of severe maternal morbidity. The NPEC criteria for MOH are estimated blood loss ≥ 2.5 lts; transfusion of ≥ 5 units of RCC or treatment of bleeding with plasma, fibrinogen or platelets. There is a trend for administration of fibrinogen early in cases of MOH and this increases the number of women who fall into the MOH category. For this reason, we have broken down the numbers according to the main criteria that they met.

There were 5 cases of peripartum hysterectomy, 3 also met the criteria for MOH. There were no cases of eclampsia or uterine rupture and the rate of pumlonary embolus remains low. Note that postnatal PE may not present to our hospital.

Table 1: Number of cases of severe maternal morbidity cared for at the CWIUH in 2019

Organ Dysfunction Categories	
Major Obstetric haemorrhage	50
RCC ≥ 5 units	*11*
EBL ≥ 2.5 lts	*30*
Fibrinogen/plasma or platelets only	*9*
Renal or liver dysfunction	9
Pulmonary Embolus	4
Pulmonary oedema	2
Septicaemic shock	3(3)
Sickle cell crisis	2
Other	5
Total	**76**
Management based categories	
ICU/CCU admission	5(3)
Peripartum hysterectomy	5(3)

Table 1 outlines the main causes of severe maternal morbidity. Note that when numbers are followed by another number in brackets, this means that the case is already included in another category. Liver dysfunction was mainly attributable to PET when transaminases were ≥ 200 iu/ml. Other causes included surgical complications, recurrent epileptic seizures, a methaemaglobinemia crisis, and a case of ovarian vein thrombosis.

High Dependency Unit

There were 203 obstetric-related admissions to HDU in 2019. This represents 2.6% of the obstetric population (an identical percentage to last year). The leading indications for admission are haemorrhage and hypertension/PET. The data for the year are shown in Table 2. Note that only 3 cases of liver / renal dysfunction are included in the HDU data, the remaining cases were captured in the PET group. Some of the MOH cases are captured under PPH or APH.

Table 2: Obstetric - Related HDU Admissions

Indication for Admission	N=
MOH	42
PPH	30
APH	8
Peripartum Hysterectomy	4
PET (± HELLP)	47
Hypertension	4
Threatened PTL	7
PTL	1
MgSO4 (fetal neuroprotection)	14
Sepsis	5
? Sepsis	10
Septic Shock	3
Liver/Renal Dysfunction	3
Respiratory failure	3
Diabetic Ketoacidosis	2
Epilepsy	2
Cardiac Disease	2
Anaesthetic problems	2
Sickle Cell Disease	2
Miscellaneous	12
Total	**203**

Key Performance Indicators

- Four pregnant or recently pregnant women were transferred out to another Hospital ICU. One woman was admitted directly to ICU in another general hospital with an infective exacerbation of asthma and discharged to deliver her baby at a later gestation.

Achievements

- The PPH quality improvement project continued during 2019. A proforma for management of PPH was designed to improve quality of care, there was skills and drills training in PPH, a PPH trolley was introduced and tranexamic acid has been added to the PPH drugs kit.
- A consultant obstetrician with sessional commitment at St James's Hospital to care for pregnant women in the general hospital setting will be appointed in early 2020 and this will lead to improved communication and the development of care pathways for transfers between the CWIUH and SJH.

Challenges

- To reduce PPH rates and blood transfusion rates.
- Staffing and skill mix remain a challenge.
- Care pathways for women requiring transfer between the CWIUH and SJH continue to be developed.
- The development of a unit with the capability to provide level one care adjacent to the Delivery Suite would optimise HDU utilisation and efficiency.

Division of Gynaecology

General Gynaecology Report

Table 1: Inpatient Surgery

	2013	2014	2015	2016	2017	2018	**2019**
Patients	6212	6374	6158	6330	6031	6180	**6064**
Operations	8980	8891	8618	8918	8556	8819	**8748**

Table 2: Operation Categories

	2013	2014	2015	2016	2017	2018	**2019**
Obstetrical	3308	3630	3590	3663	3544	3748	**3609**
Cervical	838	882	752	828	844	872	**902**
Uterine	2897	2696	2704	2761	2543	2564	**2656**
Tubal & Ovarian	1032	916	844	847	812	775	**769**
Vulval & Vaginal	522	408	361	423	360	427	**405**
Urogynaecology	336	328	329	365	410	377	**367**
Other	47	31	38	31	43	56	**40**
Total	8980	8891	8618	8918	8556	8819	**8748**

Table 3: Obstetrical Operations

	2013	2014	2015	2016	2017	2018	**2019**
Lower Segment Caesarean Section (including those with Tubal Ligation)	2229	2476	2400	2571	2534	2746	**2611**
Classical Caesarean Section (including those with Tubal Ligation)	4	3	6	5	6	8	**7**
Hysterectomy in Pregnancy	2	0	2	4	1	6	**0**
ERPC	494	586	596	544	538	509	**510**
ERPC Postpartum	13	19	23	19	14	26	**22**
Laparotomy for Ectopic *	0	1	5	2	1	1	**1**
Laparoscopy for Ectopic *	47	73	78	57	62	44	**62**
Cervical Cerclage	61	61	60	36	41	59	**65**
Perineal Repair Postpartum in theatre	194	196	215	211	166	165	**133**
Manual Removal of Placenta	123	94	90	90	68	64	**77**
Operative Vaginal Delivery in theatre	88	89	83	91	80	69	**73**
Other	53	32	32	33	33	22	**48**
Total	3308	3630	3590	3363	3544	3748	**3609**

**method of collecting ectopic data changed in 2013*

Table 4: Cervical Operations

	2013	2014	2015	2016	2017	2018	**2019**
LLETZ/NETZ/SWETZ/LEEP (in theatre)	127	99	86	87	82	101	**110**
LLETZ/NETZ/SWETZ/LEEP (in clinic)*	538	617	531	563	604	563	**614**
Cone Biopsy	4	7	8	5	2	6	**1**
Punch & Wedge Biopsy of Cervix	16	17	16	17	14	11	**16**
Cervical Polypectomy	47	22	21	56	36	32	**30**
Diathermy to Cervix	8	16	3	4	3	2	**2**
Other	98	104	87	96	103	157	**129**
Total	838	882	752	828	844	872	**902**

** Previously only recorded in Colposcopy Clinic Statistics*

Table 5: Uterine Operations

	2013	2014	2015	2016	2017	2018	**2019**
Hysteroscopy:							
– Diagnostic	955	867	885	939	856	853	**864**
– Operative:							
– Myomectomy	9	2	4	10	6	11	**8**
– Resection of uterine septum	1	5	2	3	7	7	**7**
– Resection of uterine adhesions	2	1	2	1	3	1	**0**
– Endometrial polyp	46	73	88	49	59	104	**111**
– Other	0	8	5	5	0	5	**3**
Laparoscopy:							
– Laparoscopic assisted Vaginal Hysterectomy	38	36	44	45	34	28	**19**
– TAH	35	88	73	60	52	40	**75**
– SAH	6	9	13	7	5	1	**0**
– Radical Hysterectomy	0	0	0	0	1	0	**2**
– Myomectomy	18	22	27	8	8	8	**11**
Laparotomy:							
– TAH	67	15	12	29	34	39	**59**
– SAH	4	1	1	1	3	0	**1**
– Radical Hysterectomy	0	0	0	0	0	1	**0**
– Myomectomy	16	20	21	16	10	15	**22**
Other:							
– Vaginal Hysterectomy	79	68	44	47	70	56	**44**
– D&C	759	742	779	827	737	708	**729**
– TCRE	23	23	13	24	26	28	**24**

Table 5: Uterine Operations continued

	2013	2014	2015	2016	2017	2018	**2019**
– Endometrial Ablation	44	43	47	71	69	76	**84**
– Mirena Coil insertion	374	341	335	317	279	290	**302**
– Mirena Coil removal	143	147	155	148	121	156	**128**
– Examination under Anaesthesia	214	122	91	97	114	79	**103**
– Omentectomy	11	9	7	2	4	2	**7**
– Other	53	54	56	55	45	56	**53**
Total	2897	2696	2704	2761	2543	2564	**2656**

Table 6: Tubal and Ovarian Operations

	2013	2014	2015	2016	2017	2018	**2019**
Laparoscopy:							
– Diagnostic	340	278	235	234	249	247	**267**
– Sterilisation	88	42	40	44	58	28	**28**
– Dye Test	125	106	78	101	85	91	**53**
– Tubal Reconstructive Surgery	2	0	1	0	0	0	**0**
– Unilateral Salpingectomy	10	16	17	20	12	14	**9**
– Bilateral Salpingectomy	20	35	42	42	26	39	**45**
– Unilateral Oopherectomy	5	13	7	12	4	12	**7**
– Bilateral Oopherectomy	5	1	2	4	1	4	**1**
– Unilateral Salpingo-oopherectomy	14	19	30	19	17	8	**14**
– Bilateral Salpingo-oopherectomy	95	72	69	74	75	46	**66**
– Unilateral Ovarian Cystectomy	49	73	70	51	75	77	**60**
– Bilateral Ovarian Cystectomy	29	15	5	8	7	6	**2**
– Aspiration of Ovarian cyst(s)	15	11	9	15	6	3	**3**
– Adhesiolysis	69	67	77	74	58	50	**58**
– Ablation/Diathermy	105	131	121	110	98	95	**75**
– Other	11	13	11	15	14	7	**9**
Laparotomy:							
– Sterilisation	1	0	3	1	0	0	**0**
– Tubal Reconstructive Surgery	1	2	0	0	0	0	**0**
– Unilateral Salpingectomy	3	2	1	1	1	3	**2**
– Bilateral Salpingectomy	11	1	4	3	4	11	**14**
– Unilateral Oopherectomy	4	3	2	0	0	2	**6**
– Bilateral Oopherectomy	1	0	1	0	0	1	**0**
– Unilateral Salpingo-oopherectomy	11	6	4	7	5	0	**5**

Table 6: Tubal and Ovarian Operations continued

	2013	2014	2015	2016	2017	2018	**2019**
– Bilateral Salpingo-oopherectomy	0	0	0	0	5	23	**35**
– Unilateral Overian Cystectomy	0	8	11	10	6	4	**2**
– Bilateral Ovarian Cystectomy	2	1	2	1	1	1	**0**
– Adhesiolysis	6	0	2	0	2	0	**1**
– Ablation/Diathermy	1	1	0	1	0	1	**2**
– Other	2	0	0	0	3	2	**5**
Total	1032	916	844	847	812	775	**769**

Table 7: Vulval and Vaginal Operations*

	2013	2014	2015	2016	2017	2018	**2019**
Simple Vulvectomy	2	4	1	4	0	2	**1**
Vaginal Repair for Dyspareunia/ Vaginoplasty	7	5	2	0	0	5	**0**
Posterior Repair	130	91	67	87	76	90	**63**
Anterior Repair	150	105	85	87	105	95	**88**
Suturing of Vaginal Vault	3	0	1	0	0	0	**0**
Hymenectomy/Hymenotomy	1	1	2	3	5	1	**2**
Excision of Vulval/Vaginal Cysts/Biopsy	110	73	86	93	55	94	**95**
Bartholin's Cyst/Abcess	24	35	30	42	24	16	**19**
HPV	3	4	4	2	2	4	**0**
Labial Reduction	9	6	9	5	4	3	**2**
Fenton's Procedure	8	9	4	4	7	9	**8**
Other cyst/abscess/lesions	8	5	14	12	14	14	**11**
Other	67	70	56	84	68	94	**116**
Total	522	408	361	423	360	427	**405**

**excludes Urogynaecology operations and operations for vault prolapse*

Table 8: Urogynaecology*

	2013	2014	2015	2016	2017	2018	**2019**
Laparoscopic Burch/paravaginal repair	10	4	2	0	1	0	**0**
TVT/TOT/TVTO	96	77	84	71	85	28	**0**
Bulking Injection	17	12	10	16	16	25	**7**
Botox injection	11	35	22	39	30	38	**44**
Vault Suspension:							
* SSLS	20	19	15	17	22	39	**35**
* LSCP	10	14	26	24	16	4	**0**
* Other	26	6	4	12	18	2	**8**
Cystoscopy	131	135	147	147	200	215	**240**
Other	15	26	19	39	22	26	**33**
Total	336	328	329	365	410	377	**367**

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

Table 9: Other Operations

	2013	2014	2015	2016	2017	2018	**2019**
Abdominal Wound Dehiscence	0	0	1	0	1	0	**1**
Appendicectomy	12	9	7	4	8	2	**6**
Laparotomy for other indication	8	1	2	2	3	4	**2**
Blood Patch	12	10	8	12	9	9	**3**
Other	15	11	20	13	22	41	**28**
Total	47	31	38	31	43	56	**40**

Table 10: Total Gynaecological Outpatient Attendance

	2013	2014	2015	2016	2017	2018	**2019**
Adolescent	143	144	170	203	*	*	*
Colposcopy	6166	7009	6473	6029	5938	6011	**6603**
Endocrine/Infertility	627	464	504	449	483	494	**530**
General	4328	4728	4469	4981	6155	5798	**7547**
Urogynaecology	1249	1436	1565	1564	1736	1648	**1561**
Anaesthetic	905	913	1102	2706	2768	2690	**2737**
Total	13418	14694	14283	15932	17080	16641	**18978**

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

Table 11. Gynaecology Complications & Transfer to HDU/ITU

Complication	N
Bladder / Urethral Injury	2
Bowel Injury	1
Uterine Perforation	6
Transfer to HDU	1
Transfer to ITU	4
Blood Transfusion > 5 units	1
Other Organ Injury	2
Wound Dehiscence	0
Total	**17**

Coombe Continence Promotion Unit

Staff Complement

Professor Chris Fitzpatrick, *Director (Author)*

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

Dr Mary Anglim, *Consultant*

Dr Gunther Von Bunau, *Consultant*

Dr Aoife O'Neill, *Consultant*

Dr Faiza Aldarmaki, *RCPI International Fellow*

Dr Amina Javaid, *Registrar*

Dr Alexandra Sobota, *Registrar*

Anne Graham/Clare Daly, *Physiotherapy Manager*

Amanda Drumond Martins, *Physiotherapist (1 WTE)*

Gillian Healy, *Senior Physiotherapist (0.75 WTE)*

Laura Ward, *Senior Physiotherapist (0.5 WTE)*

Anna Chrzan, *Senior Physiotherapist (0.5 WTE)*

Alyson Walker, *Physiotherapist – locum (0.5 WTE)*

Sinead Boyle, *Senior Physiotherapist – locum (0.5 WTE)*

Velta Vuskane, *Physiotherapist - locum (0.6 WTE)*

Roisin Phipps Considine, *Senior Physiotherapist – on leave (1 WTE)*

Julia Hayes, Senior Physiotherapist – *on leave (0.6 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

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

Key Performance Indicators

- 227 first visits and 993 return visits to Urogynaecology Clinic*; 340 urodynamic evaluations; 367 operative procedures; 298 Day Ward Cystistat bladder instillations; 25 CISC instructions (pre-Botox mainly).

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

N.B. In 2018 a pause was placed on the use of mid-urethral polypropylene tapes for stress incontinence and vaginal polypropylene mesh for pelvic organ prolapse by the Department of Health. Although not included within the terms of reference of the pause, the use of polypropylene mesh in abdominal reconstructive surgery for pelvic organ prolapse was also discontinued in the hospital, as well as other major operations for stress incontinence.

Achievements in 2019

- 340 urodynamics evaluations and 367 operative procedures performed
- Midwife/nurse administration of Cystistat bladder instillations on Day Ward
- RCPI International Fellow in Urogynaecology
- Same day admission policy for > 98% major cases
- Fast-tracking triage of GP referrals directly to Physiotherapy
- Urogynaecology MDT meetings

Challenges for 2020

- The development of new national guidelines for the treatment of stress incontinence and pelvic organ prolapse
- Expansion of urodynamic sessions
- Development of new Urogynaecology service within the proposed Women's Health Unit
- Expansion of the role of the Urodynamic Specialist Midwife and training of second Urodynamic midwife/ nurse
- Expansion of Physiotherapy Services
- Development of a specialist service for frail elderly patients and those with cognitive impairment

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 2019. A special word of thanks to Ms Clare Smart, Mr Aaron Gracey, Ms Emma O'Neill, Ms Laura Forde, Ms Anitha Selvanayagam, Ms Sangeetha Nagarajan, Ms Mercy Ninan, Ms Deirdre Doherty, Ms Alison Rothwell and Dr Niamh O'Sullivan.

Table 1 Urodynamic Diagnosis %

Diagnosis	%
USI	**32**
USI + DO	**25**
USI + HRVD	**1**
DO	**35**
DO + HRVD	**2**
HRVD	**2**
No diagnosis	**3**
Total	**100**

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

Table 2 Urogynaecology Operations* (2013 - 2019)

	2013	2014	2015	2016	2017	2018	**2019**
Laparoscopic Burch/paravaginal repair	10	4	2	0	1	0	**0**
TVT/TOT/TVTO	96	77	84	71	85	28	**0**
Bulking Injection	17	12	10	16	16	25	**7**
Botox injection	11	35	22	39	30	38	**44**
Vault suspension:							
SSLS	20	19	15	17	22	39	**35**
LSCP	10	14	26	24	16	4	**0**
Other	26	6	4	12	18	2	**8**
Cystoscopy	131	135	147	147	200	215	**240**
Other	15	26	19	39	22	26	**33**
Total	336	328	329	365	410	377	**367**

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

Colposcopy Service – Medical Report

Head of Department

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

Staff Complement

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

Nurse Colposcopists
Aoife Kelly
Yvonne McCudden

Trainee Nurse Colposcopists
Feba Paul

Clinical Nurse Manager II
Olivia McCarthy

Gynaecology Oncology Liaison Nurse
Laura McGovern *(0.96 WTE)*

Healthcare Assistants
Maria White
Michaela Everington
Lauren Marlow

Failsafe Officer/Office Manager
Bernie Cummins *(until August 2019)*

Office Administrators
Frances Cunningham
Helen Conlon
Joan McNeaney

Specialist Registrars
As per rotation

The CWIUH Colposcopy service is Consultant-led and includes two Nurse Colposcopists, Aoife Kelly and Yvonne McCudden. We currently have one Trainee Nurse Colposcopist; Feba Paul.

Clinic Attendances

In 2019 2330 women were referred for colposcopy, a 7.3% increase on 2018 figures.

2152 patients attended for a first visit appointment. This represented an increase of 8.3% on 2018 figures.

There was an 11% increase in return visit attendances to the clinic, 4454 patients vs 4007 in 2018.

DNA rates for patients attending the clinic for the first time, increased in 2019 to 208 patients from 169 patients in 2018.

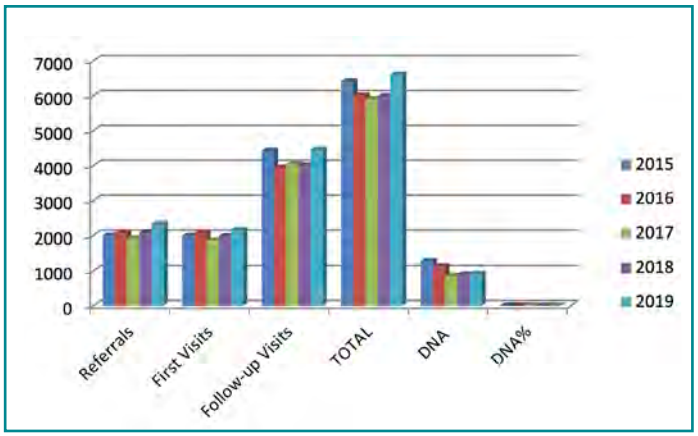
However, pleasingly, for the fifth year in a row the overall DNA rate has decreased and is now 13.9% for all patient groups.

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

Table 1 Colposcopy attendance figures over 5 years

	2015	2016	2017	2018	**2019**
Referrals	2001	2071	1915	2094	**2330**
First Visits	1993	2064	1863	1986	**2152**
Follow-up Visits	4428	3942	4046	4007	**4454**
Total	6421	6006	5909	5993	**6606**
DNA	1280	1137	871	904	**920**
DNA %	19.9	18.93	17.5	15	**13.9**

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



Treatment and Histology

As in previous years, the majority of patients with cytological and/or colposcopic evidence of disease are treated within the colposcopy clinic by Large Loop

Excision of the Transformation Zone (LLETZ).

In 2019, there was a slight increase in patients who went through theatre for treatment.

CWIUH IT data recorded 110 LLETZ completed in theatre, these figures also include LLETZ and NETZ treatments from non-colposcopy sources within the hospital.

Our Mediscan database recorded 614 clinic based LLETZ treatments vs 51 theatre cases; however some cases were left blank on the Mediscan Dataset so it may not have captured all theatre activity. See table 2.

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

Table 2 Histological breakdown of the transformation zones which were removed by LLETZ in the clinics and in theatre in 2019

Histology results of LLETZ Appt. 2019	Clinic	Theatre	Blank	Total
Adenocarcinoma in-situ / CGIN	9	0	2	**11**
Cancer (including micro-invasive)	7	2	2	**11**
CIN uncertain grade	6	0	0	**6**
CIN1	239	16	19	**274**
CIN2	121	6	8	**135**
CIN3	171	15	14	**200**
HPV / cervicitis only	0	0	0	**0**
Inadequate / Unsatisfactory	0	0	0	**0**
No CIN / No HPV (normal)	56	9	4	**69**
VAIN1	1	0	0	**1**
VAIN2	0	1	0	**1**
VAIN3	0	0	0	**0**
Blank	4	2	3	**9**
Total	**614**	**51**	**52**	**717**

Quality Assurance and MDTs

In 2019 a variety of operational issues led to a suspension in the regularity of MDT meetings. In the absence of meetings, patients requiring review were discussed and reviewed by the Lead Clinician and Nurse Colposcopist, and managed appropriately. We aim to re-establish the meetings in early 2020.

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.

Challenges

Following the CervicalCheck issues in 2018 and the subsequent RCOG review of cancer cases, a series of meetings were held with patients involved in the RCOG review. This required significant organisation and input from many staff members, clinical, nursing and admin personnel. In addition, many hours were required to prepare for meetings and to actually meet with patients and their families, whilst maintaining our clinical capacity and commitments. Overall the meetings went well with positive feedback from patients.

Future plans

Plans by CervicalCheck to introduce HPV primary care screening by October 2019 have been put on hold until early 2020 so we have yet to see how that will impact on numbers coming through the service.

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 CervicalCheck which supports the continuous movement of patients through colposcopy efficiently.

Olivia McCarthy
CNM II
Colposcopy

Prof Tom D'Arcy
Director of Colposcopy

Colposcopy Service – Nurse Colposcopists Report

Staff Complement

Ms Aoife Kelly,
1 WTE Clinical Midwife Specialist in Colposcopy (Author)
Ms Yvonne Mc Cudden,
0.96 WTE Nurse Colposcopist (Qualified May 2019)

Ms Feba Paul, *1 WTE Trainee Nurse Colposcopist*

Key Performance Indicators

The nurse/trainee Nurse Colposcopists are responsible for the management of a caseload of patients in the Colposcopy Outpatient setting, as directed by the Lead Consultant for Colposcopy. This involves running two Nurse-led Colposcopy Clinics, working alongside four Consultant Colposcopists and, in their absence, sustaining and maintaining full clinical support.

The nurse/trainee Nurse Colposcopists record, manage and communicate cytology, histology and microbiology results to patient and their GPs and arrange follow-up appointments or discharges.

The nurse/trainee Nurse Colposcopists triage the referrals received by the Colposcopy Clinic and determine the urgency of the referral and the appropriate clinic to accommodate the referral.

Additionally the nurse/trainee Nurse Colposcopists:

- Support the Clinical Lead and Nurse Manager in the on-going review and development of the service.
- Provide a positive learning environment for trainee Colposcopists and numerous Cervical Screening Course Students. This includes teaching colposcopy, cervical screening and providing support. We also supported a nurse undergoing a postgrad nursing diploma in sexual assault and forensic examination in 2019
- Implement evidence-based policies and protocols.

Nurse Colposcopists are responsible for the co-ordination and facilitation of the CINCPC/MDT meetings. These meetings require significant input and planning, with each CPC/MDT meeting having an average of 10 cases for discussion. The co-ordinator is responsible for listing cases, requesting slides, presentation of cases, reconciling outcomes and completion of follow up management plans afterwards.

Nurse Colposcopists' Activity for 2019

Patients Seen	5131 - Patients seen (total number) 3428 - Follow up patients 1703 - First visit patients
Performed	465 - LLETZ treatments 1576 - Diagnostic biopsies
Diagnosed cancers/cGIN	10 - Micro invasive carcinoma/ Invasive squamous cell carcinoma/ Invasive adenocarcinoma 10 - Adenocarcinoma-in-situ of cervix (cGIN)
Aoife Kelly is a Registered Nurse Prescriber	107 Prescriptions written in 2019
MDT	Co-ordinated and facilitated 3 meetings
Conference	NICCIA annual meeting March 2019
Personal development	Aoife gave health promotion lectures to H.Dip midwifery students on cervical screening We assisted with the medical student exams in St James's Hospital We supported several smear taker trainees on placement

Challenges for 2020

- We plan to continue to provide the highest standard of Colposcopy Service to an increasingly complex patient caseload.
- We endeavour to perform further audits and presentations in 2020 and attend study days relevant to our clinical field.
- We endeavour to support training, and clinical/ managerial development.

Gynaecology Oncology Liaison Nurse

Head of Department

Professor Tom D'Arcy, *Consultant Obstetrician/ Gynaecologist*

Staff Complement

Laura McGovern, *1 WTE Gynaecology Oncology Liaison Nurse*

Key Performance Indicators

In total there were 51 newly diagnosed cancers in the CWUIH for the year 2019:

Cervix	23
Corpus Uteri	22
Cancer of the Ovary	4
Cancer of the Vulva	2

Achievements

- The CWIUH has strong linkage to St James's Hospital and the Gynaecology Oncology Liaison Nurse is a vital role to ensure ongoing communication between both sites in relation to patient care. One of the main aspects of this role is to ensure that a seamless pathway of care is maintained for the patients diagnosed with a gynaecological malignancy.
- The Oncology Nurse has a visible presence in both the inpatient and outpatient environment, working closely with the team in Colposcopy, Hysteroscopy, St Gerard's Ward and Gynaecology Day Ward. The Oncology Nurse attends the outpatient clinics in St James's Hospital and the CWIUH each week and is present with Prof D'Arcy and Dr Kamran when women are informed of their cancer diagnosis. The Oncology Nurse is also present when patients are told of their cancer diagnosis in the Hysteroscopy Clinic with Dr Tadesse and Prof Farah. Contact details are given to patients and ongoing support is provided by way of telephone, email and consultation with the Oncology nurse.

Scope of the role of the Gynaecology Oncology Liaison Nurse

- Attends the Gynaecology Oncology MDT on a weekly basis in St James's Hospital. It is the responsibility of the Oncology Nurse to submit patient information for discussion at MDT each week. This is where all newly diagnosed or suspected cancer cases are discussed and where further management of care is planned.
- Organises the relevant imaging and biopsies that are required for staging purposes in new cases and in cases of suspected recurrence.
- Responsible for the booking of beds for admission for both diagnostic and therapeutic purposes both in St James's Hospital and the CWIUH.
- Liaises with all divisions of the Gynae Oncology team, including the co-ordinating of referrals to both radiation and medical oncology, for patients who require primary chemoradiation or adjuvant treatment following surgery.
- Meets women and their families both pre and post-operatively, providing both verbal and written information and support regarding their gynae-oncology surgery and their possible need for further treatment.

Future Plans

- To implement an online referral proforma to improve the referral pathway within the CWIUH.
- To guide women at the end of their treatment to services available to support them following a cancer diagnosis.

Hysterosalpingocontrastsonography (HyCoSy) Service

Consultant

Consultant: *Professor Nadine Farah*
Clinical Research Fellow: *Dr Aleksandra Sobota*
Secretary: *Ms Aideen O'Connor*

Key Performance Indicators

Procedures	N=	%
Procedures Scheduled	195	
Procedures Abandoned	6	3.1
Procedures Inconclusive	5	2.5

Tubal Patency	N=	%
Patency ascertained	148	75.8
Unilateral Occlusion	21	10.7
Bilateral Occlusion	15	7.9
Uterine Findings:	N=	%
Submucosal fibroids / endometrial polyps	8	4.1

In 6 cases either one or both of the tubes were initially blocked and were unblocked during the procedure.

Outpatient Hysteroscopy Service

Head of Department

Dr Iram Basit, *Consultant Obstetrician/Gynaecologist (Jan – March)*
Professor Nadine Farah, *Consultant Obstetrician/ Gynaecologist (from June 2019)*

Staff Complement

Consultants

Professor Nadine Farah, *Consultant Obstetrician/ Gynaecologist*

Dr Workineh Tadesse, *Consultant Obstetrician/ Gynaecologist*

Dr Shobha Singh, *Consultant Obstetrician/Gynaecologist*

Clinical Nurse Manager II

Olivia McCarthy

Registered General Nurse

Birgit Wilmes, *(0.5 WTE, increased to 0.62 WTE August 2019)*

Healthcare Assistants

Maria White

Office Manager

Bernie Cummins

Office Administrator

Marlene Duffy *(until May 2019)*
Avril Phillips *(from July 2019)*

The CWIUH Outpatient Hysteroscopy Service is a Consultant-led service assessing women aged 40 years and over who suffer from abnormal uterine bleeding or post-menopausal bleeding.

The clinic offers uterine assessment via transvaginal ultrasound, hysteroscopy and tissue biopsy. The clinic also provides therapeutic interventions such as removal of uterine polyps and small fibroids using the MyoSure device.

Achievements

The number of clinics has increased to 4 per week since June 2019 seeing six first visits and four to six return slots. Telephone-based follow-up appointments were also introduced for patients who were suitable for discharge rather than having them return to clinic unnecessarily.

Following the successful introduction of the use of MyoSure device in October 2018, a "See & Treat" approach was established in August 2019 for suitable cases. Of all the MyoSure treatments we have undertaken in the unit in 2019 (total 57 cases), ten were "see and treat".

In 2019, we were able to extend access to the clinic for some women younger than 40 years of age where clinically indicated.

Clinic Attendances

In 2019, 874 patients attended the unit for assessment and/or treatment. This shows a slight increase compared to the 2018 figures. Of these, 554 (63.4%) were new patients, whereas the remaining 320 (36.6%) were return patients. The ratio of first to follow up visits was 1: 0.58.

A total of 118 patients failed to attend their appointments (overall DNA rate of 11.9%).

Table 1 *attendance figures over the 1st 2 years of service*

	2018*	**2019**
TOTAL attended	857	**874**
New	650 (75.8%)	**554 (63.4%)**
Return	207 (24.2%)	**320 (36.6%)**
Overall DNA	119 (13%)	**118 (11.9%)**
Waiting time (%)		
< 4 weeks	-	**42.7%**
4-8 weeks	-	**28.9%**
> 8 Weeks	-	**28.5%**
Myosure (N)		
Total	-	**57**
See & treat	-	**10**

*****Figures include patients from mid July 2017*

Histology

There were ten confirmed cases of cancers diagnosed in the clinic in 2019. Additionally, 8 cases of complex endometrial hyperplasia were identified.

Quality Assurance

A patient questionnaire was devised to assess patient satisfaction with the service. The overall results from patients were very positive. Patients felt very well supported and rated the service highly in regard to accessing assessment and treatment so quickly.

Future plans

Within the Hysteroscopy Service, we will continue to review management pathways to ensure optimal use and allocation of appointments, and the continuance of ambulatory treatments.

We envision developing local, auditable standards for our Hysteroscopy Service through benchmark clinical audits and continuous patient satisfaction surveys.

We will continue to work in conjunction with the Colposcopy Service to provide a dedicated one-stop access clinic for patients with glandular abnormalities, therefore expediting their assessment and management and avoiding the need to go to the theatre and undergo a general anaesthetic.

Acknowledgments

A special thanks to our Hysteroscopy Nurse Birgit Wilmes (RGN) for her data collection and input in the compiling of this report.

Olivia McCarthy
CNM II
Outpatient Hysteroscopy

Dr Workineh Tadesse
Clinical Lead
Outpatient Hysteroscopy

Operating Theatre Department, including Anaesthetic Clinic

Heads of Department

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

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

Ms Frances Richardson, *Asst. Director of Midwifery & Nursing, Gynaecology, (retired, second quarter)*

Ms Raji Dominic, *Asst. Director of Midwifery & Nursing, Gynaecology (commenced, third quarter)*

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

Staff Complement

Approved posts – 29 WTE

CNM III x 1 WTE

CNM II (Anaesthetics) x 1 WTE

RGN x 20.85 WTE

CMM II x 2 WTE

Staff Midwives x 5.47 WTE

Total as of December 2019 was 29.32

Key Performance Indicators

- Some rolling closures were required during the early part of the year due to challenges in staffing Theatres. These were minimised through very careful management of sessions available.
- Staffing levels improved across both nursing and midwifery services during 2019, following significant investment in a recruitment drive for Theatre.
- CSSD Services remained outsourced during the first and into the second quarter, during prolonged upgrade works. Service level was not affected during this additional challenge on service provision.

Achievements in 2019

- QI initiative aimed at reducing Caesarean Section wound infection rate, continues to be effective, and was the recipient of Quality Improvement awards during 2019.
- Revision of the consent form complete. Process of gaining approval and going to print ongoing.
- Appointed .5WTE Clinical Skills Facilitator to enhance skill development in the department, in an acting capacity, funding still being sought.

Challenges for 2020

- To progress the design and tender phase for the build of new Theatres and refurbishment of others.

Division of Paediatrics & Newborn Medicine

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	938
No. of Infants > 1.5kg	758
No. of Admissions ≥ 35 weeks gestation	609

** including readmissions*

Section 2: VLBW Infants (Vermont Oxford Network Database)

Table 2.1 Number of cases reported to the VON 2019 (N= 136)

	All cases	Number of cases excluding congenital anomalies
Infants < 401g but ≥22 wks gestation	3	3
Infants 401-500g	6	6
Infants 501-1500g	125	118
Infants > 1500g but ≤ 29^{+6} wks gestation	2	0
Total	**136***	**127**

**N = represents total number of VON infants managed by the CWIUH. This reflects both inborn and outborn VON infants. There was a total of 9 newborns with VON defined major congenital anomalies. The number 136 includes all newborns with any sign of life following delivery.*

Table 2.2 Gestational age breakdown and survival to discharge of all infants (501 – 1500g) reported to the VON (including those with congenital anomalies) in 2019 (N = 128)

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	0	0	0	0	0	0	0
22 wks	0	0	0	0	0	0	0
23 wks	5	2	2	2	2	2	4
24 wks	3	1	1	1	1	0	1
25 wks	12	10	9	0	0	0	9
26 wks	12	10	10	0	0	0	10
27 wks	11	10	10	1	1	1	11
28 wks	8	8	8	2	2	2	10
29 wks	30	29	29	3	3	3	32
30 wks	18	18	18	1	1	1	19
31 wks	6	6	6	0	0	0	6
32 wks	5	4	4	1	1	1	5
> 32 wks	4	4	4	0	0	0	4
Total	**114**	**102**	**101**	**11**	**11**	**10**	**111**

Table 2.3 Birth weight and survival to discharge of all infants reported to the VON (including those with congenital anomalies) 2019 (N = 136*)

Birth Wt	Inborn Infants	Survival to Discharge	Outborn Infants	Survival to Discharge	Total Survival to Discharge
<501g	9	1	0	0	**1**
501-600g	9	5	2	1	**6**
601-700g	10	7	1	1	**8**
701-800g	7	5	0	0	**5**
801-900g	11	11	1	1	**12**
901-1000g	10	8	1	1	**9**
1001- 1100g	11	9	1	1	**10**
1101-1200g	16	15	2	2	**17**
1201-1300g	12	12	1	1	**13**
1301-1400g	16	16	1	1	**17**
>1400g	14	12	1	1	**13**
Total	**125**	**101**	**11**	**10**	**111**

**Total N = 136, includes inborn and outborn infants for whom survival data available at discharge.*

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 data for infants 501-1500g admitted to NICU in CWIUH (congenital anomalies included) (N = 125) compared to the Vermont Oxford Network and Republic of Ireland

Birth Wt	CWIUH 2019 N, (%), (denominator)	*ROI *2019* Median % (25th-75th quartiles)	VON 2019 Median % (25th-75th quartiles)
Inborn	114, (91.2%), (125)	73.3%	93.3%
Male	75, (60%), (125)	51.8%	50%
Antenatal Steroids (partial or complete)	118, (95.2%), (124)	95.7%	86.7%
C/S	93, (74.4%), (125)	74.1%	75.3%
Antenatal Magnesium Sulphate	106, (85.5%), (124)	66.7%	64.4%
Multiple Gestation	39, (31.2%), (125)	22.5%	23.7%
Any major birth defect	7, (5.6%), (125)	0% (1-5.5)	3.7%
Small for gestational age	18, (14.4%), (125)	17.2%	18.2%
Surfactant in DR	35, (28.2%), (124)	10.1%	14%
Conventional Ventilation - After Initial Resuscitation	57, (46.7%), (122)	48%	52.3%
High Frequency Ventilation - After Initial Resuscitation	8, (6.6%), (122)	0% (0-6.6%)	15.8%
Any Ventilation	57, (46.7%), (122)	48.1%	54.4%
High Flow Nasal Cannula – After Initial Resuscitation	40, (32.5%), (123)	37.8%	57.3%
Nasal CPAP - After Initial Resuscitation	114, (92.7%), (123)	89.9%	80%
Nasal CPAP – Delivery Room	82, (66.1%), (124)	53.3%	56.3%
Ventilation after Early CPAP	23, (27.7%), (83)	17.9%	33.3%
Surfactant at any time	75, (60%), (125)	56.3%	56.5%
Steroids for CLD**	12, (9.8%), (123)	0% (0-3)	7.7%
Inhaled Nitric Oxide	16, (13.1%), (123)	0% (0-6.6)	2.1%
RDS	107, (87%), (123)	79.3%	75%
Pneumothorax**	12, (9.8%), (123)	0% (0-9.8)	2.8%
Chronic Lung Disease (at 36 wks)	15, (14.7%), (102)	12.5%	19.8%
Early Bacterial Sepsis**	4, (3.3%), (123)	0% (0-0)	0% (0-2)
Late Bacterial Sepsis**	10, (8.4%), (119)	0% (0-6.1)	5.1%
CONS Infection**	3, (2.5%), (119)	0% (0-4)	1.4%
Nosocomial Bacterial Infection**	12, (10.1%), (119)	2% (0-15)	7.3%
Fungal Infection**	1, (0.8%), (119)	0% (0-0)	0% (0-0)
Any Late Infection (Bacterial or Fungal)	13, (10.9%), (119)	2% (0-15)	7.5%
NEC Surgery	8, (6.5%), (123)	0% (0-4.3)	2.9% (0-6.1)
PDA ligation	0, (0%), (123)	0% (0-0)	0% (0-3.5)
Surgery for ROP	3, (2.4%), (123)	0% (0-5)	0% (0-2.5)
Anti-VEGF Drug	6, (4.9%), (123)	0% (0-0)	0% (0-1.6)
Any ROP	17, (18.3%), (93)	15.8%	25%
Severe ROP (≥Stage 3) **	5, (5.4%), (93)	0% (0-1.5)	3% (0-7.4)
Any Grade of IVH (Grade I-IV)	19, (15.6%), (122)	14%	21.7%
Severe IVH (Grade III-IV) **	10, (8.2%), (122)	0% (0-4.2)	6.3%
Cystic PVL**	2, (1.6%), (122)	0% (0-0)	0.4%

Table 2.4 Cont'd: Morbidity & Mortality data for infants 501-1500g admitted to NICU in CWIUH (congenital anomalies included) (N = 125) compared to the Vermont Oxford Network and Republic of Ireland

Birth Wt	CWIUH 2019 N, (%), (denominator)	*ROI *2019* Median % (25th-75th quartiles)	VON 2019 Median % (25th-75th quartiles)
GI perforation**	5, (4.1%), (123)	0% (0-0)	0% (0-0)
NEC**	8, (6.5%), (123)	0% (0-8.2)	3.2%
Paracetamol for PDA**	13, (10.6%), (123)	0% (0-8.2)	2.9%
Ibuprofen for PDA**	1, (0.8%), (123)	0% (0-5.9)	0.7% (0-8.3)
Probiotics**	113, (91.9%), (123)	0% (0-7.5)	0% (0-14.8)
Any Human Milk Enteral Feeds at Discharge	89, (72.4%), (123)	57.3% (33.3-69.6)	53.6% (39.1-67.8)
Human Milk Only Enteral Feeds at Discharge	65, (52.8%), (123)	9.5% (0-40)	5% (1-16)
Mortality	14, (11.2%), (125)	0% (0-12.5)	10.2%
Mortality excluding Early Deaths**	12, (9.8%), (121)	0% (0-6.1)	7.7%
Survival	109, (88.8%), (125)	100%(87.5-100)	89.8%
Survival without Specified Morbidities	83, (66.4%), (125)	63.3%	62.5%

** ROI and VON outcome data are expressed as median % values with 25th to 75th percentiles when appropriate*

Table 2.5: Shrunken Standardized Mortality and Morbidity (SMR) Rates

	SMR (95% confidence interval) For Year 2019	SMR (95% confidence interval) For 3 Years 2017-2019
Mortality	0.9 (0.6 – 1.4)	1.1 (0.8 – 1.4)
Death or Morbidity	0.9 (0.7 – 1.1)	0.8 (0.7 – 1)
Chronic Lung Disease (at 36 wks)	0.7 (0.5 – 1.1)	0.8 (0.6 – 1)
NEC	1.2 (0.6 – 2)	1.4 (1 – 1.9)
Late Bacterial Infection	1 (0.6 – 1.7)	0.9 (0.6 – 1.3)
Coagulase Negative Infection	0.6 (0.2 – 1.4)	0.8 (0.4 – 1.3)
Nosocomial Infection	0.9 (0.5 – 1.5)	1 (0.7 – 1.3)
Fungal Infection	1 (0.1 – 3)	1 (0.2 – 2.2)
Any Late Infection	1 (0.6 – 1.7)	0.9 (0.7 – 1.3)
Any IVH	0.7 (0.5 – 1)	0.8 (0.6 – 1)
Severe IVH	1 (0.7 – 1.5)	0.8 (0.5 – 1.1)
Pneumothorax	1.5 (0.9 – 2.1)	1.5 (1 – 2)
Cystic PVL	0.7 (0.2 – 1.6)	0.4 (0.1 – 0.9)
Any ROP	0.8 (0.5 – 1.1)	0.8 (0.6 – 1)
Severe ROP	1.1 (0.5 – 1.9)	0.9 (0.5 – 1.4)

Section 3: Hypoxic Ischaemic Encephalopathy and Mortality Tables

Table 3.1: Hypoxic Ischaemic Encephalopathy

	Inborn	Outborn
•Mild HIE (Stage 1) •Moderate HIE (Stage 2) •Severe HIE (Stage 3)	4 8* 2	- 4 1
Therapeutic Hypothermia Outcomes for Hypothermia • RIP • Alive & Normal to Date • Cerebral Palsy • Global Delay • Unknown**	10 1 6 1 1 1	5 - 2 - 1 2

** 1 inborn newborn with HIE and gastroschisis.*

*** Unknown status is either due to discharge back to a peripheral Neonatal Unit with follow-up not yet ascertained or awaiting clinic follow up in the case of inborn.*

Table 3.2: Mortality - Inborn Infants with Congenital Anomalies (N = 14)

Birthweight (g)	Gestational Age	Apgar Scores	Age at Death (day of life)	Place of Death	Abnormality (leading to death)
90	17 +1	-	13 mins	CWIUH	Triploidy
249	19 +0	-	46 mins	CWIUH	Cystic Hygroma, Hypoplastic left heart, VSD, Mitral Atresia
394	23 +1	-	50 mins	CWIUH	Osteogenesis Imperfecta
580	25 +1	-	15 mins	CWIUH	Trisomy 18
800	25 +5	-	25 mins	CWIUH	Thanatophoric Skeletal Dysplasia
1110 PND	26 +5	1, 1	1	CWIUH	Arthrogryposis Multiplex Congenita, Premature PND
1490 PPND	32 +1	5, 8	3	PICU	Gestational Alloimmune Liver Disease PND
1930	37 +5	6, 6	5	CWIUH	Anencephaly
2240 PND	34	4, 7	1	CWIUH	Polycystic Kidney Disease, Potters PND
2740*	37 +5	8, 9	65	Home	Complex cardiac, Single ventricle, TAPVD, Pulmonary Atresia, Situs Inversus
3010	37 +2	8, 9	9	Crumlin	TGA, VSD, Hypoplastic aortic arch
3640	38	5, 8	18	Crumlin	Coarctation Aorta, AVSD, Noonan's syndrome
3700	39	8, 8	10	Crumlin	TGA, Intact Ventricular Septum
4050	38 +5	6, 9	8	CWIUH	Hypoplastic Left heart Syndrome, Mitral & Aortic Atresia

PND – Postnatal Diagnosis.

** - Infant death*

Table 3.3: Mortality - Inborn Infants Normally Formed ≤ 1500g (N = 21)

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

Birthweight (g)	Gestational Age	Apgar Scores	RIP (day of life)	Place of Death	Cause of Death
121	19 + 2	3, 2	1	CWIUH	Extreme Prematurity – Comfort care
240	18 + 5	-	1 min	CWIUH	Chorioamnionitis, Extreme Prematurity
320	20 + 6	-	140 mins	CWIUH	Antepartum Haemorrhage, Chorioamnionitis, Extreme Prematurity
362	22	2, 0	1	CWIUH	Extreme Prematurity – Comfort care
397	22	4, 2	1	CWIUH	Extreme Prematurity – Comfort care
407	23 + 1	5, 5	1	CWIUH	Extreme Prematurity -– Comfort care
410*	27 + 6	2, 6	4 months	CWIUH	IUGR, Pulmonary Hypertension, BPD
420	22 + 4	3, 3	1	CWIUH	Extreme Prematurity – Comfort care
450	22 + 5	1, 1	1	CWIUH	Extreme Prematurity – Comfort care
470	23 + 3	1, 1	1	CWIUH	Extreme Prematurity – Comfort care
470	24 + 3	5, 8	4	CWIUH	Extreme Prematurity
530	23 + 1	1, 3	1	CWIUH	Twin I, RDS, Extreme Prem, Grade III/IV IVH,
560*	25 + 3	5, 8	43	CWIUH	Extreme Prem, Pneumothorax, Enterococcus Faecalis Sepsis
600	23 + 2	3, 7	2	CWIUH	Extreme Prem, Grade III/IV IVH, Pulmonary Hypertension
630	23 + 1	2, 7	11	CWIUH	Twin II, Grade III IVH
640	25 + 3	2, 6	7	CWIUH	Extreme Prematurity, Enterococcus Sepsis, NEC, Pneumothorax,
670	24	3, 7	17	CWIUH	Extreme Prem, Surgical NEC, Sepsis
800	24	3, 7	5	CWIUH	Extreme Prem, Bilateral Pneumothoraxes, Grade III/IV IVH
950	26 + 2	8, 8	8	CWIUH	Extreme Prematurity, E coli sepsis, NEC
1000	29 + 5	1, 4	2	CWIUH	Extreme Prematurity, Pulmonary Hypoplasia with Pulmonary Hypertension secondary to PPROM, Pneumothorax
1040	27 + 2	8, 9	13	CWIUH	Extreme Prem, NEC, Pneumothorax, Bilateral Grade III IVH

** Infant death*

Table 3.4: Mortality - Inborn Infants Normally Formed >1500g (N = 3)

Birthweight (g)	Gestational Age	Apgar Scores	Age at Death (day of life)	Place of Death	Cause of Death
3160	41	1, 1	10	CWIUH	GBS sepsis
2500*	38	9, 10	55	Temple St	Pertussis, Respiratory Failure
3630*	41 + 1	9, 10	38	Crumlin	SIDS

** - Infant death*

Table 3.5: Outborn Infants with Congenital Anomalies > 1500g (N = 2)

Birthweight (g)	Gestational Age	Apgar Scores	Age at Death (day of life)	Place of Death	Cause of Death (Referring Hospital)
1740	31	1, 1	15	CWIUH	RDS, Pulmonary Hypertension, Disseminated non-Langerhans Histiocytosis, (Altnagelvin, Derry)
2910	34 + 3	4, 4	8	CWIUH	Autosomal Recessive Polycystic kidney Disease (Galway)

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	88
Respiratory Distress Syndrome	15
Pneumothorax	8
Meconium Aspiration Syndrome	8
Aspiration Pneumonia	1
Congenital Pneumonia	2
Congenital Diaphragmatic Hernia	4
Congenital Pulmonary Airway Malformation	3
Cystic Fibrosis	1

Table 4.2 : Jaundice in Term Babies (>37 Weeks) (N)

Non-hemolytic	93
Hemolytic	
• ABO	18
• Rh	10
• Other	1

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

Table 5.1 : Gastrointestinal Tract Anomalies (N)

Cleft lip	2
Cleft palate +/- lip	8
Bowel Atresia/Obstruction	3
Anorectal anomalies	1
Exomphalos	0
Gastroschisis	4
Cystic Hygroma	2
Mediastinal Cyst	1
Vitellointestinal Duct	1
Duodenal Atresia	2

Table 5.2 : Urinary and Genital System Anomalies (N)

Renal Agenesis (isolated unilateral)	1
Multicystic kidneys (unilateral)	3
Hydronephrosis	5
Duplex Kidney	1
Posterior Urethral Valve/Bladder Outlet Obstruction	3
Isolated Hypospadias	6
Polycystic Kidney Disease/Potters Sequence	2
Ambiguous Genitalia	1

Table 5.3 : Neural System Anomalies (N)

Anencephaly	1
Meningomyelocele +/- ventriculomegaly	3
Agenesis Corpus Callosum + ventriculomegaly	1
Hydrocephalus/Ventriculomegaly	3
Isolated Agenesis Corpus Callosum	1

Table 5.4 : Skin Anomalies (N)

Giant Congenital Nevus	1
Subgaleal Hemorrhage	4
Albinism	1

Table 5.5 : Musculoskeletal Anomalies (N)

Congenital deformities of the feet	3
Digital anomalies	4
Developmental Dysplasia of the Hip (requiring treatment)	123
Thantophoric Skeletal Dysplasia	1
Poland Syndrome	1
Osteogenesis Imperfecta	1
Arthrogryposis Multiplex Congenita	1

Table 5.6 : Cardiac Anomalies (N)

Isolated Ventricular Septal Defect	9
Hypoplastic Right Heart Syndrome	2
Hypoplastic Left Heart Syndrome	3
Transposition of Great Arteries	14
Transposition of Great Arteries & Hypoplastic Aortic arch	1
Transposition of Great Arteries & Double Inlet Left Ventricle	1
Aortic Stenosis	1
Interrupted Aortic Arch	1
Tetralogy of Fallot	4
Atrial Septal defect	1
Dysplastic aortic valve	1
Rhabdomyomas	1
Coarctation of the Aorta	3
Shone Complex	1
Situs inversus	2
Arrhythmias	2
Double Inlet Left Ventricle	1
Atrioventricular Septal defect	1
Single Ventricle/Pulmonary Atresia	2
Atrioventricular Septal defect & Hypoplastic Aortic arch	1
Patent Ductus Arteriosus	1
Arteriovenous Malformation	1

Table 5.7 : Chromosomal Anomalies and/or Other Genetic Abnormalities (N)

Trisomy 21	19
Trisomy 18	2
Trisomy 13	1
22q11 deletion	2
Triploidy	1
Trisomy 9	1
Beckwith Wiedemann	1

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

Non-immune Hydrops Fetalis	1
Wolf Hirschhorn syndrome	1
Barth syndrome	1
Bardet Biedl syndrome	1
Panhypopituitarism (micropenis)	1

The year 2019 demonstrated overall a decrease in Neonatal Unit admissions and Baby Clinic activity, with unit admissions down in total from **1026 in 2018 to 938 in 2019** (a decrease of 8.6%, and Baby Clinic total outpatient visits down by 14%. However, there was a further increase in the total number of Vermont Oxford Extreme Preterm newborns with an increase from 113 babies in 2018 to 136 in 2019. The decrease in overall unit activity may reflect the increased role of Neonatal Unit nurse liaison activity in attempting to facilitate the care of certain newborns on the postnatal ward alongside their mothers. Traditionally many newborns 35 – 37 weeks, birth weight 2 – 2.5kg, and with need for some feeding assistance were admitted to the neonatal unit. The increased utilization of the liaison nurse has decreased this need for neonatal unit admission.

The Tongue Tie clinic established in late 2018 established its role in the Baby Clinic in assisting mothers with effective breast feeding and providing on-site frenotomy for tongue tie if necessitated. Complaints from parents related to lack of hospital-based tongue-tie assessment services have almost completely disappeared in large part related to the efforts of both lactation midwives and the CWIUH Tongue Tie clinic.

Our Clinical Psychologist Dr Louise Hickey completed a two-year Bayley developmental follow-up for the cohort of inborn Vermont Oxford Extreme Preterm and HIE hypothermia treated newborns born in the year 2017. This is the first time ever in the history of the CWIUH Dept of Neonatology that a Bayley two year follow up has been achieved in such a complete manner.

There was a dramatic increase in the use of any breast and/or a diet of exclusive breast milk for Vermont Oxford Extreme Preterm babies at discharge from the NICU. For the year 2019 this was significantly increased at 72.4% and 52.8% respectively. This has never been seen before in the CWIUH and is a tremendously welcome improvement in the care of critically sick extreme preterm newborns.

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. Dr Anne Doolan took up this role as co-chairperson with Dr Mike Boyle from the Rotunda hospital. Dr Doolan also functions as chair of Parenteral Nutrition for Paediatrics and Neonatology Expert Group.

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. A further note of gratitude to paediatric consultant radiologists' Drs Eoghan Laffan and Clare Brenner who continue to provide excellent on site paediatric radiology services in addition to the excellent team of radiographers. Finally, a sincere thank you to our parents and babies for their patience and goodwill whilst on the rollercoaster journey of life that is the NICU experience for families. Our thoughts and sympathies go out to those newborns and bereaved families who died whilst in the CWIUH NICU. They remain always in our thoughts and prayers.

Comparison with Previous Reports

For the year 2019 the Coombe hospital cared for 136 premature infants whose birth weights were between 401 - 1500g 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 2018 when the Coombe hospital cared for 113 such infants. Of note in the year 2017 this number was slightly greater at 140 infants.

Of these 136 premature VON infants', complete survival/mortality data for 125 of these infants who were admitted to the NICU is known at the point of death/discharge. These 125 newborns include both inborn

and outborn babies and are defined as those liveborn newborns admitted to CWIUH NICU with birth weights 500 – 1500g. Of these 125 premature VON infants, 114 were inborn at the CWIUH and 11 were outborn. The total survival to discharge in 2019 was **88.8%**, increased from 83.5% for the year 2018.

In 2019 the survival to discharge of such premature infants without specified major morbidities was **66.4%** which was similar to the previous year. We are quite pleased that our survival to discharge without specified major morbidities is similar to the overall Vermont Oxford Network result of 62.5%. Both the survival to discharge and survival without major pre-specified morbidities for VON extreme preterm newborns at the CWIUH NICU has been very stable for the last four years with little significant fluctuation. Table 2.4 features outcome data for the CWIUH compared to median percentage values for both aggregate ROI NICU's and the entire VON. 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 increased at **8.2%** compared to 5.1% in 2018. This is slightly greater than the VON median value of 6.3% for the year 2019 but within the statistical predicted range for a NICU typical of the CWIUH.

There was a significant increase in the number of infants with retinopathy of prematurity (ROP) that necessitated Anti-VEGF (Evastin) therapy that was performed on site in the Coombe NICU. Six newborns required Evastin in 2019 compared to only **one** infant on-site Evastin therapy for the previous year. Furthermore, **three** infants required transfer to CHI Crumlin for laser therapy of ROP compared to only **one** infant in 2018. The outcome of Severe ROP at the CWIUH was at **5.4%**, increased from 1.4% in 2018 and greater than the VON median value of 3%. This value of 5.4% is still within the statistical predicted range for a NICU typical of the CWIUH. We are extremely grateful to our two excellent consultant paediatric 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 somewhat increased at **14.7%** compared to the year 2018 when it was 11.6%. This remains lower than the entire VON network at 19.8%. In the year 2017 at the CWIUH the outcome of CLD was higher at 19%. 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. Disappointingly, the outcome of pneumothorax was increased in the CWIUH at **9.8%** for the year 2019 compared to the VON 2019 value of 2.8%. IN the year 2018 the outcome of pneumothorax at the CWIUH was lower at 5.8%. The SMR over three years including 2019 is 1.5 (95% CI 1 – 2).

Concerning the VON Shrunken Standardised Morbidity rate for various infectious performance parameters over the three years 2017-2019, the CWIUH remains within the acceptable normative range. The SMR for "late bacterial infection" is 0.9. The SMR for "coagulase after negative infection" is 0.8. The SMR for "nosocomial infection" is 1. The SMR for "fungal infection" is 0.7. 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), one point noteworthy is our use of paracetamol for echocardiographic targeted early therapy of PDA at the CWIUH of **10.6%** in 2019. This is significantly greater that the VON median value of 2.9%. In 2019 only one newborn received ibuprofen for PDA treatment. We referred no newborns for PDA surgical ligation. We have only ever referred a total of two newborns for PDA surgical ligation for the years 2015 - 2019 in total. This is a dramatically low number compared to overall VON practice.

There was a dramatic increase in the use of any breast and/or a diet of exclusive breast milk for Vermont Oxford Extreme Preterm babies at discharge from the NICU. For the year 2019 this was significantly increased at 72.4% and 52.8% respectively. This has never been seen before in the CWIUH and is a tremendously welcome improvement in the care of critically sick extreme preterm newborns. In particular the outcome of "discharge home on a diet of exclusive breast milk" at 52.8% is dramatically higher than the median values of 7.5% and 5% respectively for ROI 2018 and VON 2019. Unfortunately, despite encouraging results pertaining to use of breast milk for infant diet, the CWIUH NICU in 2019 continues to have a higher outcome of NEC at 6.5% compared to overall VON 2019 median value of 3.2%. When examining the SMR over three years including 2019, the SMR for NEC at the CWIUH is statistically increased at 1.4 (95% CI 1 – 1.9). The prevention of NEC

remains an ongoing challenge for our unit.

In relation to hypoxic ischaemic encephalopathy (HIE), there were 8 inborn infants classified as HIE stage II and 2 classified as HIE stage III. All of these 10 infants were treated with therapeutic hypothermia. One of these inborn HIE infants was diagnosed as GBS sepsis and despite management with therapeutic hypothermia unfortunately died. Our inborn HIE II/III hypothermia treatment number of 10 infants is an increase from the 7 inborn infants who received hypothermia in the year 2018. There were only 5 outborn newborns referred to the CWIUH NICU in 2019 which is a sizeable decrease from the 14 outborn infants referred to the Coombe for therapeutic hypothermia in 2018. 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.

For the first time in an annual report the CWIUH is now able to report in a more comprehensive manner on developmental outcome for inborn VLBW and extremely premature newborns in addition to HIE hypothermia newborns. Two-year developmental follow-up assessments using the Bayley Scales of Infant and Toddler Development-III commenced in November 2018. This developmental outcome data is courtesy of our clinical psychologist Dr. Louise Hickey. The developmental outcomes for inborn VON extreme preterm newborns born in 2017 and inborn HIE newborns is described in a further subsection of this report.

The Neonatal Centre continues to receive significant numbers of infants diagnosed with congenital abnormalities prenatally, including congenital cardiac disease. Notably in 2019 there were less liveborn babies diagnosed with Trisomy 21 (n = 19) compared to the previous year (n = 29).

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 Ms Julie Sloan (Research Midwife) for her dedication and hard work in assisting me with this report. Julie also maintains the Vermont Oxford Database at the hospital. I am also grateful to Ms Catherine Barnes (administrative assistant) and Ms Emma McNamee (Information Technology) for their respective roles with this report. A special thank you to Dr Caroline Ahearne, HST Registrar in Neonatology, who helped compile this report. 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, Prof. Eleanor Molloy and Dr Francisco Meza 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 2019.

Dr John Kelleher MB BCh BAO MSPH
Director of Paediatrics & Newborn Medicine, IMC 23364

CWIUH Baby Clinic: Two Year Developmental Follow Up of the VON Preterm and HIE Infants inborn at the CWIUH in 2017

As per NICE guideline (NG72) & The Model of Care for Neonatal Services in Ireland (2015), developmental follow-up for extremely preterm and low weight babies at 24 months corrected is recommended for early identification, assessment and intervention of infants with developmental concerns.

The Bayley Scales of Infant and Toddler Development III (BSID-III) is the recommended instrument to measure developmental outcomes of preterm and term infants. The BSID-III is a standardised, norm-referenced developmental battery that provides information regarding children's developmental skills across cognitive, language and motor domains (Bayley, 2006). BSID-III consists of five subscale scores: cognitive, receptive language, expressive language, fine motor and gross motor and three composite scores: cognitive, language and motor with a lower score indicating a greater degree of development delay (Do et al., 2019). Severe disability/impairment for this preterm population is defined as bilateral blindness, hearing requiring amplification, unable to walk 10 steps with support, cerebral palsy, or a Bayley score (BSID-III, cognitive language or motor composite) less than 70 or too severely delayed for Bayley assessment (The VON: A Community of Practice, 2010).

From 2017 VON inborn babies only who survived to discharge (n=101, 80%), a total of 64 developmental assessments were performed on preterm infants (with a further 6 HIE babies and 6 infants with developmental concerns). Preterm infants were followed up for assessment after 24 months (mean of 27 months ranging from 25-30). Of the 81 VON infants who were contacted for developmental follow-up at 2 years corrected, 64 attended and completed BSID-III, 4 attended for an informal assessment/did not complete BSID-III (not severely impaired), 4 DNA, 9 were followed up with local Early Intervention Services with the majority reporting positive outcomes. 20 infants born in November and December 2017 are yet to be seen at the time of this report.

The table below outlines developmental outcomes from BSID-III assessments for babies born in January to October 2017 only. Of the 64 babies assessed so far, 89.1% survived without a severe disability/impairment according to the BSID-III.

Table 1 : BSID-III Composite Score Outcomes (Babies born in January – October, 2017) and percentage of cases with moderate to severe impairment (<70) and mild impairment (<85)

BSID-III	Cases	N	% of cases
Any BSID-III Composite Score <70	7	64	10.9
BSID-III Cognitive <70	2	64	3.1
BSID-III Language <70	5	64	7.8
BSID-III Motor <70	4	64	6.3
Any BSID-III Composite Score < 85	26	64	40.6
BSID-III Cognitive <85	13	64	20.3
BSID-III Language <85	17	64	26.5
BSID-III Motor <85	20	64	31.3

Table 2 : Breakdown by weeks' gestation of Average Composite Score Outcomes and percentage of cases with severe impairment

Weeks	Average Cognitive	Average Language	Average Motor	% with severe impairment
24-26 $^{+6}$ (n=12)	85	78	83	3/12 = 25%
27-27 $^{+6}$ (n = 11)	98	91	95	-
28-28 $^{+6}$ (n= 13)	95	95	93	1/13=8%
29-29 $^{+6}$ (n=11)	98	91	89	1/11 = 9%
30-34 $^{+2}$ (n=17)	99	95	93	2/17 = 12 %

Table 3 : Breakdown by birth weight of Average Composite Score Outcomes and percentage of cases with severe impairment

Birth-weight	Average Cognitive	Average Language	Average Motor	% with severe impairment
400-900g (n=20)	88	81	85	4/20 = 20%
901-1200g (n=20)	101	100	95	1/20 = 5%
1201-1750g (n=23)	97	92	91	2/23 = 9%

Table 4 : HIE Inborn Babies born in 2017 (N=6)

BSID	Average Composite Scores	Range of Composite Scores	BSID<85
Cognitive	104	80-110	1/6 = 16%
Language	98	91-109	
Motor	94	70-110	1/6 = 16%

CWIUH Baby Clinic: Summary of Activity for 2019

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! In comparison to the previous year where the total number of individual patient visits was 7973, there was a decrease in activity to a total number of 6817 visits in 2019. This is a decrease of 14%. This decrease is noted across three main areas; orthopedic, medical and "walk in" pediatric assessment clinics.

During the year 2019 the CWIUH Tongue Tie clinic, that was first established in late 2018, evolved into a very effective clinic held on most Tuesday afternoons. This clinic provides breast feeding support and if needed a frenotomy in a newborn with ankyloglossia. The purpose of the Tongue Tie clinic is solely to facilitate breast feeding in mother-newborn dyads. The clinic does not offer any service to formula fed infants or those whose parents are concerned about other issues such as speech and language delay or gastroesophageal reflux. The clinic is staffed by neonatal nurse/midwives Jean Cousins, Sonya Gorman, lactation midwives and consultant neonatologists' Drs Anne Doolan, Pamela O'Connor and John Kelleher. Complaints from parents related to lack of hospital-based tongue-tie assessment services have almost completely disappeared in large part related to the efforts of both lactation midwives and the CWIUH Tongue Tie clinic.

Summary of CWIUH Baby Clinic Activity for 2019 by Clinic Type

Type of Clinic	**N**
Paediatric/Neonatology	3553
Orthopaedic	436
Physiotherapy	2053
Psychologist	139
"Walk in" Paediatric	463
Weight clinic	53
Tongue Tie Assessment	120
Total Number of Individual Patient Visits	**6817**

Research in the Department of Paediatrics & Newborn Medicine 2019

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 2019, Drs Matthew McGovern, Mary O'Dea and Saira Tabassum. The main research projects conducted in the Neonatology department in 2019 are listed below.

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. PhD: Dr. Murwan Omer: PRISM: PReterm Infection and SysteMic inflammation and neonatal outcomes. TCD 2014-20

GENIE study: GEnder and Neonatal Inflammation in prEterm outcomes: NCRC: PhD: Dr. Matthew McGovern: and Prof Eleanor Molloy (PI) €185,875: TCD: 2017-20.

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. Health Research Board HRA Grant. 2015-9; Prof Eleanor Molloy (PI). €328,000, 2015

UNICORN study: Underlying mechanisms in Neonatal Immune metabolic dysregulation, Circadian rhythm and bRain INjury: PhD: Dr Mary O'Dea and Prof Eleanor Molloy (PI): TCD: submitted December 2019; Awarded March 2020.

Neonatal cardiac function in infants with Down syndrome. Health Research Board NCHF: PI Prof Afif El-Khuffash: Co-investigator E Molloy, J Miletin.

BRAIN Injuries in Neonates: MRI Networks: National Children's Hospital Foundation Ref: 1716 – PI Prof Arun Bokde: Co-investigator E Molloy. €144,487.

FIREFLY: Follow up of Inflammatory Responses and multiorgan outcomes FoLlowing neonatal brain injury. Health Research Board HRA Grant 2019-22: PI; E Molloy: €369,891

PATHFINDER: Parental information on therapeutic Hypothermia Following Neonatal Encephalopathy. Health Research Board: Knowledge Exchange Scheme 2017: PI: E Molloy; €31,335

NICOM study: Prospective observational cohort study comparing cardiac output measured non-invasively by bioreactance in preterm infants on mechanical ventilation and after extubation.

POPART Trial (Prophylactic Oropharyngeal Surfactant for Preterm infant Trial): Multicentre international (Ireland, Sweden, Norway, Belgium Czech Republic, Italy, Portugal) randomised, parallel group, controlled trial (Phase 3). The main objective of this trial is to study whether administering the oropharyngeal surfactant (Curosurf) directly into the oropharynx directly after birth, reduces the rate of endotracheal intubation in preterm babies with respiratory failure.

GRASS Study (Does Routine Assessment of Gastric Residuals in Preterm Neonates Influence Time Taken to Reach Full Enteral Feeding?)

This multicentre randomized controlled clinical study aims to compare a control group with regular assessment and evaluation of gastric residuals and an intervention group with no routine assessment of residuals prior to feeding advancement, for the time taken to reach full enteral feeding and for occurrence of any observed complications including necrotizing enterocolitis.

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.

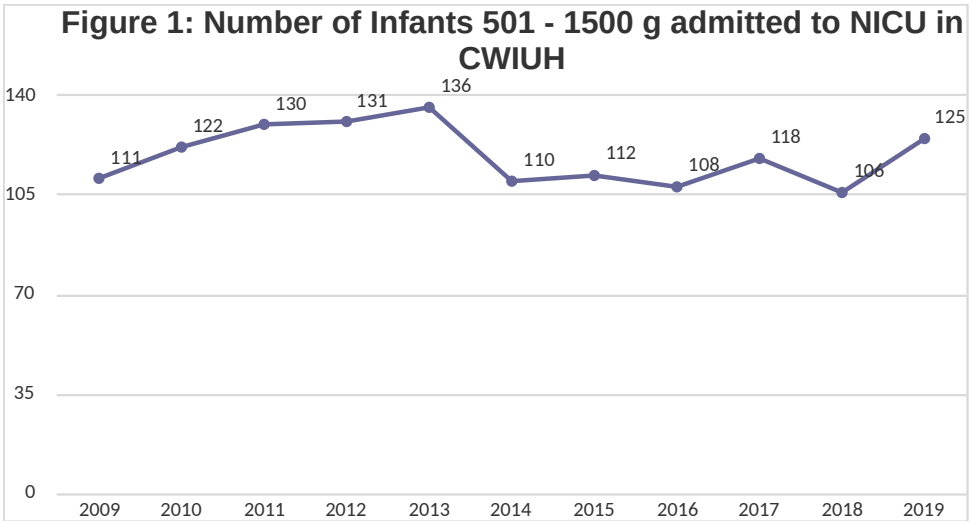
Publications in the Department of Paediatrics & Newborn Medicine 2019

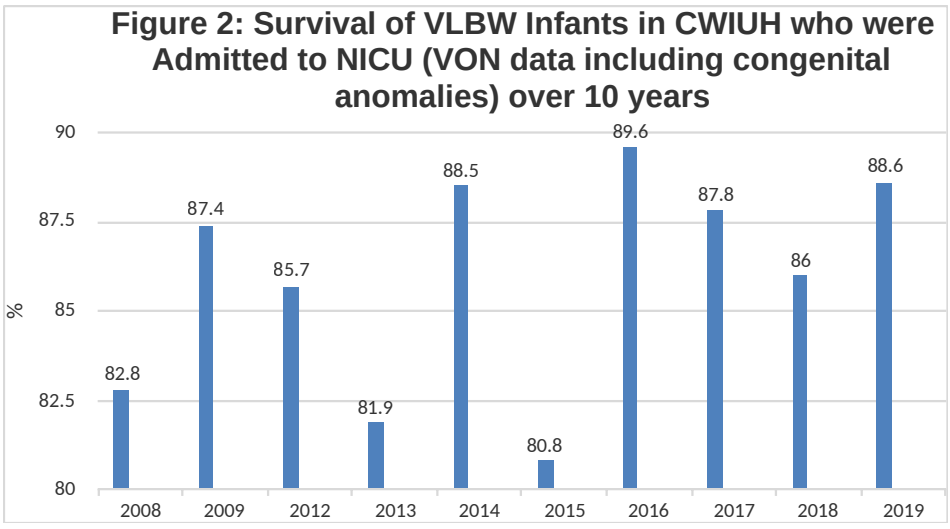
1. Low Density Granulocytes in ANCA Vasculitis Are Heterogenous and Hypo-Responsive to Anti-Myeloperoxidase Antibodies. Ui Mhaonaigh A, Coughlan AM, Dwivedi A, Hartnett J, Cabral J, Moran B, Brennan K, Doyle SL, Hughes K, Lucey R, Floudas A, Fearon U, McGrath S, Cormican S, De Bhailis A, Molloy EJ, Brady G, Little MA. Front Immunol. 2019 Nov 7; 10:2603.
2. Coagulation Profiles Are Associated with Early Clinical Outcomes in Neonatal Encephalopathy. Sweetman D, Kelly LA, Zareen Z, Nolan B, Murphy

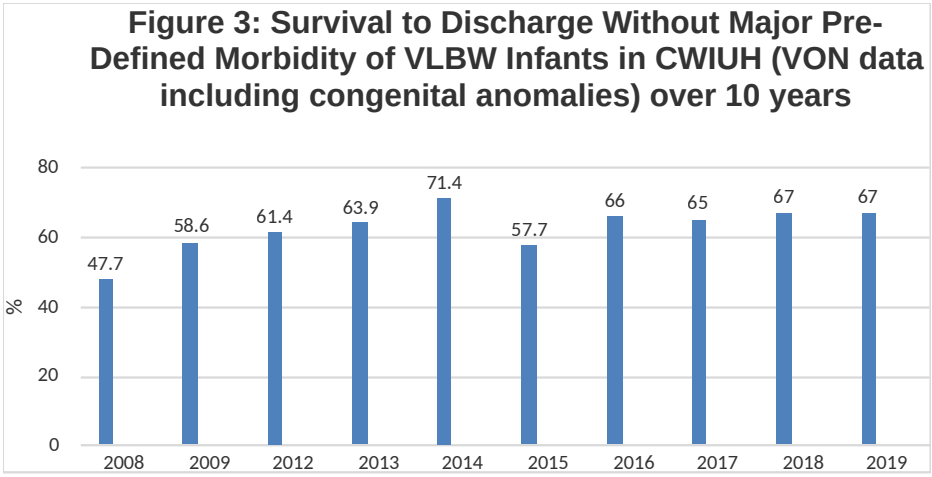
J, Boylan G, Donoghue V, Molloy EJ. Front Pediatr. 2019 Oct 1; 7:399.

3. Pediatric Intensive Care: Immunomodulation with Activated Protein C ex vivo. Eliwan HO, Watson WRG, Regan I, Philbin B, O'Hare FM, Strickland T, O'Neill A, O'Rourke M, Blanco A, Healy M, Nolan B, Smith O, Molloy EJ. Front Pediatr. 2019 Sep 27; 7:386.
4. Altered Toll-Like Receptor Signalling in Children with Down Syndrome. Huggard D, Koay WJ, Kelly L, McGrane F, Ryan E, Lagan N, Roche E, Balfe J, Leahy TR, Franklin O, Moreno-Oliveira A, Melo AM, Doherty DG, Molloy EJ. Mediators Inflamm. 2019 Sep 12;2019: 4068734.
5. Toward the elimination of bias in Pediatric Research. Bearer C, Agostoni C, Anand KJS, Ambalavanan N, Bhandari V, Bliss JM, Bloomfield F, Bonifacio SL, Buhimschi I, Cilio MR, Coppes M, Czinn SJ, El-Khuffash A, Embleton N, Felderhoff-Müser U, Ferriero DM, Florin T, Fuentes-Afflick E, Gardner W, Gospe SM Jr, Gunn A, Gressens P, Guissani D, Haiden N, Hauptman M, Kim KS, Klebanoff M, Lachman P, Lanphear B, Ozen S, Roehr C, Roland D, Rosenblum N, Schwarz M, Staiano A, Stroustrup A, Valente EM, Wilson-Costello D, Wynn J, Molloy E. Pediatr Res. 2019 Dec;86(6):680-681.
6. A 20 years conundrum of neonatal encephalopathy and hypoxic ischemic encephalopathy: are we closer to a consensus guideline? Chalak L, Ferriero DM, Gressens P, Molloy E, Bearer C. Pediatr Res. 2019 Nov;86(5):548-549.
7. Dr Janusz Korczak: paediatrician, children's advocate and hero. Molloy EJ. Pediatr Res. 2019 Dec;86(6):783-784.
8. Nucleic acid cytokine responses in obese children and infants of obese mothers. Brennan K, O'Leary BD, Mc Laughlin D, Kinlen D, Molloy EJ, Cody D, Paran S, McAuliffe FM, Hogan AE, Doyle SL. Cytokine. 2019 Jul; 119:152-158.
9. Banked preterm versus banked term human milk to promote growth and development in very low birth weight infants. Dempsey E, Miletin J. Cochrane Database Syst Rev. 2019 Jun 28;6(6): CD007644. doi: 10.1002/14651858.CD007644. PMID: 31250435
10. Are antibiotics a risk factor for the development of necrotizing enterocolitis-case-control retrospective study. Raba AA, O'Sullivan A, Semberova J, Martin A, Miletin J. Eur J Pediatr. 2019 Jun;178(6):923-928. PMID: 30949889
11. A Review of Out-of-hours Outpatient Neonatal Presentations to a Standalone Tertiary Neonatal Centre. Coyne S, Flynn L, McGovern M, Miletin J. Ir Med J. 2019 Feb 14;112(2):879. PMID: 30896140 No abstract available.
12. Effect of Early Parenteral Nutrition Discontinuation on Time to Regain Birth Weight in Very Low Birth Weight Infants: A Randomized Controlled Trial. Perrem L, Semberova J, O'Sullivan A, Kieran EA, O'Donnell CPF, White MJ, Miletin J. JPEN J Parenter Enteral Nutr. 2019 Sep;43(7):883-890.
13. Letter to the editor.Raba AA, Semberova J. J Paediatr Child Health. 2019 Dec;55(12):1514-1515.
14. Assessment of neonatal heart rate immediately after birth using digital stethoscope, handheld ultrasound and electrocardiography: an observational cohort study.Treston BP, Semberova J, Kernan R, Crothers E, Branagan A, O'Cathain N, Miletin J. Arch Dis Child Fetal Neonatal Ed. 2019 Mar;104(2):F227.
15. Antenatal depression and the impact on infant, cognitive, language and motor development at six and 12 months postpartum. O'Leary N, Jairaj C, Molloy, EJ McAuliffe FM, Nixon E, O'Kane V,. Early Hum Dev 2019 Jul; 134:41-46.
16. Neonatal Encephalopathy: Need for Recogntion of Multiple Etiologies for Optimal Management. Aslam S, Strickland T, Molloy EJ. Front Pediatr. 2019 Apr 16; 7:142.
17. Insights in Pediatric Research. Molloy EJ, Bearer CF. Pediatr Res 2019 Aug; 86(2): 140.

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*

Heads of Department

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

Bridget Boyd, *Assistant Director of Midwifery & Nursing*

Mary O'Connor, *Clinical Midwife Manager III (A/CMM III until June)*

Staff Complement

90 WTE including:

1 WTE Advanced Nurse Practitioner – Neonatal Nursing

1 WTE CMM III

6 WTE CMM/CNM II

2.55 WTE CMM/ CNM I

1 WTE CMS Discharge Planning

1.71 WTE Clinical Skills Facilitators

86.33 WTE Midwives / Nurses

Clerical Staff

Support Staff

6.1 vacancies

Key Performance Indicators

- Coombe Women & Infants University Hospital team is 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.
- To continue 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 2019

- 10 WTE staff nurses were recruited; 6 staff resigned/ retired, with a retention rate of 93.9%.
- Two staff graduated with Postgraduate Diploma in Neonatal Intensive Care Nursing and one PgDip Student was facilitated from Limerick University Hospital. Two Staff commenced the programme this year, one seconded from Children's Hospital Ireland and a Staff nurse from CWIUH. Two students were facilitated for clinical placement from Limerick and Galway University hospitals also.
- One staff completed the MSc in Nursing (Neonatal).
- Six staff completed the Foundation Programme on Principles of High Dependency and Special Care; six completed Level II, Neonatal Intensive Care.
- The NNTP team from CWIUH conducted a total of 182 transports representing 32% of the 567 NNTP transports.
- 87 % of referrals were accepted.
- 14 staff completed the sixth Family Infant Neurodevelopmental Education (FINE) Level I programme facilitated and coordinated by CWIUH.
- Three staff completed FINE Level II and the fourth Irish FINE Level II course was coordinated from CWIUH.
- World Prematurity Celebrations comprised of a local celebration with staff and parents whose babies were inpatients, plus the annual hospital illumination in purple.

Challenges for 2020

- To continue to encourage increased parental presence and participation in their baby's care, facilitating their increasing confidence and competence as discharge approaches.
- To develop innovative ways of collaborating with parents and families.
- To continue to develop, revise and update policies and guidelines in keeping with current best practice.
- To further reduce infection rates.
- To overcome the ongoing challenge posed by NEC, using Quality Improvement Initiatives expanding to interdepartmental education sessions, fostering preparation and support in obtaining early colostrum.
- Plan and manage capacity effectively.
- To enhance staff retention and promote an ethos of ongoing professional development.
- Preparation for MN-CMS electronic record systems.
- To ensure that each baby receives individualized supportive care during painful and stressful procedures in conjunction with the best evidence literature, from their nurse and /or parent.
- To ensure that 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 Nursing and Midwifery*

Mary O Connor, *CMM III*

Sheena Bolger, *CNS Neonatal Transition Home Service*

Staff Complement

Sheena Bolger, *1 WTE CNS*

Key Performance Indicators

- Provide practical and emotional support to families of premature babies, pre & post discharge. Weekly phone calls of support between discharge and due date, and fortnightly until 6/52 corrected age. Directly supported 99 families in 2019 which included a total of 445 scheduled phone calls and 61 home visits (to 41 families). Aim to reduce phone calls from parents, and visits, to baby clinic and GPs.
- Promote parent education in Neonatal Centre to empower parents and enhance readiness for discharge. Twice-weekly parent education sessions and CPR workshops are offered and all parents are encouraged to attend, staff are also welcome. 157 mothers and 72 fathers availed of this class in 2019.
- Facilitate monthly Neonatal Support Group along with MSW, where parents can chat with staff and each other. Parents are encouraged to attend prior to discharge. The Annual Christmas Party welcomed 32 families of babies who spent time in the Neonatal Unit over the past couple of years.
- Breastfeeding champion - encouraging and supporting mothers to produce breastmilk for their premature babies. In collaboration with Lactation Support midwives, we encourage mothers to attend expressing workshops. This support and guidance enhances mothers' chances of successfully providing milk for their babies. We also co-ordinate donation of breast milk when necessary.
- Provide valued education sessions to foundation course students as part of their curriculum.
- Respiratory Syncytial Virus (RSV) prophylaxis programme with Palivizumab continues over the winter period. Initial administration in hospital and referral to home administration service. Administered pre-discharge dose to 14 babies and referred 46 babies to Synacare, the home administration service.

Achievements in 2019

- Developed an updated version of Down's Syndrome discharge checklist, after discussions with consultant group.
- Created an information leaflet to assist staff in general hospitals to assist mothers to express milk.

Challenges for 2020

- Continue to improve our family-centred care by supporting parents in every way we can.
- Obtain a supply of hospital-grade breast pumps to loan to mothers of our premature babies.
- Continue to progress the development of a new parent support group.

Registered Advanced Nurse Practitioner (Neonatology)

Heads of Department

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

Bridget Boyd, *Assistant Director of Midwifery & Nursing*

Mary O'Connor, *CNM III*

Staff Complement

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

Key Performance Indicators

- To enable consistency in standards of healthcare. This is achieved by having a presence in the clinical area, ensuring care is evidenced-based and supported by PPG, as well as offering support and guidance to medical and nursing staff at the bedside.
- To promote family-centred care, empowering parents to participate in the care of their infants.
- To minimize nosocomial infection rates, monitor antibiotic use and strategies 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, an investigator or in a support role.

Achievements in 2019

- Secured a dedicated simulation area and a high fidelity simulation model to enhance training in resuscitation and stabilization for nursing and medical staff.
- In collaboration with medical and nursing colleagues, we initiated a number of research studies, completed audits and presented posters at national conferences.
- Presented at national study days on a variety of topics, as well as on the STABLE and Neonatal Resuscitation Program.
- Presented on a range of topics for Neonatal Nurses, Midwives, PHNs and NCHDs education programs.
- Participated on the Neonatology Project Group and Nursing Workforce Planning group for the new National Children's Hospital.

Plans for 2020

- Develop specific care plans for infants born 23-26 weeks.
- Seek publications to disseminate results of research projects undertaken in 2019.
- The role of the Postnatal Ward Liaison Nurse is well established in the NNU. The challenge for 2020 is to deliver more care at the bedside in the PNWs, minimizing separation of mothers and babies and enhancing the provision of neonatal care in the Delivery Suite and postnatal wards, in conjunction with midwifery staff.
- Continue improvements to parent facilities.
- Enhance the working relationship with medical and nursing staff in our network hospital, as we strive to provide expert neonatal care in the region.

Division of Peri-operative Medicine

Department of Peri-operative Medicine and Anaesthesia

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 Petar Popivanov, *Consultant, 26 hours*
Dr Stephen Smith, *Consultant, 26 hours*
Prof Michael Carey, *Consultant, Locum*

Key Performance Indicators
Theatre

Patients Operated on in Theatre excl. LLETZ/NETZ/SWETZ/LEEP (completed in Colposcopy Clinic)	Elective	Emergency	Total
Local	102	8	**110**
General	2191	249	**2440**
Spinal	1494	719	**2213**
No anaesthetic used	17	5	**22**
Spinal or Epidural	0	3	**3**
Epidural	10	620	**630**
General & Spinal	10	8	**18**
General & Epidural	0	6	**6**
Spinal & Epidural	0	7	**7**
Spinal or Epidural & Epidural	0	1	**1**
Total	**3824**	**1626**	**5450**

Caesarean Sections

Mode of Anaesthetic	Elective CS	Emergency CS	Total CS
GA	18	62	**80**
GA & Other		1	**1**
GA & Spinal	3	5	**8**
GA & Epidural		8	**8**
Spinal	1368	670	**2038**
Spinal & Other	1		**1**
Spinal & Epidural		31	**31**
Epidural		451	**451**
Total	**1390**	**1228**	**2618**

Mode of Labour Analgesia

	Mothers Delivered	Epidurals
Primiparous	3204	**1860 (58.1%)**
Multiparous	4542	**1298 (28.6%)**
Total Mothers:	**7746**	**3158 (40.8%)**
Aromatherapy	7	
Epidural continuous infusion + top ups	1609	
Epidural continuous infusion alone	1489	
Epidural - top ups alone	60	
Hydrotherapy	9	
Hypnotherapy	65	
Inhalational analgesia	4668	
No analgesia	561	
Not Answered	1739	
Other	18	
Pethidine	212	
Pudendal block	14	
Remifentanil infusion	25	
Spinal	215	
TENS	505	
Total	**11,196**	

Achievements in 2019

- Introduced a quality improvement initiative to reduce opioid consumption for pain relief after caesarean section by 66%. This was a joint initiative with the departments of Pharmacy and Midwifery. This project won 2nd prize at the National Patient Safety Conference, Department of Health, 2019 (Dublin Castle).

Challenges for 2020

- Introduction of the virtual Pre-operative Assessment Clinic.
- Introduction of a 'one-stop shop' initiative where decision for surgery, pre-operative assessment, and investigations are completed on the same patient visit.
- Formalisation of the Women's Pain Service.

Publications

- R Irwin, I Gyawali, B Kennedy, N Garry, S Milne, T Tan. An ultrasound assessment of gastric emptying following tea with milk in pregnancy: A randomised controlled trial. European Journal of Anaesthesiology 2019
- P Popivanov, R Irwin, M Walsh, M Leonard, T Tan. Gastric emptying of carbohydrate drinks in term parturients before elective caesarean delivery: an observational study. International Journal of Obstetric Anaesthesia 2019
- S Boyd, A O'Connor, M Horan, P Dicker, C Manning, C Lynch, K Ryan, T Tan, B Byrne. Analgesia, anaesthesia and obstetric outcome in women with inherited bleeding disorders. European Journal of Obstetrics and Gynecology and Reproductive Biology. 2019. Vol 239, p60-63.
- A Geoghegan, M Ma, T Tan. Multidisciplinary feedback on the introduction of an emergency bleep system to a tertiary obstetric unit. International Journal of Obstetric Anaesthesia 2019; 39; S22.
- M Ma, A Deasy, S Smith. An audit of current practice in the use of high flow nasal oxygen in caesarean section under general anaesthesia. International Journal of Obstetric Anaesthesia 2019; 53; S39.

Division of Laboratory Medicine

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

Department Heads

Dr Colette Adida, *Consultant Histopathologist [on sabbatical]*
Dr Niamh O'Sullivan, *Consultant Microbiologist*
Dr Catherine Flynn, *Consultant Haematologist*
Dr Vivion Crowley, *Chemical Pathology*
Dr Filip Sokol, *Locum-Pathologist*
Dr Peter Kelehan, *Locum-Pathologist, (Pathology/Morbid Anatomy)*

Other Laboratory Staff

Medical Scientist & Lab Aide Staff- 38.5 WTE
Biochemists - 3 WTE
Phlebotomist - 3 WTE
Administration/Clerical Staff- 6 WTE
Specialist Registrar [SPR] Histopathology - 1 WTE
Registrar Histopathology/Cytopathology - 1 WTE (Dec)
Consultant Staff - 3 WTE
Haemovigilance Officer - 0.8 WTE
Surveillance Scientist – 0.5 WTE

Key Performance Indicators: Workload by test request

Area	2014	2015	2016	2017	2018	2019
Microbiology	44,514	42,573	41,639	44,387	44,764	**43,781**
Biochemistry	205,475*	218,565*	216,849**	207,686	213,994	**216,915**
Haematology	50,717	53,961	55,111	54,298	51,418***	**52,640**
Transfusion	25,273	26,537	26,328	29,464	29,099	**30,088**
Cytopathology	27,355	25,589	26,161	26,185	31,814	**33,200**
Histopathology	5,877	6,001	6,331	6,380	6,796	**7,092**
Post mortems	50	35	33	32	32	**35**
Phlebotomy	21,084	23,641	33,812***	37,870	38,287	**39, 554**
Molecular Pathology [Gynae-Screen]	4,442	7,147	8,369	7,611	7,800	**17,000**

** = including POCT tests ** = change in referral test counting*

**** = corrected test number, counting method change [late 2017].*

Achievements in 2019

- Maintaining the accreditation of all Pathology Departments and POCT within the hospital.
- An Taoiseach announced that the Coombe Hospital had been chosen as the site for the new National Cervical Screening Laboratory [NCSL]. This represents an iconic development in Irish and International Cancer Screening and Medicine. A new purpose-built, state-of-the-art Screening Laboratory including, new Artificial Intelligence [AI] Digital Cytology, a new Gynae Cytology screening laboratory, new Histopathology Laboratory, new Molecular Pathology/Biology laboratory [undertaking HPV molecular testing, next generation sequencing, proteomics and oncogenomics, with integrated research facilities] will be built. The new laboratory will also include a Molecular Cytopathology Training School, Digital Pathology suite, Conference facilities and Digital slide scanning facilities [static and real-cell imaging]. Defined cores will exist in the building including: Molecular Biology, Bioinformatics, Health Informatics, Disease Modelling and Translational Molecular Biology. In addition, the old laboratory will undergo refurbishment on a scaled basis.
- With the appointment of a Project Manager by HSE Estates Office, Mr Vincent Brennan, work commenced with Hospital staff on the planning and development phase for the National Cervical Screening Laboratory [NCSL]. Hospital and Pathology staff were recruited on to a number of teams within the hospital to ensure the project would provide the necessary footprint for the laboratory requirements of the new national laboratory. The Hospital hosted building project, architect and design, staffing meetings to provide the requirements and costings to the HSE.
- The Pathology Dept. continues to provide in-service training to Cytopathology third year DIT Medical Laboratory Science students.
- Very high level of international achievement in research.

Challenges for 2020

- 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].
- CORU registration for all Medical Scientist staff.
- Expanding test repertoires.
- Continued contribution of staff to the building project for the new National Cervical Screening Laboratory at the hospital site.
- Preparation for MEDLis and NMCMS IT systems.

2019 saw the retirement of two Chief Medical Scientists within the department:

Mary Sweeney in Cytology - although she started her working life in the Coombe in Biochemistry, Mary worked in the Laboratory for 38 years, and saw numerous changes in the workings of the lab, from conventional cytology to liquid based cytology, automated screening, and the accreditation process, where Mary showed her talent for auditing. Mary served as a member of the Irish Cytology Association, and the Cervical Screening programme QA board. She gave dedicated service in every aspect of her duties, and always with a smile.

Jacqui Barry O'Crowley in Histology - Jacqui joined the Coombe staff in 2002 from the Mater Hospital, and during her time helped obtain and maintain accreditation for the Histology department. She introduced new technologies into the Histology laboratory, and provided training for staff and higher degree students within Immunocytochemistry and CISH. She also served as President of the Academy of Clinical Science and Laboratory Medicine during her time in the Coombe, ensuring the advancement of the profession of Medical Scientists, both within the department and throughout the country.

We wish them both many happy years of retirement.

Biochemistry / Endocrinology / Point of Care Testing

Heads of Department

Dr Vivion Crowley, *Consultant Chemical Pathologist*

Ruth O'Kelly, *Principal Clinical Biochemist*

Ann O'Donnell-Pentony, *Hospital POCT Co-ordinator/ Chief Medical Scientist*

Staff Complement

Dr Anne Killalea, *Senior Clinical Biochemist (0.5 WTE)*

Aoife O'Brien, *Senior Clinical Biochemist (0.5 WTE)*

James Kelly, *Senior Clinical Biochemist*

Susan Logue, *Staff Grade Medical Scientist*

Ugo Igwagu, *Staff Grade Medical Scientist*

Luke Doyle, *Laboratory Aide*

The Biochemistry Department provides test results for diagnostic, screening, therapeutic and disease monitoring purposes. Our test repertoire includes 38 biochemistry tests and 8 endocrinology tests. Point of Care Testing throughout the hospital includes 10 blood gas analysers, 17 glucose meters as well as meters for testing threatened pre-term labour and rupture of membranes. Our patients include pregnant women and neonates as well as women attending for gynaecological investigations. The quality of our results is of upmost importance and therefore we take great pride in our accreditation to ISO 15189 and 22870 standards by the Irish National Accreditation Board (INAB). We also participate in research projects with our clinical colleagues around the hospital.

Key Performance Indicators

Test numbers:

	2017	2018	2019
Biochemistry tests *(including referred tests)*	207686	213994	**216915**
Glucose Tolerance test *(to diagnose Gestational Diabetes)*	4212	4400	**4458**
C-reactive Protein *(to diagnose sepsis)*	5392	5465	**6605**
Thyroid Function tests	5165	5406	**5601**
Blood Gas Requests	17685	17438	**17049**

- In general, overall testing has increased year on year in spite of a falling birth rate due to increased complexity of patients.
- Blood Gas testing numbers are reducing and reflect a trend to less invasive testing in neonates.
- Increased testing particularly seen in the diagnosis and monitoring of Diabetes and maternal sepsis.
- 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 2019

- Maintenance of INAB accreditation status in routine testing and in Point of Care testing (POCT).
- A new post of Chief Medical Scientist in POCT has been created to reflect the complexity and importance of POCT in the hospital.
- Extension of POCT to include diagnosis of threatened Pre-term labour and more widespread availability of Lactate analysis for management of patients who may have sepsis.
- Continued training and re-certification of ward staff in POCT.
- Senior staff regularly attended multi-disciplinary meetings including the Diabetes team meetings, Point of Care Committee meetings and weekly Perinatal review meetings.
- Education and Teaching: Ruth O'Kelly lectures 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 and Transition Year students were facilitated.
- 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 National Cancer Control Programme – Measurement of serum tumour markers.

Challenges for 2020

- 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 and value for money is an important priority.
- The Diabetic Service continues to expand due to the increased incidence of risk factors for diabetes in our population.
- Point of Care testing is expanding with the increased demand particularly in the area of maternal sepsis and fetal monitoring during labour.
- A procurement process was completed during 2019 for the replacement of the main Biochemistry analyser. This analyser is expected to go live in January 2020.

Cytopathology

Heads of Department

Prof John O'Leary, *Consultant Histopathologist*
Dr Colette Adida, *Consultant Histopathologist [on sabattical]*
Dr Filip Sokol, *Locum Consultant Histopathologist*
Mary Sweeney, *Chief Medical Scientist (Retired Sept)*
Roisin O'Brien, *Chief Medical Scientist (Oct-Dec)*

Staff Complement

Nadine Oldfield, *Senior Medical Scientist*
Padma Naik, *Senior Medical Scientist*
Ita Nolan, *Senior Medical Scientist*
Niamh Cullen, *Medical Scientist*
Hannah Deering, *Medical Scientist*
Elaine Hayes, *Medical Scientist*
Joanna Kakolewska, *Medical Scientist*
Ruth McAlerney, *Medical Scientist (0.5WTE)*
Jennifer Sullivan, *Medical Scientist (0.5WTE)*
Graham O'Lone, *Lab Aide (0.5WTE)*
Cathy Hannigan, *Lab Aide*
Jessica Creaner, *Lab Aide*
Ailbhe Walsh, *Lab Aide*
Kerry Ann Durbin, *Clerical Officer*
Elizabeth Lynch, *Clerical Officer*
Mary Nugent, *Clerical Officer (0.5 WTE)*

Key Performance Indicators

In 2019, 42% of the Department's workload was Colposcopy samples.

Specimen Throughput	2017	2018	**2019**
Total number of smears	26185	31814	**33200**
Programme Smears	24800 (95%)	30235 (95%)	**31265(94%)**
Turnaround Time (TAT)(0-2 weeks)	54 %	*	*
Unsatisfactory	3.3%	4.6%	**6%**
Negative	88 %	86%	**75%**
Low-Grade	6.8 %	8.8%	**10%**
High Grade	2.0 %	1.8%	**3%**

** = TAT monitoring suspended May 2018 by CervicalCheck*

Achievements in 2019

- Maintaining our INAB accreditation status, along with an extension to scope.
- Participation in the Public Health England EQA scheme, U.K. (2 rounds per annum).
- Participation in the Hologic TEQA scheme (2 rounds per annum).
- Implementation of Axio Scanner for scanning both cytology and histology slides.
- Quality assurance visit carried out by CervicalCheck.
- Additional workload assigned to the department, in May 2019 the Cytopathology Department began receiving samples from 10 additional Colposcopy Clinics.
- Participation in 42 MDT meetings.
- The Cytology Department held 5 Colposcopy training sessions, and 3 Colposcopy refresher sessions, a total of 8 Colposcopy Nurses and 6 Registrars attended these training sessions.
- Jennifer Sullivan, Ailbhe Walsh and Jessica Creaner joined the department.

Challenges for 2020

- Automated cover-slipper needs to be replaced.
- Cytopathology update courses for all screening staff.
- Roche Cobas 4800 training for at least 2 additional staff members.
- Implementation of LEAN across cytology.
- Increased use of Q-Pulse for record keeping – staff training and competency records and asset records.
- Audit training for staff members.
- Implementation of Scan Viewer, enabling the department to view and store request forms electronically.
- Achieving and maintaining accreditation for all cervical cytology testing.
- Obtaining accreditation for HPV testing on Cervical Cytology samples: extension to scope submitted to INAB Nov 2019.

Haematology / Transfusion Medicine

Heads of Department

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

Staff Complement

Fergus Guilfoyle, *1 WTE Chief Medical Scientist*
Gabriel Hyland, *0.5 WTE Senior Medical Scientist*
Isabel Fitzsimons, *0.5 WTE Senior Medical Scientist (Jan – July)*
Niamh Mullen, *0.5 WTE Senior Medical Scientist (Jan – July)*
Rebecca O'Grady, *0.5 WTE Senior Medical Scientist (from Sept)*
Claire Haran, *1 WTE Senior Medical Scientist (from Nov)*
Orla Cormack, *1 WTE Staff Grade Medical Scientist (Jan - May)*
Eimear McGrath, *1 WTE Staff Grade Medical Scientist*
Niamh Byrne, *1 WTE Staff Grade Medical Scientist*
Shagufa Zaman, *1 WTE Staff Grade Medical Scientist*
Yewande Dosunmu, *1 WTE Staff Grade Medical Scientist*
Sinead Erichsen, *1 WTE Staff Grade Medical Scientist (from Aug)*
Donna Conway, *1 WTE Staff Grade Medical Scientist* (from Dec)
Sonia Varadkar, *0.8 WTE Haemovigilance Officer*
Maureen Hand, *0.5 WTE Clerical Officer*

Key Performance Indicators Specimen Throughput

- Haematology tests: 52,640 (51,418 in 2018) - 2% increase
- Transfusion Medicine tests: 30,088 (29,099 in 2018) - 3% increase

Turn Around Time (TAT)	(TAT) Figures for Haematology				(TAT) Figures for Transfusion Medicine			
Test	Full Blood Count		Coagulation Screen		Crossmatch		Inpatient Group & Screen	
Year	**2019**	2018	**2019**	2018	**2019**	2018	**2019**	2018
Target Max TAT	**60 mins**	60 mins	**120 mins**	120 mins	**240 mins**	240 mins	**240 mins**	240 mins
Average TAT achieved	**22 mins**	23 mins	**41 mins**	39 mins	**58 mins**	59 mins	**164 mins**	100 mins
% within target TAT	**98 %**	97%	**96 %**	97 %	**100 %**	100 %	**99.5 %**	100 %

Achievements in 2019

- Maintained INAB ISO 15189 accreditation.
- Switched from codabar product barcodes for red cells and platelets to ISBT barcodes in preparation for new format of blood packs.
- Re-configured LIS and Blood Track to allow fating of plasma with PDAs.
- Managed increase in workload due to implementation of Termination of Pregnancy service, including provision of blood grouping and issue of Anti-D to primary care patients.
- Trialled new processes and procedures required in Blood Transfusion to comply with legislation implementing the Falsified Medicines Directive.
- Expanded Internal Quality Assurance system to Blood Transfusion.
- Procured, installed and initiated validation of new coagulation analyser.
- Initiated replacement of defunct blood and blood product fridges & freezers.
- Introduced new clinical interpretive comments on FBC & Blood Film reports to highlight iron deficiency and prompt action.
- Improved blood stock management – a rotation system was utilised for red cells with Tallaght to optimise and reduce O Negative usage from 20% to 12%.
- Improvements in blood stock management across CWIUH, Tallaght University Hospital and Naas General Hospital presented at IEQAS Conference.
- Case report 'Hairy Cell Leukaemia Masquerading as Pancytopenia in Pregnancy' Shackelton et al. Published Case Reports in Haematology 21 August 2019.

Challenges for 2020

- Full implementation of processes and procedures required in Blood Transfusion to comply with the Falsified Medicines Directive legislation.
- Optimisation of the RAADP program with integration of fetal RHD typing on all RhD Negative antenatal patients.
- Complete validation of coagulation analyser.
- Replacement of flow cytometer for FMH measurement.
- Further improvements in management of patients with haemoglobin disorders including a laboratory guideline.
- Development of comments on Transfusion reports to aid clinical interpretation of the potential significance of blood group antibodies.
- Complete the replacement of blood and blood product fridges and freezers.
- Expand range of clinical interpretive comments on FBC & Blood Film reports.
- Increasing demand for blood film review and clinical consultation for haematological disorders. This includes consultations for anaemia, including sickle cell disease; thrombocytopenia; complex disorders such as NAIT, and patients declining blood.
- Attendance at medical MDTs for haematology patients including those with haemostasis and thrombosis disorders and continued advisory services for RAADP and TOP initiation, is challenging and the time required is beyond current sessional commitments.

Haemovigilance

Head of Department

Dr Catherine Flynn, *Consultant Haematologist*

Staff Complement

Sonia Varadkar, *Haemovigilance Officer (0.8 WTE)*

Key Performance Indicators

Number of Women Transfused	**219**
Number of Women who received 5 or more RCC	**8**
Number of babies who received pedipacks	**64**
Neonatal exchange transfusions	**0**
Neonatal ECMO	**0**
Reports to National Haemovigilance Office	**2**

Achievements in 2019

- Accreditation – ISO 15189.
- 100% traceability of blood components and blood products.
- Introduction of Anti D for Termination of Pregnancy.
- Plasma inclusion for administration using Electronic Blood Track System.
- Publication "Antecedents of red cell transfusion in a large contemporary obstetric cohort" Journal of Perinatal Medicine.

Challenges for 2020

- Transfusion rate reduction - staff identifying risk factors early.
- Education of staff.
- Review guidelines/SOPs relating to blood components and blood products (Neonates and Massive Blood Transfusion).
- To maintain ISO 15189 (INAB Accreditation).
- Optimisation of the RAADP program with integration of fetal RHD typing on all Rh D negative antenatal patients to confirm suitability for Anti D prophylaxis.
- Management of complex cases such as NAIT requiring IVIG and Sickle Cell Disease.
- Poster presentation at National Haemovigilance Office conference "Retrospective audit of the use of Recombinant Activated Factor VIIa (rFVIIa) in neonates over a 10 year period in a large Dublin maternity hospital".

Histopathology and Morbid Anatomy

Heads of Department

Professor John O'Leary, *Clinical Head of Department*
Jacqui Barry O'Crowley, *(Retired April)*
Kate Thompson, *(Jun-Dec), Scientific Head of Department*

Staff Complement

Consultant Pathologists
Professor John J. O'Leary, *Consultant Pathologist*
Dr Colette Adida, *[on sabattical], Consultant Pathologist*
Dr Filip Sokol, *Locum Consultant*
Dr Peter Kelehan, *Locum Consultant (Morbid Anatomy)*

Special Registrars
Dr Peter de la Harpe Golden
Dr Sarah Ni Mhaolcatha

Registrars
Dr Sheena Heffernan, *(Dec)*

Medical Scientists
Niamh Kiernan, *Senior Medical Scientist (Jan-Sept)*
Claire Maguire, *Senior Medical Scientist (Jan-Feb)*
Adam Bates, *Senior Medical Scientist (May -Dec)*
Eibhlin Gallagher, *Medical Scientist*
Rosana Alves Fiorino, *Medical Scientist*
Carmel Quinn, *Medical Scientist (Feb-Aug)*
Ellen O'Reilly, *Medical Scientist (July-Dec)*
Johnny Savage, *Medical Laboratory Assistant*
Graham O'Lone, *Mortuary*

Clerical Officers
Aaron Gracey-Keogh
Aoife O'Dwyer
Pamela Smith
Helena Lyons, *Private Secretary to Professor J. O'Leary*

Key Performance Indicators

Histopathology Workload 2017-2019						
Year	**Cases**	**P.M. Cases**	**Blocks**	**H&E**	**IHC**	**Specials**
2019	**7092 (up 4.3%)**	**35 (up 9.3%)**	**20409 (up 10.4%)**	**51946 (down 3.6%)**	**1883 (down 15.8%)**	**66 (up 46.7%)**
2018	6798	32	18436	53903	2236	45
2017	6355	30	19139	56363	1943	45

TATs

According to Faculty of Pathology, RCPI Guidelines, the target Histopathology turnaround times (TATs) should be as follows:

- Small biopsy TAT: 80% within 5 working days.
- Non-biopsy/other TAT: 80% within 7 working days.

Histopathology Specimen TAT Q1-Q2 2019						
	#Cases	% Day 3	% Day 5	% Day 7	% Day 10	#outliers
Total TAT Histology	3430	8.78	20.93	30.17	42.42	1337
Small Biopsy TAT	1371	11.09	23.85	34.43	45.88	452
Non-Biopsy - Other TAT	2059	7.24	18.99	27.34	40.12	885

A significant Histopathology staff shortage in the first half of 2019 meant that TATs were significantly longer than the recommended guidelines.

Histopathology Specimen TAT Q3-Q4 2019						
	#Cases	% Day 3	% Day 5	% Day 7	% Day 10	#outliers
Total TAT Histology	3426	23.23	71.1	89.64	96.26	38
Small Biopsy TAT	1373	24.47	77.06	93.45	98.69	5
Non-Biopsy - Other TAT	2053	22.41	67.12	89.09	94.64	33

Increased staff levels and a leaner approach to work-flow reduced TATs significantly in Q3-Q4 of 2019, with 77.06% of biopsies reported within 5 days and 89.09% of non-biopsy specimens reported within 7 days.

Continuous Professional Development

Continuous professional development (CPD) is strongly supported in this department as evident from the number of talks and meetings attended by our team.

Histopathology CPD		
Month	**Course**	**#Scientists Attending**
August	NEQAS special stains	1
September	HSCP meeting	1
October	Q-pulse forum	1
October	Molecular presentation	3
November	Interviewer skills training	1
November	CERVIVA conference	3
November	Business plan development and project management	1

Achievements in 2019

- Maintained INAB ISO 15189 accreditation for Histopathology.
- Eibhlin Gallagher started the MSc in Biomedical Science with the University of Ulster in September.
- Rosana Alves completed her in-service Academy training log-book upgrading her from Medical Scientist trainee to Medical Scientist.
- Maintained high level of service provision despite ongoing challenges in staffing.
- Improved workflows to reduce TATs.
- Implemented a rationalised approach to stock management.
- Formalin now neutralised in-house significantly reducing our waste management expenditure.
- Continue to manage an inter-laboratory assessment scheme.
- The Roche Vantage Tracking System was installed and validated.
- The new Benchmark Ultra was validated.
- Four scientific staff trained in cut-up.
- Lab de-cluttered providing a safer, cleaner work environment.
- Poorly performing stains were re-optimised.
- Service contracts reviewed and value gained where possible.
- Several cost-saving initiatives implemented.

Challenges for 2020

- Microtomes need to be replaced.
- Histo-dissection course planned for scientific staff.
- SISH staining to move from the Benchmark LT to the Benchmark Ultra.
- Roche Benchmark training for 2 staff members making them subject matter experts.
- Blocks and slides to be moved off site.
- Vantage tracking system to be extended.
- Neutralise IHC waste in-house further reducing our waste removal expenditure.
- Review and rationalise all specimen and slide code procedures on LIMS.
- Training and competency records to be documented on Q-pulse.
- Assets and non-conforming work documentation to move to Q-pulse.
- The inter-laboratory scheme co-ordinated by this laboratory is to be updated and clarified.
- Audit training for staff.
- New imaging system for Histopathology cut-up room.

Microbiology and Infection Prevention and Control

Heads of Department

Dr Niamh O'Sullivan, *Consultant Microbiologist*

Alma Clancy, *Chief Medical Scientist*

Rosena Hanniffy, *Assistant Director of Midwifery/Nursing IPC (Retired May 2019)*

Geraldine Chawke, *Infection Prevention and Control Staff Midwife / Acting Infection Prevention and Control Manager II*

Staff Complement

Anne Marie Meenan, *Surveillance Scientist / Senior Medical Scientist (Jan-Nov)*

KellyAnne Herr, *Senior Medical Scientist (Jan-March)*

Sarah Deasy, *Senior Medical Scientist*

Vickey Moran, *Senior Medical Scientist*

Cian Foley, *Senior Medical Scientist (Jan-April) / Senior Medical Scientist / Surveillance Scientist (April-Dec)*

Ciaran Byrne, *Medical Scientist*

Mary Barrett, *Locum Medical Scientist (Jan)*

Patrick Morkel, *Medical Scientist*

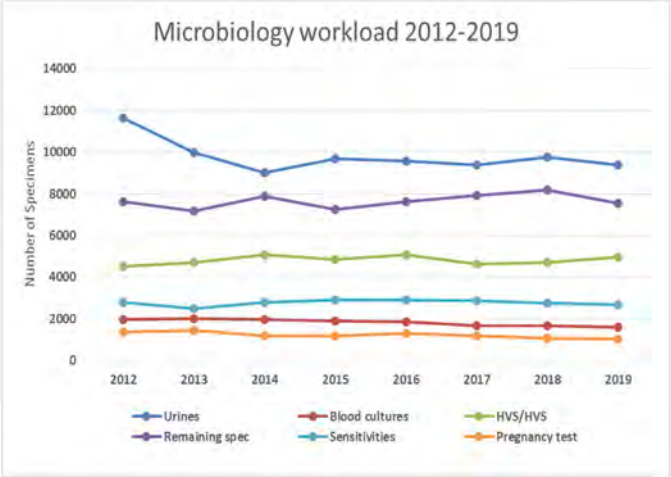
Stephane Hyland, *Medical Scientist (Feb-Dec)*

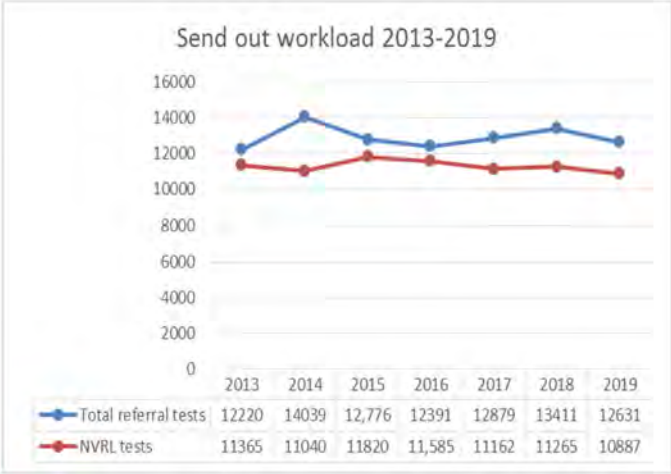
Sandy Bakankio, *Medical Scientist (June-Dec)*

Teresa Hannigan, *Laboratory Aide (0.8 WTE)*

David Roche, *Laboratory Aide (June-Sept)*

Maureen Hand, *Clerical Officer (0.5 WTE)*





	2013	2014	2015	2016	2017	2018	2019
Total referral tests	12220	14039	12,776	12391	12879	13411	12631
NVRL tests	11365	11040	11820	11,585	11162	11265	10887

Key Performance Indicators

Microbiology

- The Microbiology Department is accredited by the Irish National Accreditation Board to ISO 15189: 2012 Standard.
- Microbiology specimen throughput:
  - Specimens: 28,449
  - Susceptibilities: 2,701
  - Referral tests:12,631
- Environmental screening:
  - 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 21 occasions in 2019.
  - This included blood cultures, urines, microbiology specimens both simple and complex, semen specimens, pregnancy tests and external tests.
  - 18 of these were within the target turnaround times.
- External QA:
  - 58 distributions were analysed in 2019.
  - Schemes: pregnancy testing, antifungal ID and susceptibility, general bacteriology, antimicrobial

susceptibility testing, genital pathogens, MRSA screening, andrology, urinalysis cell count and blood culture gram stains.

- Internal quality assurance:
  - Ongoing tests/kits/reagents validation.
  - Batch acceptance of all products.
  - Daily, weekly, monthly and quarterly quality control was carried out covering all microbiology methods, reagents, media and susceptibility testing.

- All microbiology staff up to date with manual handling, chemical safety, fire safety and hand hygiene 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

- Adult blood stream infection rate per 1,000 bed days used (BDU).
- Adult blood culture contamination rate.
- Paediatric late onset primary blood stream infection 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.

	2018	2019
Adult BSI rate	0.32	**0.47**
Paediatric NICU late onset BSI rate	5.3	**6.0**
Paediatric early onset BSI rate	0.36	**0.18**
S. aureus HCAI rate	0.93	**0.39**
C. difficile HCAI rate	0	**0**

- 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
  - 2018: Between 76% and 82%
  - 2019: Between 61% and 82%
- Hand hygiene audits in clinical locations (target 90%):
  - 2018: May-91% Oct-93%
  - 2019: May-94% Oct-91%
- Alcohol gel consumption
  - 2018: 1,474 litres
  - 2019: 1,617 litres

Achievements in 2019

- Validation and batch acceptance continued for accreditation.
- Performance characteristics of examination procedures, including uncertainty of measurement, determined for accreditation purposes.
- Staff trained in semenology.
- 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 and POCT.
- Microbiology staff are members of and contribute to National committees/advisory groups.
- Infection Prevention and Control Dashboard maintained.
- Adult blood culture contamination rate below 3% for the sixth year in a row.
- Alert organism and environmental screening continued.
- Antibiogram data produced to inform antimicrobial guidelines.
- Annual surveillance and IPC data produced for senior management
  - Annual newsletter
  - Hospital Board report

- Additional Maternal BSI surveillance submitted to EARS-Net.
- Enhanced surveillance BSI data for Group A Streptococcus and Haemophilus influenza submitted to Public Health.
- 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 be have alerts added to their records on iPiMS.
- Introduction of NG Test Carba 5 for the identification of IMP carbapenemases and specification of metallo beta lactamase enzymes.
- PVC care bundle audits continued. Staff have access to results on the medical audit system.
- Ongoing training of staff in IPC issues.
- Collaboration with the Centre for Midwifery Education.
- Engagement with users to reduce pre-analytical Blood Culture non-conformances.
- Blood Culture Initial Negative Reporting: change from 48 hours to 36 hours to facilitate earlier patient discharge and decrease antimicrobial consumption.

Challenges for 2020

- 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.
- CSSD Environmental Monitoring Programme.
- 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.
- Additional Maternal BSI surveillance submission to EARS-Net.
- Submission of enhanced surveillance BSI data for Group A Streptococcus and Haemophilus influenza to Public Health.
- 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.
- Introduce use of Q-Pulse for management of non-conformances.

Pathology/Molecular Pathology

The laboratory carries out service and research in the following areas: HPV, cervical pre-cancer, anal cancer, head and neck cancer, biomarker generation, cancer metastasis, prostate cancer, the cancer inflammasome, endometrial and ovarian cancer, disease modelling, nanotechnology and imaging.

Heads of Department

Professor John O'Leary

Staff Complement

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

Molecular Pathology Manager: Prof Cara Martin *(TCD/ CWIUH)*

Research Scientists:
Dr Christine White
Dr Michael Gallagher
Dr Mark Ward
Ms Loretto Pilkington
Dr Helen Keegan
Dr Prerna Tewari
Dr Mark Bates
Dr Bashir Mohammed
Ms Martha Finan
Dr Bernadine O'Donovan
Dr Sheena Heffernan
Dr Yanmei Huang
Dr Lucy Norris *(visiting) [Obstetrics & Gynaecology, TCD]*
Dr Mairead O'Connor *(CERVIVA researcher at National Cancer Registry, Ireland)*
Professor Doug Brooks *[Adjunct Professor TCD and UniSA]*
Professor Stavros Selemidis *[Visting Professor and RMIT, Australia]*
Dr Robert Brooks, *Visiting Researcher, UniSA*
2 Post-Doctoral posts *[being interviewed Q1 2020]*

Research Students:
PhD/MD: Stephen Reynolds, Imogen Sharkey Ochoa, Tanya Kelly, Laura Edgerton, Padma Naik, Colm Kerr and 2 external PhD students at UniSA, A

Key Performance Indicators

Grants held 2019

Title: Equivalency Study of Clinician and SelfCollected Samples for Cervical Cancer Screening Protocol No. MULTIHPV463 (Principal investigator)
Awarding Body: Roche Molecular Diagnostics (2019-2020)
Total Value: €1,200,000

Title: EnhaTitle: Biobanking Awareness: Improving Research and Healthcare (Principal Investigator)
Awarding Body: The Irish Cancer Society Cancer Research Engagement Award
Duration: 2019-2020
Value: €2,500

Title: Advancing ovarian cancer Diagnostics And PrognosTics; ADAPT (Amendment to Cancer Trials Ireland Study) (Principal Investigator)
Awarding Body: Royal City of Dublin Hospital Trust Fund
Duration: 2019-2020
Value: €63,333

Title: Deciphering the most clinically and biologically relevant circulating tumour cells [CTCs] in cancer metastasis (Mentor team with Prof John O'Leary)
Awarding Body: SFI Industry Fellowship (Janina Berghoff) in conjunction with Becton Dickinson
Duration: 2018-2019
Value: €61,641

Title: Interrogation of the cancer cell metabolome in ovarian cancer, assessment of omentin and resistin as biomarkers of response (Principal Investigator)
Awarding Body: Royal City of Dublin Hospital Trust Fund
Duration: 2019-2020
Value: €38,058

Title: Development of Diagnostic and Prognostic Algorithms for Ovarian Cancer (Principal Investigator)
Awarding Body: Roche Investigator Initiated Study
Duration: 2018-2020
Value: €19,999.68

Title: HPV associated disease: shaping the future prevention and management pathway
ARPP-A-2018-018
Awarding Body: Health Research Board, Ireland.
Total Value: €236,000

Title: Characterising the proteogenome of Circulating Tumour Cells [CTCs]
Awarding Body: SFI Industry Fellowship in conjunction with Becton Dickinson (August 2019- August 2020)
Value: €79,965

Title: Deciphering the most clinically and biologically relevant circulating tumour cells [CTCs] in cancer metastasis [2018-2020]
Awarding Body: Enterprise Ireland Innovation Award with Becton Dickinson
Total Value: €803,000.00

Title: Enhancing the Evidence Base for Cost-Effectiveness Analysis in Ireland: Building Improvements from the Intervention-Specific to System-Wide Levels
Awarding Body: Health Research Board. Emerging Investigator Awards (EIA) (2018-2022)
Total Value: €632,058

Title: CERVIVA-Vax: Monitoring the impact of HPV vaccination in Ireland
Awarding Body: Merck Investigator Projects (2018-2021)
Value: €200,000

Title: CERVIVA-Vax: Monitoring the impact of HPV vaccination in Ireland
Awarding Body: Health Research Board. Investigator Led Projects (2018-2021)
Value: €370,000

Title: CERVIVA: The HPV Educate Project
Awarding Body: Health Research Board. Knowledge Exchange and Dissemination (KEDS) Awards (2017-2019)
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 (2017-2020)
Total Value: €119,973

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: Targeting endosomal NOX-2 oxidase in viral disease [2017-2019]
Awarding Body: NHMRC
Total value: €549,858.00

Title: Endosomal reactive oxygen species in tumour angiogenesis [2017-2019]
Awarding Body: NHMRC
Total value: €440,096.00

Title: Envision Sciences [https://envisionsciences.com/]
Awarding Body: Private donor
Total value: Aus$3,800,000 [Euro 2,600,000]

Title: Mid-career support grant [2019-2021]
Awarding Body: HRB
Total value: €240,000

Total grant values: €10,113,080

Grants out for review: €4,360,000

Post graduate degrees
In 2019, the department had 8 [6 internal and 2 external] post-graduate students pursuing PhD degrees.

The Cellular and Molecular Cytopathology Training School.
In 2019-2020, the Cellular and Molecular Cytopathology Training School (formerly National Cytology Training School) provided 21 educational and training events or workshops in co-operation with the Departments of Cytopathology and Histology and the Molecular Pathology Research Laboratory to Colposcopy Specialists in training (12), Colposcopy Nurses (3), Biomedical Scientists (8), Pathology trainees (4), Research Scientists (3) and Undergraduate Biomedical Scientists/ Student Placements/ TY students (13). In March 2020, the CMCTS launched i) CPD Certificate in Molecular Cervical Cytopathology in co-operation with TU Dublin and in partnership with CervicalCheck for the upskilling of biomedical scientists in Molecular Cytopathology in preparation for the transition to HPV primary screening and ii) an Educational Series of Open Lectures on Cervical Screening, that was widely attended by the Pathology Department.

Achievements in 2019

Publications
In 2019, the Molecular Pathology Group at the CWIUH and St James's Hospital published 15 peer reviewed

journal articles (with 4 additional papers in press) and 25 published abstracts [see below].

Peer reviewed publications for 2019

1. To EE, Luong R, Diao J, O' Leary JJ, Brooks DA, Vlahos R, Selemidis S. Novel endosomal NOX2 oxidase inhibitor ameliorates pandemic influenza A virus-induced lung inflammation in mice. Respirology. 2019 Oct;24(10):1011-1017. doi: 10.1111/resp.13524. Epub 2019 Mar 18. PMID: 30884042; PMCID: PMC6972593.
2. To EE, Erlich J, Liong F, Luong R, Liong S, Bozinovski S, Seow HJ, O'Leary JJ, Brooks DA, Vlahos R, Selemidis S. Intranasal and epicutaneous administration of Toll-like receptor 7 (TLR7) agonists provides protection against influenza A virus-induced morbidity in mice. Sci Rep. 2019 Feb 20;9(1):2366. doi: 10.1038/s41598-019-38864-5. PMID: 30787331; PMCID: PMC6382773.
3. Johnson IRD, Sorvina A, Logan JM, Moore CR, Heatlie JK, Parkinson-Lawrence EJ, Selemidis S, O'Leary JJ, Butler LM, Brooks DA. A Paradigm in Immunochemistry, Revealed by Monoclonal Antibodies to Spatially Distinct Epitopes on Syntenin-1. Int J Mol Sci. 2019 Nov 29;20(23):6035. doi: 10.3390/ijms20236035. PMID: 31795513; PMCID: PMC6928784.
4. To EE, Erlich JR, Liong F, Luong R, Liong S, Esaq F, Oseghale O, Anthony D, McQualter J, Bozinovski S, Vlahos R, O'Leary JJ, Brooks DA, Selemidis S. Mitochondrial Reactive Oxygen Species Contribute to Pathological Inflammation During Influenza A Virus Infection in Mice. Antioxid Redox Signal. 2020 May 1;32(13):929-942. doi: 10.1089/ars.2019.7727. Epub 2019 Jul 12. PMID: 31190565; PMCID: PMC7104903.
5. Bates M, Furlong F, Gallagher MF, Spillane CD, McCann A, O'Toole S, O'Leary JJ. Too MAD or not MAD enough: The duplicitous role of the spindle assembly checkpoint protein MAD2 in cancer. Cancer Lett. 2020 Jan 28;469:11-21. doi: 10.1016/j.canlet.2019.10.005. Epub 2019 Oct 5. PMID: 31593803.
6. O'Connor M, O'Donovan B, Waller J, Ó Céilleachair A, Gallagher P, Martin CM, O'Leary J, Sharp L. Communicating about HPV in the context of head and neck cancer: A systematic review of quantitative studies. Patient Educ Couns. 2019 Sep 17. pii: S0738-3991(19)30423-9. doi: 10.1016/j.pec.2019.09.017. PubMed PMID: 31558324
7. Molony P, Werner R, Martin C, Callanan D, Sheahan P, Heffron C, Feeley L. Tumour Cell Anaplasia and Multinucleation as Prognosticators in Oropharyngeal Squamous Cell Carcinoma. Head Neck Pathol. 2019 Sep 24. doi: 10.1007/s12105-019-01081-7. [Epub ahead of print] PubMed PMID: 31552619.
8. Annett S, Moore G, Short A, Marshall A, McCrudden C, Yakkundi A, Das S, McCluggage GW, Harley I, Moustafa N, Kennedy C, DeFazio A, Brand A, Sharma R, Brennan D, O'Toole S, Leary J, O Connor D, Furlong F, McCarthy H, Kissenfennig A, McClements L, Robson T. FKBPL-based peptide, ALM201, targets angiogenesis and cancer stem cells in ovarian cancer. British Journal of Cancer 2019, doi:10.1038/s41416-019-0649-5.
9. Bates M, Furlong F, Gallagher MF, Spillane CD, McCann A, O'Toole S, O'Leary JJ. Too MAD or not MAD enough: The duplicitous role of the spindle assembly checkpoint protein MAD2 in cancer. Cancer Lett. 2019 Oct 5;469:11-21. doi: 10.1016/j.canlet.2019.10.005. [Epub ahead of print] PubMed PMID: 31593803.
10. Marchocki Z, Norris L, O'Toole S, Gleeson N, Saadeh FA. Patients' experience and compliance with extended low molecular weight heparin prophylaxis post-surgery for gynecological cancer: a prospective observational study. Int J Gynecol Cancer. 2019 Apr 16. pii: ijgc-2019-000284. doi:10.1136/ijgc-2019-000284. [Epub ahead of print] PubMed PMID: 30992328.
11. Mulligan K, Egan S, Brennan D, Irish Society of Gynaecological oncology Public and patient involvement group members, O'Meara Y, O'Toole S. Doctor-Patient Communication in an Outpatient Setting. Ir Med J. 2019 May 9;112(5):934. PubMed PMID: 31411016.
12. Cluxton CD, Spillane C, O'Toole SA, Sheils O, Gardiner CM, O'Leary JJ. Suppression of Natural Killer cell NKG2D and CD226 anti-tumour cascades by platelet cloaked cancer cells: Implications for the metastatic cascade. PLoS One. 2019 Mar 25;14(3):e0211538. doi: 10.1371/journal.pone.0211538. eCollection 2019. PubMed PMID: 30908480; PubMed Central PMCID: PMC6433214.
13. Bincy J, Vijayaraghavan RK, Kent L, O'Toole S, O'Leary J, Forster R Tunable metallic nanostructures using 3D printed nanosphere templates. Electrochemistry Communications 2019 Volume 98, Pages 106-109.
14. Nuttall DS, Hillier S, Clayton HR, Savage AJ, Martin CM, O'Leary JJ. A retrospective validation of the FocalPoint GS slide profiler NFR technology by analysis of interval disease outcomes compared with manual cytology. Cancer Cytopathol. 2019 Mar 2. doi: 10.1002/cncy.22109. [Epub ahead of print] PubMed PMID: 30825407.
15. Traynor D, Duraipandian S, Bhatia R, Cuschieri K, Martin CM, O'Leary JJ, Lyng FM. The potential of biobanked liquid based cytology samples for cervical cancer screening using Raman spectroscopy.

J Biophotonics. 2019 Jan 17:e201800377. doi: 10.1002/jbio.201800377. [Epub ahead of print] PubMed PMID: 30653819.

Published Abstracts 2019

16. Bincy Jose, Sharon O'Toole, Robert J. Forster, John O'Leary. Intelligent Nanorockets With Targeted, Propulsive And Continuous Sensing Capacity. Laboratory Investigations 2018; 98(S1): 808.

17. MP Ward, BM Mohamed, L Kane, M Bates, J Berghoff, C Spillane, T Kelly, J Kennedy, FA Saadeh, K Hokamp, O Sheils, C Martin, M Gallagher, S Hannify, EP Dixon, SA O'Toole, JJ O'Leary. Influence of platelets and neutrophils on circulating tumour cells (2020, AACR, Accepted for publication).

18. Tanya Kelly, Mark Ward, Bashir Mohamed, Mark Ward, Cara Martin, Cathy Spillane, Sharon O'Toole, and John O'Leary. Plasminogen Activator Inhibitor 1 (PAI-1) is a Key Driver of Ovarian Cancer Metastasis. Modern Pathology 2020; 30(3): 1079.

19. S. O'Toole, M. Foley, S. Rizmee, L. Norris, W. Kamran, N. Ibrahim, M. Ward, C. Thompson, C. Murphy, M. Anglim, T. D'Arcy, N. Farah, H. O'Connor, J. O'Leary, F. AbuSaadeh, N. Gleeson. HE4 has a role in identifying high risk prognostic factors in endometrial cancer. International Journal of Gynaecological Cancer 2019 (Supplement).

20. B. M. Mohamed, S. O'Toole, S. A. Elbaruni, F. AbuSaadeh, H. S. Melarcode, L. Norris, M. Ward, M. F. Gallagher, S. G. Gray, J. O'Leary. PAD enzymes as a candidate therapeutic target in ovarian cancer. International Journal of Gynaecological Cancer 2019 (Supplement).

21. B. M. Mohamed, S. O'Toole, S. A. Elbaruni, F. AbuSaadeh, H. S. Melarcode, L. Norris, M. Ward, M. F. Gallagher, S. G. Gray, J. O'Leary. Ex-vivo antitumor efficacy of PEGylated-targeted nanodiamonds for docetaxel delivery in ovarian cancer International Journal of Gynaecological Cancer 2019 (Supplement)

22. Eilis Perez, Bashir Mohamed, Danny Di Capua, Lucy Norris, Noreen Gleeson, Feras Abu Saadeh, Claire Thompson, Ciaran O'Riain, Mark Bates, Lorraine O'Driscoll, John O'Leary, Sharon O'Toole. High Expression Of Neuromedin U In High Grade Serous Ovarian Cancer Confers A Progression Free Survival Advantage. Laboratory Investigations 2019; 99(1): 89.

23. Tanya Kelly, Cara Martin, Bashir Mohamed, Sharon O'Toole, Cathy Spillane, John O'Leary. Exposure to Platelets accelerates Mitosis in SKOV3 Cells. Laboratory Investigations 2019; 99(1): 56.

24. Melad Saed, Sharon O'Toole, Lucy Norris, Steven Gray, Feras Abu Saadeh, John O'Leary, Bashir Mohamed. The Efficacy Of Nanocomplexes Complexed With Specific Biomarker Targets In Ovarian Cancer Treatment, An Ex-Vivo Explant Case Study. Laboratory Investigations 2019; 99(1): 98.

25. Stephen Reynolds, Christine White, Padmaja Naik, Roisin O' Brien, Rita Ladapo, Loretto Pilkington, Helen Keegan, Caroline Powles, Jacqui Barry O'Crowley, Prerna Tewari, Sharon O'Toole, Charles Normand, Grainne Flannelly, Cara Martin, John O'Leary. A DNA Methylation Panel for the Triage of HPV Positive Women in a Primary Screening Population. Laboratory Investigations 2019; 99(1): 94.

26. Eilis Perez, Bashir Mohamed, Danny Di Capua, Lucy Norris, Noreen Gleeson, Feras Abu Saadeh, Claire Thompson, Ciaran O'Riain, Mark Bates, Lorraine O'Driscoll, John O'Leary, Sharon O'Toole. High Expression Of Neuromedin U In High Grade Serous Ovarian Cancer Confers A Progression Free Survival Advantage. Laboratory Investigations 2019; 99(1): 89.

27. Prerna Tewari, Prithi Raguraman, Robbie S R Woods, Niamh Kernan, Imogen Jacqui Barry O'Crowley, Esther Mary O'Regan, Cara M Martin, John J O'Leary. "Evaluation of Prognostic Impact of p53 Mutant Expression in HPV-Positive and HPV-Negative Head & Neck Squamous cell Carcinomas" Mod Pathol 32, 1-59, (2019). https://doi.org/10.1038/s41379-019-0238-4

28. Tanya Kelly, Cara Martin, Bashir Mohamed, Sharon O'Toole, Cathy Spillane, John O'Leary. Exposure to Platelets accelerates Mitosis in SKOV3 Cells. Laboratory Investigations 2019; 99(1): 56.

29. Melad Saed, Sharon O'Toole, Lucy Norris, Steven Gray, Feras Abu Saadeh, John O'Leary, Bashir Mohamed. The Efficacy Of Nanocomplexes Complexed With Specific Biomarker Targets In Ovarian Cancer Treatment, An Ex-Vivo Explant Case Study. Laboratory Investigations 2019; 99(1): 98.

30. Stephen Reynolds, Christine White, Padmaja Naik, Roisin O' Brien, Rita Ladapo, Loretto Pilkington, Helen Keegan, Caroline Powles, Jacqui Barry O'Crowley, Prerna Tewari, Sharon O'Toole, Charles Normand, Grainne Flannelly, Cara Martin, John O'Leary. A DNA Methylation Panel for the Triage of HPV Positive Women in a Primary Screening Population. Laboratory Investigations 2019; 99(1): 94.

Meeting Proceedings

1. Tanya Kelly, Mark Ward, Bashir Mohamed, Mark Ward, Cara Martin, Cathy Spillane, Sharon O'Toole, and John O'Leary. Platelets and PAI-1 expedite Ovarian Cancer Metastasis. Proceedings of the Irish Association for Cancer Research 2020, Galway, Ireland.
2. Yanmei Huang, Cathy Spillane, Brendan Ffrench, Bashir Mohamed, Mark Ward, Michael Gallagher, Tanya Kelly, Cathal O'Brien, Cara Martin, Dorinda Mullen, Elizabeth Connolly, Sarah A McGarrigle, John Kennedy, Sharon A O'Toole*, John J O'Leary. (*Joint Senior Authors). No Correlation Between Enumeration of Circulating Tumour Cells And Miller-payne Grade in a Cohort of Brest Cancer Patients Undergoing Neoadjuvant Chemotherapy. Proceedings of the Irish Association for Cancer Research 2020, Galway, Ireland.
3. Yanmei Huang, Cathy Spillane, Brendan Ffrench, Bashir Mohamed, Mark Ward, Michael Gallagher, Tanya Kelly, Cathal O'Brien, Cara Martin, Dorinda Mullen, Elizabeth Connolly, Sarah A McGarrigle, John Kennedy, Sharon A O'Toole*, John J O'Leary. (*Joint Senior Authors). No correlation between Circulating tumour cell enumeration and Miller-Payne grade in a cohort of breast cancer patients undergoing neoadjuvant chemotherapy. Proceedings of the 11th TCD International Cancer Conference 2019.
4. B. M. Mohamed, S. O'Toole, S. A. Elbaruni, F. AbuSaadeh, H. S. Melarcode, L. Norris, M. Ward, M. F. Gallagher, S. G. Gray, J. O'Leary. PAD enzymes as a candidate therapeutic target in ovarian cancer. Proceedings of the 11th TCD International Cancer Conference 2019.
5. MP Ward, BM Mohamed, L Kane, J Berghoff, C Spillane, B John, T Kelly, J Kennedy , FA Saadeh, K Hokamp, O Sheils, C Martin, M Gallagher, S Hanniffy, EP Dixon, SA O'Toole, JJ O'Leary. Influence of platelets and neutrophils on Circulating Tumour Cells (CTCs). Proceedings of the 11th TCD International Cancer Conference 2019.
6. Janina Berghoff, Sean Hanniffy, Bashir Mohamed, Mark Ward, Sharon O'Toole, John O'Leary, Eric Dixon. Optimization of cancer cell isolation from blood using an integrated enrichment system with BD FACSMelody. Proceedings of the Liquid Biopsy Conference, Bergamo, Italy May 2019.
7. Sharon O'Toole, Cathy Spillane, Yanmei Huang, Brendan Ffrench, Cathal O'Brien, Carmel Ruttle, Cara Martin, Bashir Mohamed, Mark Ward, Michael Gallagher, Tanya Kelly, Dorinda Mullen, John Kennedy John O'Leary. Circulating tumour cell enumeration does not correlate with Miller-Payne grade in a cohort of breast cancer patients undergoing neoadjuvant chemotherapy. Proceedings of the Liquid Biopsy Conference, Bergamo, Italy May 2019.
8. Prevalence of Oral HPV Infections in Women Attending Colposcopy Clinics in Ireland. Presented at the annual BSOMP meeting 25th April 2019.
9. Prerna Tewari, Eugene Kashdan, Cara M Martin, John J O'Leary, Cathal Walsh, Andrew C Parnell. Estimating the Prevalence of Oropharyngeal Squamous Cell Carcinomas from human Papilloma virus status in the USA by combining machine learning with Bayesian inverse modelling. EUROGIN– International Multidisciplinary HPV Congress, Monaco, 4th 7th December 2019.
10. Sharkey Ochoa I, O'Regan E, Gheit T, Tommasino M, McKay, Chopin, S, Barry O'Crowley J, Kernan N, Tewari P, White C, Keegan H, O'Toole S, Toner M, O'Keane C,, Faul P, Cronin N, Kay E, Buckley C, Kennedy S, Mullen D, Timon C, O'Murchu E, Sharp L, O'Leary, JJ Martin CM. ECHO [Epidemiology of HPV infection in Oral Cancer in Ireland]. EUROGIN– International Multidisciplinary HPV Congress, Monaco, 4th 7th December 2019.
11. Kerr C, Heskin J, Cullen E, White C, Naik P, O'Leary J, Sadlier C, Bergin C, Martin CM. The prevalence of high risk HPV DNA and mRNA in anal pap smears from an outpatient, HPV positive men-who-have-sex-with men cohort in Ireland. EUROGIN– International Multidisciplinary HPV Congress, Monaco, 4th to 7th December 2019.

HPV Service Provision: In 2019, our molecular pathology research scientists led the introduction of accredited HPV testing under the Cytology Department at Coombe Women and Infants University Hospital. This is in preparation for the move to HPV primary screening in 2020.

National Cervical Screening Laboratory [NCSL]: The Molecular Pathology research group were very pleased that the government has chosen the Coombe site for the new National Cervical Screening Laboratory. The significant achievements of the CERVIVA research consortium [www.cerviva.ie] (supported by the Health Research Board [HRB]), contributed significantly to the decision.

The presence of CERVIVA on the site provides a significant pipeline of research in relation to HPV [test of disease] and biomarkers [tests of disease]. Molecular epidemiological tracing of HPV viral isolates post-vaccination, will form an extremely important part of the work of the NCSL.

CERVIVA is one of the most successful international research consortia, working in the area of HPV related diseases and cervical pre-cancer, head and neck cancer and anal cancer.

Figure: CERVIVA research consortium ecosystem – KPIs

Challenges for 2020

- Expand our Molecular Diagnostic testing service to support and meet demand associated with CervicalCheck planned change to primary HPV-based cervical screening in 2019.
- Introduce Molecular testing for:
  - Cervical cancer
  - Endometrial cancer
  - Fallopian tube, ovarian and primary peritoneal [pelvic tumours]
  - Molecular gene imprinting
  - Gestational Trophoblastic Disease [GTD]

KEY PERFORMANCE INDICATORS [including current activity]:

1. PhD students (current) [n=8]
2. MD students (current) [n=2]
3. MSc students (current) [n=2]
4. Post-doctoral scientists (current) [n=18]
5. Grant income highlights:
   a. Income in excess of 70 million euros over the past 5 years
   b. Total career grant income: >155 million euros
6. Since 1998:
   a. PhD students completed = 44
   b. MD students completed = 11
   c. MSc students completed = 11
7. Industrial links with:
   a. Life Technologies [ThermoFisher]
   b. Affymetrix
   c. Roche Molecular Systems
   d. Roche Oncology
   e. Sanofi Oncology
   f. Glaxo Smith Kline
   g. IonTorrent
   h. Invitrogen
   i. Hologic
   j. Qiagen
   k. Fluxion
   l. Johnson & Johnson
   m. Alere
   n. Illumina
   o. Vaccinogen
   p. Becton Dickinson
8. Research group h-index >80
9. Research group i-10 index >177
10. Total group citations: >17,000

Phlebotomy in OPD & Perinatal Centre

Head of Department

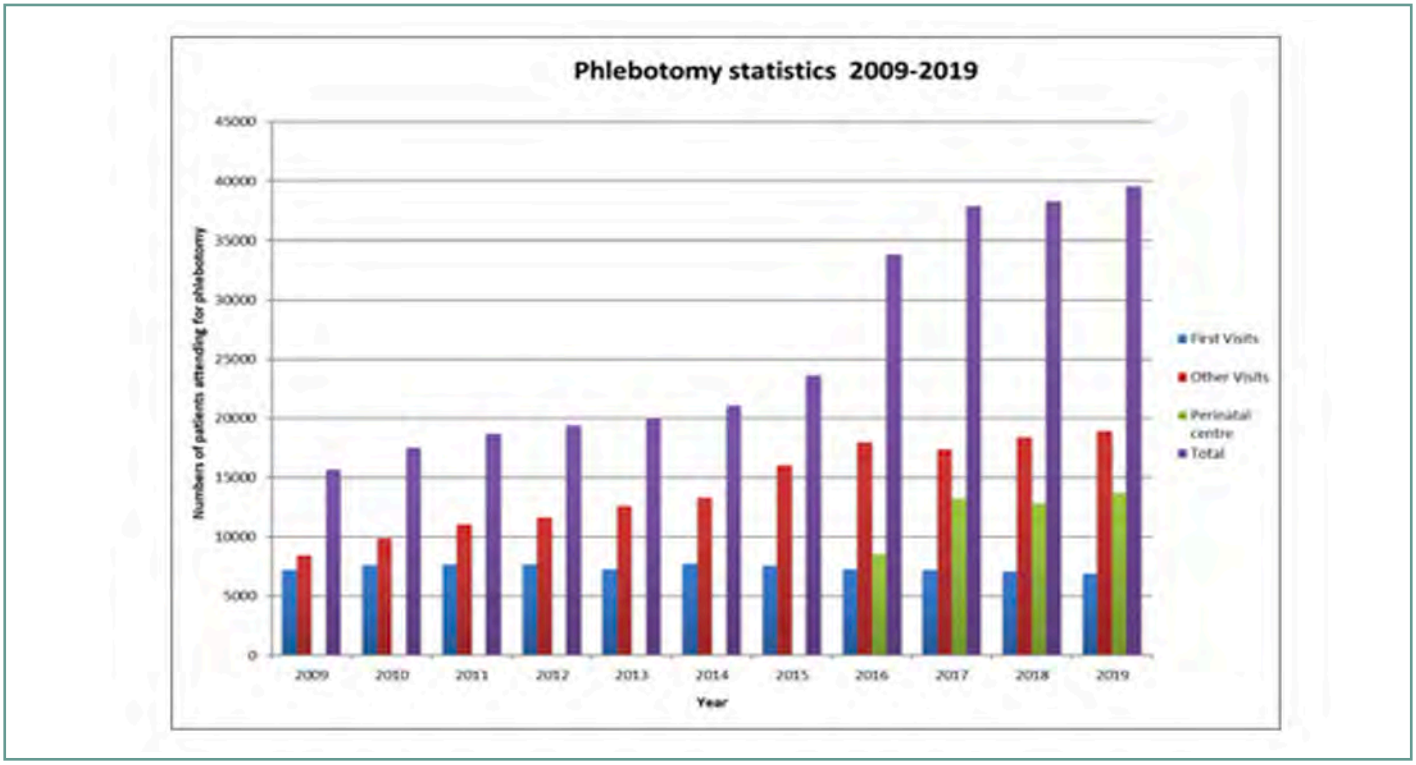
Martina Ring, *Laboratory Manager*

Staff Complement

Artemio Arganio, *1 WTE*
Vladimir Getoyev, *1 WTE*
Roisin Nolan, *1 WTE*

Key Performance Indicators

An increase of 1,267 patient episodes took place in 2019, compared to 2018 for the Phlebotomy Service in the OPD and Perinatal Centre. 72% of this increase occurred in the Perinatal Centre. Figures presented are patient episodes and do not reflect actual numbers of blood samples taken from each patient.



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**
First Visits	7212	7610	7672	7714	7298	7773	7586	7296	7237	7090	**6908**
Other Visits	8450	9856	11060	11680	12633	13311	16055	17954	17369	18414	**18951**
Perinatal Centre								8562	13264	12783	**13695**
Total	**15662**	**17466**	**18732**	**19394**	**19931**	**21084**	**23641**	**33812**	**37870**	**38287**	**39554**

All three phlebotomists work in the perinatal centre and the OPD, thus providing cross- cover for both areas.

The workload within the perinatal centre continues to be substantial, >1000 patient episodes per month, there was an increase of 912 patients who attended the clinic for phlebotomy. The work-load continues to reflect the level of suspicion of gestational diabetes in the population.

Challenges for 2020

- Continue to provide the high-quality patient-focused service with ever increasing demands.
- Assess the feasibility of introducing a hospital Phlebotomy Service in the wards during the routine day.

Radiology Departments

Adult Radiology

Head of Department

Professor Mary T. Keogan

Staff Complement

1 Clinical Specialist Radiographer (PACS Manager)

1 Senior Radiographer

1 Clinical Specialist Radiographer

1 Senior Radiographer

1 Locum Clinical Specialist Radiographer (Holiday Cover)

Key Performance Indicators

	N=
Adult Ultrasounds	3890
HyCoSy	18
Adult Radiographs	229
Total Adult Examinations	**4137**

Achievements in 2019

- Appointment of second radiographer sonographer to join the Ultrasound Department, we welcome Aoife Gilchriest, Senior Radiographer. The full range of abdominal and pelvic ultrasound examinations are now available Monday to Friday.
- Introduction of a new ultrasound service for evaluation of possible DVT. This service allows Coombe patients to be evaluated in-house and removes the need for transfer to St James's Hospital for this service.
- HyCoSy examinations are available for both in-house and GP referrals with increased capacity available.
- Many thanks to department Radiography and Clerical staff for their hard work in maintaining timely access to diagnostic examinations for all patients.

Challenges for 2020

- Maintenance of acceptable turnaround times for radiology and ultrasound examinations as demand for these services continues to increase.

Paediatric Radiology

Head of Department

Dr Eoghan Laffan

Staff Complement

2 full-time Radiographers shared between Adult and Paediatric services

1 Clinical Specialist Radiographer (CSR) and 1 Senior Radiographer

Key Performance Indicators

	N=
Outpatient Radiographs	1892
Inpatient Radiographs	1593
Ultrasounds	2764
Total	**6249**

Achievements for 2019

- The weekly Neonatal Radiology case conference, commenced in late 2018 has continued into 2019. Imaging studies performed on neonates in CWIUH, or when necessary in CHI Crumlin, are discussed. It continues to be popular amongst NCHDs offering teaching and discussion opportunities in a wide variety of cases.

Challenges for 2020

- Increase in Consultant Paediatric Radiology Consultant numbers is still required for the Neonatology service at CWIUH. This would bring the CWIUH service in line with the other Dublin Maternity Hospitals.
- National hip ultrasound screening programme for DDH remains outsourced at CWIUH, due to ongoing Radiology staffing shortages.

Allied Services

Bereavement

Head of Department

Ms Brid Shine, *Clinical Midwife Specialist Bereavement & Loss*

Staff Complement

1 WTE Clinical Midwife Specialist Bereavement & Loss

0.5 WTE Acting Clinical Midwife Specialist Bereavement & Loss

Key Performance Indicators

- Provision of anticipatory bereavement support and ongoing care to parents whose baby is diagnosed with a life limiting condition utilising the perinatal palliative care approach, in close liaison with the Perinatal Co-ordinator CMM II Ms Felicity Doddy, the Neonatology Team and Specialist Palliative Care team.
- Provision of bereavement 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 support and ongoing care for families who receive a diagnosis of life limiting condition and who choose to end their pregnancy early in line with the new legislation and care services.
- Co-ordinating the formal structured follow-up care of bereaved parents who have experienced a Perinatal death 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 2019

- 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.
- Involved in the ongoing work of the End of Life Care Committee.
- Completed 8 day intensive training in contemplative end of life care.
- Design & Dignity Grant funding from the Irish Hospice Foundation & HSE were utilised to commence the New Mortuary building works June 2019 with planned opening December 2019.
- Poster presentation following successful completion of LEAN project aimed at improving the efficiency of Bereavement Care on St Gerard's Ward in collaboration with the Midwifery team.
- The appointment of Consultant Dr Mark Hehir to lead the Pregnancy Loss Clinic began developments to review the clinic's efficiency and service delivery. The CMS in Bereavement has now weekly input in the provision of support to those families who experience repeated Miscarriage and/or unexpected Mid-Trimester Miscarriage. Gratitude to the OPD team of Midwives led by Ms Mary McDonald CMM III for support in the smooth running of the clinic and in renaming it the LEAF Clinic for the sensitivity and privacy of its service users. Carol in EPAU is kindly acknowledged for her clerical support.
- November 2019 saw the appointment of Ms Anita Bouderbala as acting CMS in a 0.5 WTE capacity to support Bereavement Midwifery Service development following the resignation of Ms Sarah Gleeson in June.
- Co-ordinated an update on symptom management with special thanks to members of the Specialist Palliative Care team, aimed at up skilling Midwives & Neonatal staff caring for Baby's requiring Palliative Care.

Challenges for 2020

- 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, in particular the area of anticipated neonatal demise utilising palliative care support in close collaboration with the Neonatal Nursing team.

- Enhanced collaborative work with our MSW colleagues newly appointed to Bereavement, as well as termination of pregnancy care.
- Continuing to advocate for end of life care projects to enhance compassionate care, including the planned development of hospice standard rooms for bereaved families as well as the opening of our new Mortuary Building.
- Continued work to ensure the hospital's Bereavement Service is in line with the HSE 'National Standards for Bereavement care following Pregnancy Loss and Perinatal Death'.
- Further enhancing the support structures available to staff in the aftermath of critical incidences, with support from senior management.

"I loved the boy with the utmost love of which my soul is capable, and he is taken from me - yet in the agony of my spirit in surrendering such a treasure, I feel a thousand times richer than if I had never possessed it"

(A quotation by William Wordsworth compassionately shared from a heartbroken mother to help us recognise the deep love felt in the loss of their much loved son.)

Chaplaincy / Pastoral Care Department

Head of Department

Renée Dilworth

The Pastoral Care Department is staffed by Ms. Renée Dilworth, Chaplain. The Pastoral Care Department provides a supporting ministry to all families in times of sadness and in times of joy. The surrounding parishes provide additional support when possible. The Chaplain understands that everyone has a spiritual dimension and that many may have a religious component, we can contact Ministers and Leaders of other denominations and traditions 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.

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 Coombe grave in Glasnevin has reached capacity and new adjoining plots have been secured.

Key Performance Indicators

Bereavement Support (incl 15 MTOP)	215
Funeral Services	182
Baptisms	39
Naming & Blessing Services/Blessings	47
Appointments for past patients	14
Prayer Services for past miscarriage and loss	5
Referral for support for fetal anomalies	4
Requests for copy of Baptismal Certificates	8
Organise Mass and Services for staff as required	7
Staff Appointments	18

In 2019 the Department continued to provide support to patients and staff. There is an ongoing demand for staff support. The wards and the NICU were visited daily. 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. It was very well attended and members of the Coombe Workplace Choir provided the music. The Department continues to respond to the growing cultural diversity of families attending our hospital. I am committed to ongoing development personally, pastorally and professionally. I continue to attend conferences relevant to the work of the Chaplaincy and am involved in the End of Life committee also Well Being Committees and advocate for bereaved families and babies. I have built good relationships with Voluntary Organisations supporting our bereaved families. The Chaplain contributes to study days for staff and students. The Department continues to send a sympathy card to families one month following the death of a baby. The feedback is very positive.

Termination of Pregnancy Service has added to the workload of the Chaplain. The work on the extension to the Mortuary began on June 10th and was due to be completed in December. A temporary Mortuary Chapel was set up to facilitate prayers and infant removals from the Hospital. As this space was restricted, prayer services were facilitated by the Chaplain at graveside or crematorium. 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 (January – April)*

Roslyn Tarrant, *Dietitian Manager (April – December)*

Staff Complement

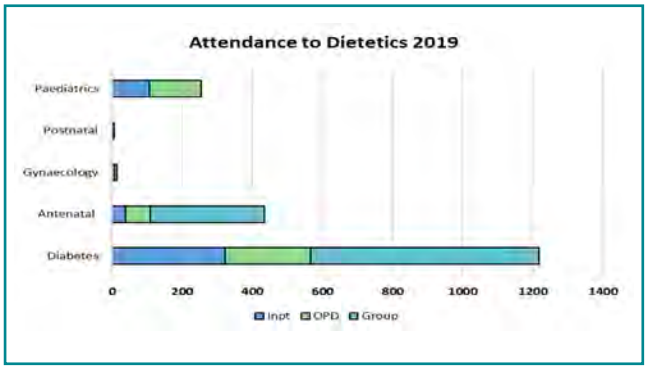
3 WTE

Roslyn Tarrant, *Acting Dietitian Manager & Clinical Specialist in Paediatrics*

Niamh Ryan, *Senior Dietitian in Diabetes*

Genevieve Crowley, *Dietitian*

Key Performance Indicators



Achievements in 2019

- Expansion of the department to include a Clinical Specialist Dietitian for the Neonatal services.
- Development of new resources within department.
- Contribution and lead on the revised national guidelines for nutrition in pregnancy.
- Abstracts & Publications

Publications

Cawley S, O'Malley EG, Kennedy RAK, Reynolds CME, Molloy AM, Turner MJ (2019) The relationship between maternal plasma homocysteine in early pregnancy and birth weight. The Journal of Maternal-Fetal & Neonatal Medicine.

Tarrant RC, Gregory I & Fitzsimons R (2019) Factors associated with compliance with nut/seed reintroduction following a negative food challenge – a cohort review from a specialist paediatric allergy unit. Arch Dis Child Volume 104, Issue Suppl 3.

Ryan N, Dunlevy F and McSweeney F (2019) Gestational Diabetes Mellitus: Improving Patient Education and Information in a Rapidly Increasing Population. Diabetes in Pregnancy, Florence.

Challenges for 2020

- To manage increasing service demand in Diabetes.
- To work with multiple stakeholders to improve care of women and infants through optimal nutrition. In particular meeting the nutrition needs of inpatients.

Liaison Perinatal Mental Health

Head of Department

Dr Joanne Fenton, *Consultant Psychiatrist*

Staff Complement

Dr Catherine Hinds, Dr Joanne Fenton & Dr Ann O'Grady Walshe, *Consultant Psychiatrist: 1.2 WTE*

Susanne Daly, *1 WTE Perinatal Mental Health Support Midwife*

Helen McBride, *1 WTE Clinical Nurse Specialist*

Sorcha O'Reilly, *0.8 WTE Mental Health Social Worker*

Dr Ruth Murphy, *Aspire Fellow*

Dr Catherine Rock/ Dr Ruby Hamill, *0.2 WTE Psychiatry Registrar*

Margaret Freeney, Deirdre Lawless, Donna Moore & Liz Dunne, *2 WTE Admin Support*

Key Performance Indicators

Patients referred to Perinatal Mental Health Clinic	1123
Patients seen for inpatient consultation	176
Diagnosed with antenatal depression	35%
Diagnosed with postpartum depression	25%
Diagnosed with anxiety disorder	35%
Diagnosed with severe & enduring mental illness	5%

Achievements in 2019

- Recruited a full-time Clinical Nurse Specialist, Mental Health Social Worker and Administrator to the team.
- Established 'spoke' Perinatal Mental Health Service in Midland Regional Hospital, Portlaoise with full-time Mental Health Midwife and Consultant outpatient clinics.
- Dedicated Mental Health Midwife Clinic with over 400 patient contacts.
- Ongoing research in collaboration with Trinity Health Services.
- Educational programmes provided to medical students and midwives in Perinatal Mental Health.
- Increased collaboration with Dublin Maternity Hospitals and Perinatal Mental Health Teams across Ireland.

Challenges for 2020

- Provide a complete MDT approach to patients with mental health difficulties.
- Identify designated clinic space for mental health patients.
- Reduce waiting times for patients attending.
- Provide group and individual therapy on-site.
- Provide groups off-site as well as domiciliary visits.

Medical Social Work Department

Head of Department

Rosemary Grant, *(January 2019– September 2019)*

Tanya Franciosa, *(October 2019 – December 2019) (Author)*

Staff Complement

Ms Rosemary Grant, *B.S.S., C.Q.S.W. - Principal Medical Social Worker, (January 2019 – September 2019)*

Ms Tanya Franciosa, *B.S.S., N.Q.S.W. - Senior Medical Social Worker, (January 2019 – September 2019)/ Acting Principal Medical Social Worker (October 2019 – December 2019)*

Ms Denise Shelly, *B.Soc.Sc., C.Q S.W. - Senior Medical Social Work Practitioner, (January – November 2019)/ Senior Medical Social Worker (December 2019)*

Ms Kate Burke, *B.Soc. Sc., M. Soc. Sc., N.Q.S.W., – Medical Social Worker (January 2019- October 2019)/ Senior Network Link Medical Social Worker (October 2019-December 2019)*

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), January 2019 – November 2019)/ Senior Medical Social Worker (November 2019- December 2019)*

Ms Sorcha O'Reilly, *B.S.S., N.Q.S.W. (Part time/Job share post – January 2019 – November 2019)/ Senior Perinatal Mental Health Medical Social Worker (November 2019 – December 2019)*

Ms Gretchen McGuirk, *B.S.S., N.Q.S.W.*

Ms Tara Lynch, *BSS NQSW*

Mr Sean Phipps, *Student MSW (September 2019 – December 2019)*

Ms Elaine Forsythe, *(Job Share), Receptionist/Secretarial Support*

Ms June Keegan, *(Job Share), Receptionist/Secretarial Support*

Key Performance Indicators

- Approximately 1,230* patients were referred to the Medical Social Work Department in 2019.
- An estimated half of all referrals were allocated to a specialist Medical Social Worker with advanced knowledge and skills in the relevant area.
- While a referral waiting list remained necessary in 2019, the Medical Social Work team worked hard to ensure efficient prioritisation of patients.
- Urgent referrals or referrals requiring immediate action (including patient safety and child protection and welfare referrals) continued to be allocated immediately, accounting for approximately 20% of all referrals to the Medical Social Work Department.
- Medical Social Workers continued to promote the importance of the Children First Act 2015, providing assistance to other mandated reporters within the hospital.
- The Medical Social Work Department continued to be represented on various committees both within the hospital and externally. This participation facilitates patient advocacy and promotes the role of Medical Social Workers.

* some referrals received in 2018 that carried forward into 2019 are not included in these figures

Achievements in 2019

- The Medical Social Work Department secured resources to develop and implement three new areas of service provision; Perinatal Mental Health, Options in Pregnancy and a Network Link with the Maternity Services in Midland Regional Hospital Portlaoise.
- Medical Social Work Department information leaflets were developed and launched on World Social Work Day on 19th March 2019. These leaflets improve patients' access to the service.
- Continued contribution to Social Work training through the provision of a third level student placement provided to Mr. Sean Phipps, facilitated by Ms. Sorcha O'Reilly and Ms. Sarah Lopez.
- Commitment to Continuous Professional Development through the establishment of a Department Journal Club organised by Ms. Sorcha O'Reilly. Medical Social Workers also continued to attend conferences and training workshops relevant to Perinatal Medical Social Work.
- Ongoing collaboration, networking and peer support between Perinatal Medical Social Workers. The Medical Social Workers assigned to the paediatric units and to patients experiencing addiction continued to engage with their peer support groups to share knowledge and experiences. The Medical Social Worker assigned to patients experiencing Domestic Violence and the Perinatal Mental Health Social Worker also established peer support networks with counterparts in the other Dublin Maternity Hospitals.

Challenges for 2020

- Homelessness and related issues remained problematic for many patients attending the hospital in 2019. The ongoing homeless crisis will continue to affect both patients born in Ireland and those born abroad, including families seeking asylum who are accessing the Direct Provision System. Medical Social Workers continue to respond to the needs of patients who are accessing homeless services through the Homeless Advice Clinic.
- The latter half of 2019 saw many changes in the Medical Social Work Department. The team must work together to embed these changes into the Department and to align them with the culture of the Medical Social Work Service.
- As with previous years, it will not be possible to provide an allocated Medical Social Worker to all obstetric teams. For those teams without an allocated Social Worker, patients will be allocated on a Duty Rota basis.
- Accommodation for parents who live outside of Dublin and whose babies are admitted to the Neonatal Units remains an ongoing issue for families. Medical Social Workers along with staff in the Neonatal Units work tirelessly to facilitate support plans for families. The support from Friends of the Coombe and Hugh's House is invaluable in this regard and the Medical Social Work Department remains grateful for the support provided to parents by these charities.
- The requirement for Mandatory Children First Training under the Children First Act 2015 remains a challenge for staff within the hospital. The Medical Social Work Department is committed to the ongoing promotion of the importance of the full implementation of the Children First Act 2015.

Opportunities for 2020

- The Senior Medical Social Workers recruited for the three new Medical Social Work services hope to develop and embed the new services into the culture of the Department and the Hospital.
- Development of a more comprehensive database in the Department to improve opportunities to capture data.
- A planned refurbishment of the Medical Social Work Department reception will foster a more welcoming environment to patients at the point of accessing the service.
- Client-led changes to service provision.

Acknowledgements

- My sincerest thanks to those who work in the Medical Social Work Department including the Medical Social Workers and the Receptionists. The level of professionalism and the seeking to attain a standard of best practice demands a major commitment which is much appreciated. I especially wish to express my gratitude to all staff in the Department for their support and hard work at time of transition in the Department.
- 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. The work of the Coombe Care Committee is much appreciated by patients and staff in all areas of the hospital. Committee members are always willing to engage with the Medical Social Work team to discuss potential areas of need.
- During 2019, support from the Principal Medical Social Workers in the other Maternity hospitals was invaluable. This good relationship between the Medical Social Work Departments contributes to best practice in Social Work.
- 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.

Finally, in September 2019 after a 41 year commitment to the patients and staff of the Coombe Women and Infants University Hospital, Ms Rosemary Grant retired from her role as Principal Medical Social Worker. We in the Medical Social Work Department express our sincerest thanks to Rosemary for her many years of mentoring and guidance. Her commitment to her role as Principal Medical Social Worker and to the Social Work Profession in general serves as an inspiration to us all. We'd like to wish Rosemary all of the best in her well-earned retirement.

Tanya Franciosa

Principal Medical Social Worker

Pharmacy Department

Head of Department

Mairéad McGuire, *Director of Pharmacy Services*

Staff Complement

Máiread McGuire, *1 WTE Chief 1 Pharmacist*

Peter Duddy, *1 WTE Chief II Pharmacist (Neonatal Services & Medication Safety)*

Una Rice, *1 WTE Senior Grade Pharmacist (Antimicrobial Pharmacist) (until Nov 2019)*

Orla Fahy, *1 WTE Senior Grade Pharmacist (Antimicrobial Pharmacist) (from Nov 2019)*

Joanne Frawley, *1 WTE Senior Grade Pharmacist*

Leanne Flynn, *1 WTE Basic Grade Pharmacist*

Gayane Adibekova, *1 WTE Pharmacy (Purchasing Technician)*

Lynsey McCarthy, *1 WTE Pharmacy Technician (FMD Technician)*

Sarah Dunne, *1 WTE Pharmacy Technician (Ward top-up Technician (Temp))*

Key Performance Indicators

1. Clinical obstetric and gynae service provision

- Daily review of patient drug charts on adult wards, medicines reconciliation at admission and review of medication charts for potential interactions and safety in pregnancy.
- Daily attendance at NICU ward rounds and review of all neonatal drug charts; including facilitation and support around prescribing of individualised and standard concentration parenteral nutrition.
- Multidisciplinary Acute pain round/team - patient education regarding appropriate analgesia use and review of medication charts.
- High Risk Pregnancy Medical Clinic - providing medicines information and advice regarding safety of medicines pre-conception, during pregnancy and breastfeeding and safe prescribing for patients with complex medical conditions.
- High Risk Pregnancy Medical Clinic - development of a medicines queries log to record medicine queries in the Pharmacy Department for complex patients to aid workflow and track queries.
- Twice monthly Antenatal GUIDE Clinic.
- Weekly multidisciplinary Nausea & Vomiting (PUQE) rounds.
- Daily Antimicrobial Stewardship rounds.
- 154 NICU drug guidelines reviewed and updated. 6 monographs were added to the NICU formulary and 8 were removed.
- Medication Reconciliation for pre-operative anaesthetic clinic

2. Medication safety

- 197 medication safety event reports were submitted by staff in 2019.
- 76% (n=149) of these event reports were actioned during 2019:
  - » Analgesia guideline review and implementation of quality improvement project around opioid use in conjunction with anaesthetic department. This QIP led to an overall reduction in oxycodone usage from 60mg per patient per day to 30mg per patient per day. It also led to the elimination of prolonged release oxycodone products from postnatal care. Further QIPs around postnatal analgesia and improved patient care are planned for 2020.
  - » A new guideline for procedural sedation in NICU was developed to meet HIQA standards as set out in the HIQA medication safety monitoring programme. This guideline covers the use of sedative & analgesic agents for all procedures carried in a non-Theatre setting in NICU.
  - » A quality improvement project commissioned by the Medication Safety Committee led to significant changes in how and when blood cultures are reported and how gentamicin is prescribed and administered in the neonatal unit.
  - » Introduced a new double-checking system in the Pharmacy Department.
  - » High-alert medication posters were developed and issued to all wards.
  - » Medicines Reconciliation Policy Audit.
  - » NICU Antimicrobial Guidelines reviewed.
  - » Changes made to morphine and clonidine prescribing guidelines to make weaning of these medications easier.
  - » Neonatal vancomycin monitoring reviewed by MDT; changes incorporated into NICU guideline review.
- Regular contribution to issues of Quality & Safety newsletter for staff.
- Medication Safety Walkrounds by Medication Safety Pharmacist and Clinical Risk Manager carried out quarterly.
- All medication incident reports for 2019 have been classified using the NCC MERP Index. This Medication Error Index that classifies an error according to the severity of the outcome is used in most Irish Hospitals. The index considers factors such as whether the error reached the patient and, if the patient was harmed, and to what degree. The majority of incidents (70%) were graded as C or D, meaning an incident occurred

that did not lead to harm or require any action, or an incident occurred and further investigation showed no harm.

3. Antimicrobial Stewardship

- The Antimicrobial Pharmacist continues to be an active member of the Antimicrobial Stewardship and Infection Prevention and Control Committees and Teams.
- The Antimicrobial Pharmacist acts as secretary for the Antimicrobial Stewardship Committee, where the multidisciplinary team meets on a quarterly basis.
- Provisional results available from the HPSC 2019 show a 2% decrease in antimicrobial consumption from Q1 2018 to Q1 2019.
- Continued education provided to staff on the appropriate use of antimicrobials and the importance of stewardship. Provided education sessions to staff and patient education on appropriate use of antibiotics for antibiotic awareness day in November.
- In depth review of the hospital Antimicrobial Prescribing Guidelines for Adult Obstetric and Gynaecological patients.
- Review of hospital antibiograms provided by Microbiology.
- Review of treatment monographs.
- Comprehensive update of safety information of antimicrobial agents in lactation.
- Inclusion of surgical prophylaxis for operative vaginal delivery and 36 hourly blood culture review for adult patients.
- 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 allowed for closer monitoring and documentation of Pharmacist intervention in relation to antimicrobial prescribing practice via Antimicrobial Stewardship ward rounds.
- Úna Rice participated in the National Antimicrobial Point Prevalence Survey, with the IP&C midwife and surveillance scientist.
- Audits and projects completed in 2019: audit of prophylactic antibiotics for operative vaginal delivery, staff questionnaire on interpretation of lab system reporting, audit of blood cultures at 36 hours and an audit of allergy documentation on patient's medication charts. The poster 'An audit of vancomycin therapeutic drug monitoring in a neonatal intensive care unit' was submitted by the antimicrobial pharmacist to the HPAI conference in April.

4. The Pharmacy Department carry out a comprehensive review of the Adult Prescribing Guidelines yearly:

- Information for management of dyspepsia and acid reflux in pregnancy included.
- Review and update of HRT section of guideline.
- Inclusion of new hospital VTE guideline.
- Inclusion of termination of pregnancy guidance.
- Review of management of Nausea and Vomiting.
- Review and update of HRT section.
- Comprehensive review of antimicrobial treatment regimens.

5. Expansion of the Pharmacy Technician-led medication Top-up service to all wards and clinical areas in the hospital. This has led to considerable cost savings in 2019 and improved stock availability, more efficient use of stock and cost efficiencies through the wards.

6. We began capturing and managing waste e.g. expired medication in 2019. This will facilitate development of systems and processes to control and reduce waste.

7. Switched to new standard concentration parenteral nutrition solutions for NICU. These new solutions will provide a better source of nutrition for our most vulnerable patients compared to previous products. A reduction in the requirement for individualised parenteral nutrition is also expected, reducing costs as well as reducing the hospital's reliance on the national service for individualised parenteral nutrition.

8. The department issued stock to wards, outpatients, staff and babies discharged from SCBU on 33,227 occasions, equating to approximately 130 dispensing transactions per day.

9. Work continued on and developing and maintaining a Pharmacy Risk Register.

10. Peter Duddy continued his teaching collaborations with the School of Pharmacy in University College Cork.

11. The department continued provision of Educational Sessions to medical staff, NCHDs and Nurses/Midwives e.g. Gentamicin, analgesia, IV medications, parenteral nutrition, smart pumps, epidural safety issues, immunoglobulin use, Propess® use and medication management/safety sessions.

12. Continued Educational support to the Centre for Nursing and Midwifery training programmes.

13. Significant increase in workload around the management of drug shortages and supply issues and risk mitigation associated with this.

14. Planning for sustained medication supply in the event of Brexit.

15. Ongoing involvement with developments in MN-CMS project, NCCPN Parenteral Nutrition steering group & Clinical programmes.

Achievements in 2019

- In collaboration with midwifery colleagues, Peter Duddy helped secure over €6,000 in funding to purchase iPads for the dissemination of medication-related information at ward level. In time, these devices will eliminate the need for paper copies of prescribing guidelines on the wards.
- Peter Duddy continued as an attending member of the Irish Medication Safety Network representing Neonatal Pharmacy and was chosen to chair the network's Theatre Working Group.
- Easy access to Hospital Prescribing Guidelines via smart technology.
- Continued operation and update of Paediatric and Adult smartphone prescribing app. These apps are available to all 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.
- 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 six monthly to annual review of electronic and pdf versions of Prescribing and Microbiology Guidelines and Neonatal prescribing handbook which can now be accessed from the user's Smartphone.
- Úna Rice continued to be an active member of the Hospital's Research Ethics Committee until November 2019, when Mairead McGuire took over the role.
- Continued pharmacist role on Anaesthetic pain rounds and Nausea & Vomiting (PUQE) rounds.
- Continuation and expansion of misoprostol pre-pack production for services carried out in the hospital.
- Introduction of a new IV iron therapy; Ferinject, with reduced administration frequencies than the previously used preparation.
- Continued development, revision and monitoring of comprehensive Adult and NICU medication prescribing and administration guidelines through the Adult or Paediatric Drugs & Therapeutics Committee.
- Continued participation in Clinical Trials (e.g. POPART trial) and collaboration with neonatal colleagues in developing the GEHPPI trial.
- Continued involvement in Risk management and auditing of practices within the hospital to improve patient safety.
- Continued strong post- graduate education ethos:
  - » 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.
  - » Facilitated and aided nursing and midwifery colleagues in the development of the role of the Registered Nurse Prescriber, ANP & prescriber nurse/midwife in 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 ondansetron for hyperemesis patients.
  - » Adherence to the Clinical Practice Guideline Hyperemesis and Nausea/Vomiting in Pregnancy.
  - » Pre-Operative Medication Reconciliation for Gynaecology Patients.
  - » Ongoing QI project for improving VTE prophylaxis for antenatal and postnatal patients.
  - » Compliance with Medication Incident forms.
  - » Anaesthetic clinic pre-operative medical assessment.
  - » Track and Trend of Medication Incident Reports using NCC MERP index.
  - » Audit of medications involved in medication incidents.
  - » Medication incident form reporter demographics.
  - » National Antimicrobial Point Prevalence Study.
  - » Audit of Vancomycin Therapeutic Drug Monitoring in NICU.
  - » Audit of medicines and prescribing for epilepsy patients.
  - » Prescribing and medication chart review audit.
  - » Audit of medicines information queries for medical clinic patients.
  - » 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 / Opportunities

- To continue to provide a sustainable Technician-led ward stock top-up service to all wards in the hospital.
- To maintain current service levels in the face of increased demands related to increasing complexity of the patient population and economic / funding restraints.
- To maintain sufficient stock of essential medicines despite global shortages and decreased supply due to pharmaceutical manufacturer mergers and take-overs, raw ingredient scarcity and Brexit.
- To effect cost savings without compromise of standards of service provision.
- To minimise waste while maintaining optimum stock holdings.
- 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.
- Introduce mechanism to empower patients to ask more questions about medicines they are given in hospital.
- Expand and develop the medicines reconciliation role to include patients with pre-existing conditions, particularly epilepsy.
- To develop and expand the role of the pharmacist in the pre-operative anaesthetic assessment clinic.
- Assigning actions to each event throughout the year helps to advance the hospital's strategic plan for medication safety. Improving the numbers of actions assigned will be a new KPI for the medication safety pharmacist and medication safety committee in 2019 and into the future. Improving communication with patients about medication safety events and near-miss reporting are other KPIs which require focus in the future.
- Advancing the medication safety agenda through audit and quality improvement is another area which should be advanced in 2020.
- A review of the medication incident reporting procedure including a simplified medication safety report form and the development of a specific medication safety event reporting guideline with defined, standardised follow-up actions would help to maintain a positive culture around reporting.
- To comply with all legal requirements of the EU Falsified Medicines Directive.
- To build a Pharmacy Technician Network with the Dublin Maternity and Children's Hospitals to encourage sharing of information and development of a system that reduces waste and allows redistribution of excess stock.

Focus on 2020

- Optimisation of postnatal pain relief in elective section lower segment caesarean section patients- A collaborative Quality Improvement Project (QIP) in association with the anaesthetics department.
- Build Pharmacy Technician Network with Dublin Maternity and Children's Hospitals to share information, learning and aid stock optimisation.
- Neonatal Antimicrobial Stewardship Service.
- Increased involvement in Anaesthetic Clinic.
- Introduction of searchable Electronic medication database to allow quick location of medications in the pharmacy out of hours.

Physiotherapy Department

Heads of Department

Clare Daly & Anne Graham, *Physiotherapy Manager (1 WTE)*

Staff Complement

Amanda Drumond Martins, *Physiotherapist (1 WTE)*

Gillian Healy, *Senior Physiotherapist (0.75 WTE)*

Laura Ward, *Senior Physiotherapist (0.5 WTE)*

Anna Chrzan, *Senior Physiotherapist (0.5 WTE)*

Alyson Walker, *Physiotherapist – locum (0.5 WTE)*

Sinead Boyle, *Senior Physiotherapist – locum (0.5 WTE)*

Velta Vuskane, *Physiotherapist - locum (0.6 WTE)*

Roisin Phipps Considine, *Senior Physiotherapist – on leave (1 WTE)*

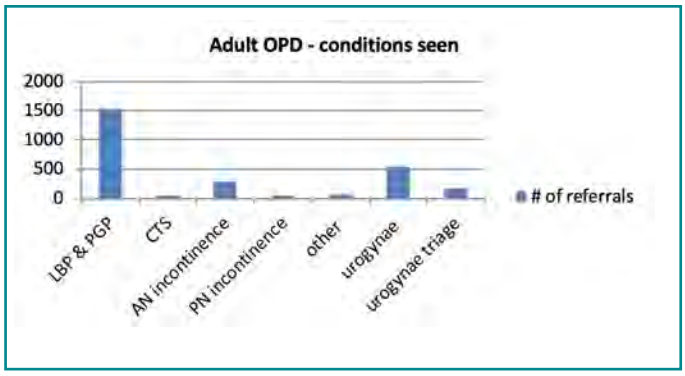
Julia Hayes, *Senior Physiotherapist – on leave (0.6 WTE)*

Key Performance Indicators

- Providing patients with access to a high-quality Physiotherapy Service in a timely manner.
- To improve access to Antenatal Education through collaboration with departments of Parent Education, Infant Feeding and Peri-operative Medicine.
- Evaluation of feedback from service users attending Physiotherapy Classes.
- Collaboration with the multidisciplinary team on quality improvement (QI) projects.
- To establish links with Physiotherapy Managers in our sister hospitals to improve quality of practice across sites.
- Staff registration with CORU.
- Implementation of the national guideline for babies with developmental dysplasia of the hips and development of the pathway within the Coombe.

Clinical Activity – Adult Outpatient Service

The Physiotherapy Department received a total of 2815 new adult outpatient referrals in 2019. Of these, 1878 women were booked into group classes. A total of 2604 individual outpatient appointments (new and review) were attended.



Physiotherapy Classes

A total of 1878 women attended classes offered within the Department. These include low back and pelvic pain class, antenatal bladder class, postnatal class and urogynae class. The antenatal bladder class commenced in 2019 in response to increased referrals as women are now asked about incontinence at their booking visit.

Low Back Pain & PGP Class

In 2019 1025 women attended the LBP/PGP class. Due to staffing levels in early 2019 women waited on average 4 weeks before attending the class. With a full complement of staff and review of the service, the wait time was reduced to <2 weeks by the end of 2019. Once a patient has attended the class, if they have persistent symptoms they can opt in for an individual appointment.

Postnatal Class

The postnatal class aims to provide an opportunity for education and support on pelvic floor muscle recovery and assessment of diastasis of the rectus abdominus muscle (DRAM). Education is given on how to safely return to exercise, while reducing the risk of back pain and incontinence. Women can self-refer for individualised treatment for pelvic floor dysfunction having attended the class. A total of 398 new mums attended in 2019.

Antenatal Education

The Physiotherapy Department were involved in the restructure of the antenatal education package offered to women attending the hospital in 2019. The newly designed programme resulted in a 167% increase in women receiving physiotherapy education compared with the previous programme.

Inpatient Adult Activity

A total of 1029 adult patient contacts took place on the wards by the Physiotherapy Team.

Paediatric Service

Physiotherapists saw 209 babies on the postnatal wards for treatment. A total of 2092 babies attended outpatient appointments in the Baby Clinic. Babies attend for a range of conditions including developmental checks, treatment of DDH, talipes, torticollis and plagiocephaly. Implementation of the revised pathway and national guideline for DDH pathway took place in 2019.

Challenges in 2019

Staffing and changeover of staff due to sick leave and maternity leave resulted in increased waiting times and reduced continuity of service to our patients.

Lack of specialist training led to significantly reduced Physiotherapy Service to the NICU/SCBU. This is under review and the service will be developed in 2020.

The department structural environment has been an on-going challenge. With increased number of referrals for the OPD service and only two treatment cubicles, the Department has been approved for an upgrade with the planned development of a third OPD cubicle.

Success and Achievements in 2019

Enhancing patient care

Feedback forms were given to patients who attended the PGP and Urogynae class. Following review of the feedback, the environment in which patients attend the classes has been improved and class capacity has increased.

Anne Graham and Clare Daly presented to the Women's Health Taskforce, a Department of Health led initiative aimed at improving Women's Health Services in Ireland. A presentation outlining how to improve the provision of Women's Health Physiotherapy services in Ireland was given.

The Physiotherapy Department have been involved in the 'Quality Improved Sustained Project Reducing 3rd and 4th Degree tears (OASIs)'. This project was presented at the State Claims Agency Conference and Patient Safety Conference. As part of this initiative a 'MDT OASIs study day' took place last May. Anne Graham presented and outlined the important role Women's Health Physiotherapists have in assessing and treating these patients.

Clare Daly has completed training modules to become a facilitator for the 'National Healthcare Communication Programme'. This programme will be rolled out within the hospital in 2020.

Continuous Professional Development (CPD)

The Physiotherapy Department engage in regular CPD training to include in-services, case presentations and clinical supervision of staff.

Julia Hayes and Anne Graham presented posters at the Irish Society of Chartered Physiotherapists conference. Anne's poster was titled 1) Improving access to physiotherapy antenatal education though multidisciplinary collaboration and Julia's poster 2) Physiotherapy pelvic girdle pain and low back pain class.

Physiotherapy in Ireland became accredited to CORU. The physiotherapy team have been undergoing this accreditation process.

Sinead Boyle completed PGcert Continence for Physiotherapists in the University of Bradford. Her systematic review was titled "a literature review to evaluate the efficacy of pessaries on the quality of life in the management of stress urinary incontinence in women". The Coombe Physiotherapy Department hosted pelvic floor education courses allowing staff to up-skill and continue their CPD. Staff have also attended numerous self-funded courses off site.

The Physiotherapy Team presented at the perineal suturing workshop and to fourth year midwifery students in Trinity College Dublin (TCD).

The department re-established links with TCD School of Physiotherapy and provided a four week clinical placement to a third year Physiotherapy Student. We look forward to continuing this link. Amanda Drumond Martins attended a clinical educator course in 2019.

The tri-hospital Dublin Physiotherapy Managers' meeting was established and meetings have taken place throughout the year.

MDT Collaboration

The Urogynae MDT meetings resumed and have taken place on a monthly basis.

The Physiotherapy Department are actively involved in Health and Social Care Professionals (HSCP) team within the hospital and contributed to day in February 2019.

Plans for 2020

- Department refurbishment as approved in 2019.
- Development of a 'Fit for Surgery Class' for urogynae patients as part of a multidisciplinary enhanced recovery programme.

- Review of all patient leaflets and development of patient education booklets.
- Undergraduate placement to be offered to TCD Physiotherapy Students.
- Training and development to enable a service to be provided to the NICU.
- Review of DNA and attendance rates for appointments.

Psychosexual Therapy

Head of Department

Donal Gaynor

Staff Complement

One Counsellor *(part-time)*

Key Performance Indicators

	N =
No. of Consultations	**236**
No. of Return Visits	**220**
No. of New Visits	**16**
Total	**472**

Dysfunctions treated

- Vaginismus (26%)
- Dyspareunia (39%)
- Inhibited Sexual Desire (18%)
- Erectile Dysfunction (2%)
- Female Anorgasmia (9%)
- Male Anorgasmia (6%)

Achievements in 2019

- Successful Treatment of couple with multiple dysfunctions – Dyspareunia, Inhibited Sexual Desire, Anorgasmia and Erectile Dysfunction, Premature Ejaculation.
- Successful Treatment of couple with multiple dysfunctions – Dyspareunia, Inhibited Sexual Desire, Anorgasmia and Erectile Dysfunction, Male Anorgasmia Situational.
- Attended 52 hours of CPD training.

Challenges for 2020

- Treatment of patient with long-term Vaginismus.
- Treatment of patient with Marfan Syndrome and Borderline Personality Disorder for Vaginismus.

Quality & Patient Safety Division

Clinical Risk Management Department

Heads of Department

Anna Deasy, *Clinical Risk Manager*

Michelle McTernan, *Clinical Risk Manager*

Ann Byrne, *Assistant Clinical Risk Manager*

Michelle Lynch, *Legal and Claims Coordinator (from June 2019)*

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 and our appointed legal representatives to manage all legal claims on behalf of CWIUH.

Challenges in 2019

- The number of medico-legal cases and coronial inquests continues to be a challenge. Investigation and preparation for such matters leads to significant workload and the increasing need for ongoing staff support throughout.
- The requirement to conduct full Systems Analysis Reviews following Category 1 incidents in a timely fashion remains extremely challenging. However, significant progress has been made throughout the year with the introduction of concise reviews, desktop reviews and after action reviews when appropriate.

Achievements in 2019

- The CRMs continue to contribute to the Leadership Quality & Safety Walk-Rounds, the Medication Safety Walk-Rounds, the Safety Matters Staff Newsletter and various hospital committee meetings.
- Education sessions for staff and students of the hospital are provided by the CRMs to promote patient safety, effective risk management and provide feedback and learning from clinical incidents, reviews, inquests and medico-legal cases.
- Participation in the various audits and inspections conducted by the HSE, HIQA and other bodies.
- The Clinical Governance / Risk Committee Meetings were regularly held throughout the year and all were well attended.

Challenges for 2020

- 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 a new CWIUH Incident Management Policy in line with the HSE Incident Management Framework (2018).
- To implement a new Incident Report Form in line with NIMS reporting system.
- To encourage the ongoing release of staff to attend the HSE training regarding investigation methods of incident review, and thus to enable such investigations to be conducted in a more timely fashion.
- To ensure patients and all clinical staff are adequately supported through the various investigation processes such as systems analysis reviews, coronial and medicolegal investigations.

Thanks and Appreciation

We welcome the opportunity to thank the Clinical Governance/Risk Management Committee for their commitment in promoting patient safety and effective risk management, and the Senior Incident Management Team for their continuing support and guidance. We thank Emma Hopkins and Rita Doran for their administrative support and assistance. Finally, we wish our dear friend and colleague Ann Byrne a very wonderful, happy and healthy retirement. Ann has worked in the hospital for many years, most recently in the extremely busy area of Clinical Risk and incident and legal claims management. Her dedication, diligence, discretion, support and friendship has been monumental within the department, and she will be greatly missed.

Quality, Risk & Patient Safety

Head of Department

Evelyn O'Shea (to December 2019) (Author)

Staff Complement

7 WTEs:
Evelyn O'Shea, *(to December 2019), Quality Manager*
Niamh Dunne, *Patient Liaison Manager*
Anna Deasy, *Clinical Risk Manager*
Michelle McTernan, *Clinical Risk Manager*
Ann Byrne, *(to October 2019) Assistant Clinical Risk Manager*
Anne Bergin, *(to October 2019), Clinical Audit Co-ordinator*
Michelle Lynch, *(from June 2019), Legal & Claims Coordinator*

Achievements in 2019

The Quality and Patient Safety (QPS) team continued to progress the development, implementation and evaluation of a comprehensive quality, safety and risk programme at CWIUH with associated structures, policies and procedures to provide assurance regarding the delivery of excellence in the care of women and infants in CWIUH. Key achievements in 2019 included:

1. Service User/Patient Experience:

- The hospital's second Annual Report on Service User Feedback (Complaints, Compliments & Suggestions) was produced. This 2018 report was approved by the Complaints Review Group and subsequently fed back to CWIUH staff by the Patient Liaison Manager during 2019. The Patient Liaison Manager also provided refresher training on the hospital's Feedback Management policy, available to all staff, during these feedback sessions in 2019. These sessions were very well attended by staff who were very appreciative of the information shared with them. The Patient Liaison Manager continues to provide feedback sessions to individual departments and individual staff members as requested.
- In 2019, 3667 compliments and 202 new complaints were received– of these complaints 101 were written and 101 were verbal. 95% of feedback from patients was positive.
- The most common themes of our complaints in 2019 were Communication & Information, Access and Safe & Effective Care. The annual report also includes the number and percentage of complaints per discipline and speciality (division), our learnings from what service users are telling us and our Actions including Quality Improvement (QI) projects to improve our service based on learnings from service user feedback.
- In 2019, 100% of all written complaints were acknowledged within 5 working days. 87% of all written complaints were resolved within 30 working days of acknowledgement of the complaint (there is no national target, some hospitals/hospital groups have a target of 70-75%).
- Compliance with National Standards:
  - » Our completed self-assessment in 2019 against the Office of the Ombudsman's Recommendations "Learning to Get Better, How public hospitals should handle complaints 2015" and "Learning to get better: Progress Report" November 2018 demonstrated full compliance.
  - » Our completed self-assessment in 2019 against the features in the National Standards for Safety Better Maternity Care 2016 that relate to service user feedback demonstrated full compliance. Our completed self-assessment in 2019 against the features in the National Standards for Safety Better Maternity Care 2016 that relate to patient engagement and patient advocacy demonstrated partial compliance. Resultant from this learning, the Patient Liaison Manager completed the Independent Patient Advocacy Service training course, provided by Patient Safety Complaints Advocacy, in 2019.
- As a direct result of Patient Liaison Manager's completion of Patient Advocacy Service training in 2019, the number of patient advocacy support interventions, by the Patient Liaison Manager, has more than doubled since last year – from 38 support interventions in 2018 to 82 in 2019 to date.
- The hospital actively participated in the new HSE "National Healthcare Communication Programme" 2019. Thirteen multi-disciplinary staff members attended one or all 3 Modules in general training sessions in 2019. The participating CWIUH staff include midwifery, human resources, consultant anaesthetist, specialist registrar in Obs & Gynae, dietetics, social work, physiotherapy, catering, household, birth reflections, practice development, education, patient services and patient liaison manager (QPS). A multidisciplinary team from CWIUH attended a briefing session from HIQA-DoH-HSE in October 2019 regarding the proposed specific National Healthcare Communication Programme for maternity services. 6 additional CWIUH staff attended Module 1 Maternity Specific Train-The-Trainer National Healthcare Communication Programme in November 2019. Thus, a total of 19 CWIUH staff trained as trainers (for one or more modules) in 2019. The trainers commenced staff training – 18 staff were trained in Module 1 in 2019. This MDT team of

trainers will meet in Q4 2020 to plan the roll-out of staff training for 2020.

- In 2019, the Master, Senior Management and QPS team continued to support the HIQA-DoH-HSE National Care Experience team regarding the planned National Maternity Experience Survey 2020. All eligible women who gave birth in October 2019 were invited to consent to provide their contact details to the National Care Experience team, n=617 women consented. The National Care Experience team will contact these women in February 2020 to participate in the first National Maternity Experience Survey 2020. Representatives from the National Care Experience team visited the hospital on 17th October 2019.
- Learnings from Service User Feedback / Quality Improvement Projects:
  - » Improving Check-in Experience for Women attending ER:
- As part of the QI project to Improve Patients' Experience of Check-in for Emergency Room, a trial implementation of a new day-time check-in process commenced in November 2018. This pilot was reviewed by the multi-disciplinary team in QI 2019 and is now implemented as business as usual – women attending the Emergency Room check-in 24/7 at the Admissions Office. Staff and service user feedback has been hugely positive and supportive of the improved check-in experience.
- Staff training/education on QPS topics including managing service user feedback at induction and on a one-to-one basis continued throughout 2019.

2. Leadership Quality & Safety (Q&S) Walk-Rounds:

- The Leadership Q&S Walk-Rounds continued in 2019. A full review of progress of actions from all Walk-Rounds was conducted in Q4 2018 and was fed back to local managers and senior management team (SMT). The progress report on Actions for each location now serves as the baseline for subsequent Walk-rounds to that location. Examples of improvements resulting from the Walk-rounds include feeding back directly to local mangers and staff on the excellent work they do, closing the loop on learnings from incidents/complaints/audits from a particular location, learning by SMT about what works well and particular challenges and concerns, infrastructure/environment improvements and improved staff compliance with mandatory training. Patients continue to be included in the Walk-Rounds.
- The Leadership Q&S Walk-Rounds were acknowledged by HIQA report on their unannounced inspection in August 2018 (National Maternity Standards) as evidence of compliance with Leadership, Governance and Management standard.
- A poster on "Effective Leadership Q&S Walk-Rounds in a Hospital Setting" was presented at the National Patient Safety Office Conference (Dept of Health) 2019, the State Claims Agency's National Quality, Clinical Risk and Patient Safety Conference 2019 and was short-listed for moderated poster presentation at the 12th Annual Multidisciplinary Research, Clinical Audit and Quality Improvement Seminar, St James's Hospital 2019. It was also one of 30 posters (out of 155 submissions) that were presented at the RCSI Hospital Group's Inaugural Quality & Safety Conference 2019.

3. Quality Improvement:

Our most recent HIQA inspection report 2018 states that "the hospital had initiated and developed a number of quality improvement projects aimed at improving the quality and safety of maternity care", page 22. It also states that "Quality improvement initiatives were developed in response to monitoring of maternal outcomes, clinical incidents and feedback from service users. These initiatives were focused on improving outcomes for women", page 24. Some of our on-going QI projects in 2019 were:

- » Reducing 3rd and 4th degree perineal tears during childbirth: The overall rate of 3rd and 4th degree tears for 2019 was 1.85%, this represents a sustained 38.1% reduction in tear rate compared to the 2015 baseline rate (2.99%). This rate of 1.85% is also in line with the National IMIS rate. This QI project is continuing at CWIUH to ensure that initial improvements achieved are sustained long term. The QI team conducted a review of the project in January 2019 using Plan-Do-Study-Act methodology and the following improvements were implemented to sustain improvements:
- » Regular (fortnightly) QI Project Team Meetings
- » An Obs and Gynae NCHD included in the QI team
- » Warm compresses – staff education and implementation of jugs with hot and cold water level markings
- » Episcissors sharpened and new scissors purchased
- » The debrief form was reviewed and the patient initials and staff signature were removed. Staff are reminded to complete an incident report form
- » Feedback on Delivery Suite QI notice board includes "Number of Days since last 3rd / 4th Degree Tear" during May 2019
- » Reducing Tears continues to be on the Agenda at Handover & team meetings, tool box sessions and at Obstetric Divisional and Clinical Risk Management

Committee meetings

» The QI project was included at NCHD Induction training in 2019

» Staff engagement in QI project: The QI team hosted a hugely successful Study Day on Prevention & Management of 3rd & 4th Degree Tears in June 2019. Experts from the Coombe, NMH and the Pelvic Floor Clinic presented their work to over 50 multidisciplinary delegates from the Coombe and other hospitals. The QI team presented the project to clinical staff after the Wednesday Perinatal Handover meeting in December 2019 to acknowledge the great work being done by staff in reducing tears and to encourage and support its sustained improvement

- The Quality Manager continued to provide QI methodology training and support sessions with individual staff and teams. QI teams from CWIUH submitted 3 QI applications to the 2020 DMHG Expression of Interest for QI coaching in December.
- Induction and on-going QI methodology training to initiate and support QI was provided by the Quality Manager to staff on one-to-one/QI team basis during 2019.

4. Clinical Audit

A Clinical Audit Programme & Policy is being developed for CWIUH. This structured and centralised approach to Clinical Audit will ensure that Clinical Audit is a key component of the quality and patient safety agenda within the hospital, the focus will be on organisational learning and improvement from audit, staff will be assisted to undertake regular audit and multi-disciplinary teamwork will be promoted in relation to audit. The programme will include a Clinical Audit Proposal Form and a Clinical Audit Report Form. In addition, a Register of the Hospital's Clinical Audits has been developed and currently includes 93 completed/ on-going clinical audits in 2019. 93 multi-disciplinary staff have attended Clinical Audit training in 2019.

5. Incident Management

- In 2019, 100% of 3rd and 4th degree tears were reported to NIMS (87% were initially reported by clinical staff). This has improved from a rate of 71% and 80% in 2016 and 2017 respectively. The most recently published data from the State Claims Agency demonstrates that tears are the 3rd most commonly reported National Maternity Clinical Incident & Legal Claim (SCA 2010-2014 Report). Tears were the 6th most commonly reported CWIUH Maternity Clinical Incident in 2019 (Note 100% are reported).
- Staff from CWIUH attended the HIQA stakeholder engagement sessions for services involving medical exposure to ionising radiation in 2019. The Radiation Safety committee and Radiology and QPS staff have commenced work to establish and improve the standard of care regarding ionising radiation exposures.
- The hospital's Incident Management Policy is currently being reviewed and a new Incident Report Form is being developed in line with the HSE's Incident Management Framework.
- Staff from CWIUH attended the Launch of the HSE's Open Disclosure policy in 2019. The two Clinical Risk Managers completed the HSE's Open Disclosure Train-The-Trainer programme in 2019. The hospital's Open Disclosure Train-The-Trainer team will meet in QI 2020 to plan the roll-out of Open Disclosure training for hospital staff.
- A Legal and Claims co-ordinator commenced employment on 17th June 2019.

6. National Standards & External Inspections

- Implementation of National Communication & Clinical Handover Guideline: National Audit by HSE QAVD:
- The national report on this audit was published in April 2019. CWIUH was one of 9 hospitals audited. The report demonstrated full compliance by CWIUH with all aspects audited.
- Site Visit by the National Clinical Lead for Healthcare Associated Infections / Antimicrobial Resistance and team.
- The National Clinical Lead and team visited CWIUH in June 2019. Their report of the visit was received in July and includes 6 recommendations including continuation of the hospital's recent implementation of CPE screening, share the specific learnings from the screening with other Maternity services in due course, need for additional IPC Nursing and Consultant Microbiologist staff, review storage space for NICU to reduce the clutter of equipment in the clinical space and review the Terms of Reference of the IPC Committee to specify that the Master or Deputy are required to have a quorum of the Committee meeting. These recommendations are being progressed.
- Inspection by HIQA on compliance with the National Standards for Safer Better Maternity Care 2016 with a focus on the management of Obstetric Emergencies:
- A report on the August 2018 inspection was received from HIQA to take into account HIQA's revised national reporting process. The report specifies that

of the 21 judgements (assessments) made during the inspection, CWIUH is fully compliant with 19 judgements (90.5% compliance rate), substantially compliant with one judgement (record of staff training) and non-complaint with one judgement (infrastructure).

7. "Quality & Safety Matters" Staff Newsletter

- The Quality & Safety Matters staff newsletter was published quarterly in 2019 and is very well received by staff. Editions included updates regarding Clinical Handover (Communication), Flu Vaccination, Medication Safety – high alert medications & SALADs, Decontamination of Probes, Clinical Audit Training, National Patient Experience Survey, various QI Projects, Health & Social Care Professions Study Day, Incidents & Near Misses, Service User feedback, Out-Patient Hysteroscopy Clinic and Pre-op Medication Management for Gynae Surgery Patients. The 2018 HIQA inspection report acknowledged this staff newsletter as part of our compliance with the Safe Care and Support standard.

8. Quality & Safety Board Sub-Committee

- The QPS team attended the Board's Q&S sub-committee meetings throughout 2019. Q&S was the subject of a "deep-dive" evaluation by the Board of Guardians and Directors in November 2019. Feedback was very positive from the Board.
- "Quality & Safety Matters" Staff Newsletter.
- The quarterly Quality and Safety staff newsletter was published in 2019 and included submissions for many departments and disciplines. The newsletter continues to be very well received by staff.
- Staff Training.

Challenges for 2020

- Continue to review our clinical incidents, claims, patient advocacy 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.
- Finalise our Incident Management policy and Clinical Incident Report Forms.
- Finalise our Clinical Audit Programme including a standardised Clinical Audit Proposal Form, Clinical Audit Report Form and a hospital register of all Audits.
- Provide induction and on-going training and support for staff in all aspects of quality and patient safety (incident management including SARs, complaints management, clinical audit and quality improvement).
- Continue to assess the hospital against the National Standards for Safer Better Maternity Services 2016 regarding Service User Feedback (including complaints) Management, Patient Liaison, Patient Advocacy and Patient Engagement.
- The high volume of SARs is demanding – we are challenged to continue to provide support to service users, staff and review teams and the completion of SARs in the context of the enormous workload involved. We endeavour to ensure that we learn from our Serious Incidents and SARs.
- The roll-out of the "National Healthcare Communication Programme" staff training will be a resource challenge for CWIUH in 2020. The trained trainers will establish a team and lead in early 2020 to manage this service.
- The National Maternity Experience Survey will provide invaluable feedback and learnings from our service users regarding their experience of our care and will enable us to improve our service for our women and babies.

I wish to welcome Michelle Lynch to our QPS team. Huge thanks and congratulations to Ann and Anne on their retirements. Huge thanks also to Niamh, Anna and Michelle for their continued hard work, dedication and enormous contribution to the delivery of a high quality safe care to all of our women and infants.

Thank you to all CWIUH senior management and staff for your huge support in our work. We appreciate the huge workload and staffing challenges you face on a daily basis. We 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 assure the hospital's compliance with required quality and safety standards, 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.

Academic Departments

Academic Midwifery Report

Head of Department

Ms Ann MacIntyre, *Director of Midwifery & Nursing*

Report

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 Midwifery Programme (post registration). At the end of December 2019 we had a total of 100 midwifery students undertaking either one of the two programmes. Our sincere thanks to Dr. Louise Gallagher for her wonderful support as 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 and Paula Barry, 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. Sincere thanks to Kevin Mulligan, Neonatal Specialist Programme Co-ordinator for his wonderful support and kindness to all the staff undertaking the programme and the Neonatal Team here in the CWIUH. We are indebted to both Dr. Linda Nugent, Sherly George and the RCSI Team 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 (CME) is now in its 12th year under the direction of Ms. Triona Cowman, Director of the CME. Due to the 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 Sheila Calahane, 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. Sincere thanks to Susanna Byrne for all her help and guidance over the past few years as director of the NMPDU.

To celebrate International Midwives Day 2019 a symposium was organised by the Practice Development Team. The Midwives, Nurses and Student Midwives presented with the theme being **'Multicultural Diversity'**. The meeting was well attended by the Multidisciplinary Team.

Awards to Midwives & Nurses in 2019

Best Clinical Educator Awards 2018/2019

Bronagh O'Connell
Maria Sweeney
Shona Kennedy

Awards to Midwifery Students

Gold Medal BSc Midwifery

BSc 2014- 2018 Aoife Swan
BSc 2015-2019 Edel Herbert

Silver Medals BSC Midwifery

BSc 2014-2018 Alexandra Surgenor
BSc 2015-2019 Emma Burke

Gold Medal Higher Diploma in Midwifery 2018-2019

Sarah Glennon

Silver Medal Higher Diploma in Midwifery 2018-2019

Katie O'Connell

Dr. T. Healy Awards – Best Overall Clinical Student Midwife

BSc 2014-2018 Emma Thompson
HDip 2015-2019 Edel Glennon
HDip 2018-2019 Ciara Hourican

Ann Louise Mulhall Award

Joy Geraghty

Mary Drumm Award

Megan Sheppard

Biological Resource Bank (BRB)

Heads of Department

Professor Sharon Sheehan, *Master/CEO*

Professor Michael Turner

Staff Complement

Ruth Harley, *RM*

Muireann Ní Mhurchú, *RM*

Achievements in 2019

- The Biological Resource Bank works in close collaboration with Research Fellows who are undertaking their PhDs or MDs under the guidance of Professor Turner in the UCD Centre for Human Reproduction.
- Alongside Dr Eimer O'Malley, we extracted, prepared and transferred the optimum amount of blood for her study to be processed externally.
- We audit the bloods that are maintained in the -80 degree freezers to ensure the bloods are frozen correctly and the freezers are running efficiently.
- Ensuring compliance with the Health Research Consent Declaration Committee guidelines. This will ensure that the CWIUH will be able to maintain all important relevant data, which will maximise the use of the BRB bloods and will make certain the BRB bank is relevant to all ongoing and future research projects.

Opportunities for 2020

- To continue to work alongside Research Fellows within UCD Centre for Human Reproduction.
- For research studies that are approved by the Research Ethics Committee to use the biobank bloods.
- That all research studies using the BRB bloods will benefit mothers and babies into the future.

Centre for Midwifery Education (CME)

Head of Department

Triona Cowman

Staff Complement

Triona Cowman, *Director (1 WTE)*

Judith Fleming, *Midwifery Specialist Coordinator, 0.5 WTE*

Kevin Mulligan, *Neonatal Specialist Coordinator, 1 WTE*

Hazel Cazzini, *Midwifery Specialist Coordinator, 1 WTE*

Saila Kuriakose, *Midwifery Specialist Coordinator, 0.5 WTE*

Antoinette Fletcher, *Midwife Tutor, 1 WTE*

Key Performance Indicators

- Appropriate accreditation/approval for all education and training programmes.
- Evaluation of all education and training programmes.
- Number of education and training events delivered.
- Number of attendees.
- Minutes of Board of Management, Coordinating Group and Programme Board Meetings.
- Cost effective functioning of the CME.
- Evidence of continuous professional development of the CME Team.

Achievements in 2019

- In 2019, the CME provided 121 education and training programmes ranging in duration from 1 hr to 9 months. The total recorded attendance for the year was 1,886. Despite programme cancellation, as a result of the Nurses and Midwives Strike Action, attendance and programme delivery was almost on a par with 2018. Attendances from outside the three Dublin Maternity Hospitals was reduced on previous years from 17% to 10% (n=192).
- With funding received from the ONMSD, 2.0 WTE Midwifery Specialist Coordinators posts, 1 WTE Midwife Tutor and 1 WTE Grade 5 Learning Technologst were appointed.
- In December 2019, the ONMSD Classroom Management System went live in the CME. All bookings for education and training events are now through HSELand.

Challenges for 2020

- The challenge to meet all idenitifed education and training needs within the CME remit is ongoing.
- Utilise learning technologies effectively in teaching and learning.

Midwifery & Nursing: Practice Development

Head of Department

Ann Bowers *(Acting) from January to June*
Paula Barry, *from June to December*

Staff Complement

1 WTE Practice Development Co-ordinator

4.2 WTE Clinical Placement Co-ordinators

4.0 WTE Clinical Skills Facilitators

(1.5 WTE: Neonatal Unit, 2.5 WTE: DS and Maternity Ward Areas)

1 WTE Post-Registration Programme Co-ordinator

0.5 WTE Allocations Liaison Officer

1 WTE Research Midwife (Jan – June 2019)

Key Performance Indicators

- The development and maintenance of the clinical learning environment for Bachelor of Science in Midwifery (BScM), Higher Diploma in Midwifery (HDIM) Students and Bachelor of Science (BScN) in Nursing Students undertaking clinical placements at the CWIUH.
- 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 of 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 2019

- 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). N = 112 students.
- Continued facilitation and support of BSc Nursing Students on maternity placement from St James's and Tallaght (AMNCH) Hospitals. N = 140 students.
- 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, induction and continued support of midwives and nurses from Ireland and 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.
- Recruitment for the Water Immersion Study (WIS) ceased in Feb 2019. Analysis for data and write up of study findings commenced. P Barry returned to her role as PDC and A Bowers returned to her role as CPC.
- Facilitation of a Midwives Clinic by the Practice Development Team (640 consultations in 2019).
- We welcomed Grainne Gillett to the Department to take up the role as CPC.
- Joy Geraghty commenced year 2 of her MSc in Midwifery in TCD.

Challenges for 2020

- Contribute to the recruitment and retention of staff and students for the 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 midwifery 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 facilitate midwifery and nursing educational programmes and up-dates in collaboration with the CME.
- Continue to promote and support the implementation of the National Maternity Strategy (2016), in particular the 'supported model of care'.
- 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.

Postgraduate Medical Training – Perioperative Medicine and Anaesthesia

Head of Department

Dr Terry Tan

Postgraduate Tutor

Dr Stephen Smith

The department continues to develop and improve upon our established multi-faceted approach to teaching and training. Nine specialist Anaesthesiology trainees from the College of Anaesthesiologists of Ireland (CAI) National Training Scheme rotated through the department fulfilling their Obstetric Anaesthesia training requirement.

Trainee composition in 2019

	Total
CAI trainees	9
Post CSST Overseas Fellow	1
Foundation year trainees	6

- Introduced training workshops and simulation in addition to our regular interactive lectures, tutorials and inter-disciplinary morbidity/case based learning meetings.
- Facilitating college trainees to gain knowledge, skills and competencies in obstetric anaesthesia necessary for certification of specialist training (CST).
- Preparation for college membership and fellowship examinations.

Achievements in 2019

- 5 Foundation year Trainees were successful in their application to the National Training Scheme.
- Winner of best oral presentation at the Irish Society of Obstetric Anaesthetists Annual Scientific Meeting 2019.
- Winner of best poster presentation at the Irish Society of Obstetric Anaesthetists Annual Scientific Meeting 2019.

Postgraduate Medical Training – Obstetrics & Gynaecology

Head of Department

Prof Nadine Farah

I would like to acknowledge Dr David Crosby in coordinating rosters during the period from January to July and Dr Amy O'Higgins in coordinating rosters during the period from July to December.

Key Performance Indicators

- All Doctors in training are assigned to a team and a named trainer.
- January to July we had 8 SPRs, 5 Registrars, 4 Junior Registrars and 10 SHOs.
- July to December we had 8 SPRs, 3 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 (Jan-Jul)
  - International Fellow in Maternal Medicine (Jan-Jul)
- 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.
- Three Special Skills modules in Gynaecological surgery one rotating with six months in St James's Hospital and the other two rotating with six months in Tallaght University Hospital.

Challenges for 2020

- Maximisation of training opportunities in the context of the EWTD in view of reduced training time and increased staff complement.
- Providing more structured teaching opportunities with a platform for remote teaching.

Postgraduate Medical Training – Paediatric Medicine

Head of Department

Dr John Kelleher

Medical Training in Paediatric Medicine in 2019

Seven Specialist Registrars in Paediatrics rotated through the Department of Paediatrics & Newborn Medicine in 2019 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 2019 the CWIUH Department of Paediatrics featured three Higher Specialist Trainee Registrars in Neonatology, Dr Claire Murphy, Dr Caroline Ahearne and Dr Carmel Moore. Dr Murphy completed a 12-month rotation in neonatology over the years 2018 – 2019. Dr Caroline Ahearne will complete her 12-month rotation over the years 2019 - 2020. Dr Carmel Moore spent six months as neonatal HST from January to June 2019 at the CWIUH and thereafter as HST in neonatal transport program affiliated with the CWIUH for the remainder of the year 2019.

The Neonatal Resuscitation Programme coordinated by Ms Margaret Moynihan and Advanced Neonatal Nurse practitioner Ms Anne Sullivan, ran 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. H Fucikova.

Postgraduate Medical Training – Pathology

[in association with the Faculty of Pathology and CervicalCheck]

Name of Department

Cellular and Molecular Cytopathology Training School (CMCTS), formerly the National Cytology Training School, co-funded by The Faculty of Pathology and CervicalCheck.

Head of Department

Professor John O'Leary, *Director of Pathology*

Staff Complement

The activities of the CMCTS are co-ordinated by Dr Helen Keegan (Lecturer and Molecular Biologist, 1 WTE). The CMCTS works closely with the Cytology and Histology Departments, the Molecular Pathology Research Laboratory and the Irish Cervical Cancer Screening Research Consortium (CERVIVA), in the design and delivery of its educational programmes.

Key Performance Indicators

- In 2019-2020, The Cellular and Molecular Cytopathology Training School provided 21 educational and training events or workshops to Colposcopy Specialists in training (12), Colposcopy Nurses (3), Biomedical Scientists (8), Pathology trainees (4), Research Scientists (3) and Undergraduate Biomedical Scientists/ Student Placements/ TY students (13).
- The CMCTS also provided laboratory supervision and training in molecular biology (HPV and biomarker testing) to BSc, MSc and PhD students of TU Dublin, University of Ulster and Trinity College Dublin.

Achievements in 2019

- Introduction of a basic training programme in Histology for colposcopy specialists in preparation for certification exams. (Histology Department).
- INAB accreditation of HPV testing in cervical cytology smear specimens using Roche Cobas 4800 platform (Cytology Department).

SpR and Registrar Posts in Histopathology

The hospital hosts one SpR every 6 months in Histopathology, Cytopathology, Morbid Anatomy and Molecular Pathology, as part of the South Dublin rotation in Histopathology, Faculty of Pathology, Royal College of Physicians of Ireland. Trainees gain wide experience in all the above areas of Pathology and encouraged to carry out basic scientific research and audit.

CervicalCheck in 2019 funded a special Registrar post to help with MDTs for the programme and to be involved in CervicalCheck related research.

Trinity College Dublin, Academic Department of Obstetrics & Gynaecology

Head of Department

Prof Deirdre J Murphy

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*

Clare Thompson, *Locum Associate Professor, Consultant Gynaecologist*

Mei Yee Ng, *Clinical Lecturer, Obstetrics & Gynaecology*

Catherine O'Gorman, *Clinical Lecturer, Obstetrics & Gynaecology*

Oladayo Oduola, *Clinical Tutor / Research Fellow*

Clare Dunney, *Research Midwife / TCD Tutor*

Noreen Gleeson, *Honorary Senior Lecturer, Consultant Gynaecologist*

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*

Michael Carey, *Specialist Lecturer, Consultant in Peri-operative Medicine*

Joanne Fenton, *Specialist Lecturer, Consultant in Perinatal Psychiatry*

Grant income to 2019

- HRB Mother & Baby Clinical Trials Network 2016-2020; €2.8 Million, Co-Principal Investigators D Murphy (obstetrics) & E Molloy (neonatology).
- HRB Primary Care Research Centre (RCSI/TCD) €4 Million, Co-investigator D Murphy.
- HRB Definitive Intervention Award, D Murphy Chief Investigator; €1M.

Achievements in 2019

- Prof Richard Deane – Chair of St James's Hospital / Tallaght Hospital joint Research Ethics Committee.
- Prof Sean Daly – appointed Director of National Training Programme.

Publications in 2019

TCD Academic staff

Original Publications in Peer-Review Journals

1. Murphy DJ. Medico-legal considerations and operative vaginal delivery. Best Pract Res Clin Obstet Gynaecol. 2019;56:114-124. doi:10.1016/j.bpobgyn.2019.01.012
2. Black M, Murphy DJ. Forceps delivery for non-rotational and rotational operative vaginal delivery. Best Pract Res Clin Obstet Gynaecol. 2019;56:55-68. doi:10.1016/j.bpobgyn.2019.02.002
3. Murphy DJ. Operative vaginal delivery. Best Pract Res Clin Obstet Gynaecol. 2019;56:1-2. doi:10.1016/j.bpobgyn.2019.02.003
4. Smith V, Begley C, Newell J, Higgins S, Murphy DJ, White MJ et al. Admission cardiotocography versus intermittent auscultation of the fetal heart in low-risk pregnancy during evaluation for possible labour admission - a multicentre randomised trial: the ADCAR trial. BJOG. 2019;126(1):114-121. doi:10.1111/1471-0528.15448
5. Smith V, Begley C, Newell J, Higgins S, Murphy DJ, White MJ, Morrison JJ, Canny S, O'Donovan D, Devane D. Authors' reply re: Admission cardiotocography versus intermittent auscultation of the fetal heart in low-risk pregnancy during evaluation for possible labour admission-a multicentre randomised trial: the ADCAR trial. BJOG. 2019 Feb;126(3):429-430.
6. Oduola O, Garry N, Murphy DJ. Operative Vaginal Birth. Obstetrics Gynaecology & Reproductive Medicine. 2019; 30(1).
7. Hayes-Ryan D, Hemming K, Breathnach F, Murphy DJ et al. PARROT Ireland: Placental growth factor in Assessment of women with suspected pre-eclampsia to reduce maternal morbidity: a Stepped Wedge Cluster Randomised Control Trial Research Study Protocol. BMJ Open 2019;9:e023562.
8. Hehir MP, Burke N, Burke G, Daly S et al. Sonographic markers of fetal adiposity and risk

of Cesarean delivery. Ultrasound Obstet Gynecol. 2019;54(3):338-343. doi:10.1002/uog.20263.

9. Mulcahy C, Mone F, McParland P, Daly S et al. The Impact of Aspirin on Ultrasound Markers of Uteroplacental Flow in Low-Risk Pregnancy: Secondary Analysis of a Multicenter RCT. Am J Perinatol. 2019;36(8):855-863. doi:10.1055/s-0038-1675208

International Textbooks

Murphy DJ. Assisted Vaginal Delivery. In High Risk Pregnancy: Management Options. Cambridge University Press, 2019.

Murphy DJ. Malposition, malpresentation and cephalopelvic disproportion. In Oxford Textbook of Obstetrics & Gynaecology. Oxford University Press, 2019.

UCD Centre for Human Reproduction

Head of Department

Professor Michael Turner

Staff Complement

Professor Michael Turner, *Professor of Obstetrics and Gynaecology, (Head of Department)*

Ms Laura Bowes, *Administrator*

Dr Eimer O'Malley, *Clinical Lecturer*

Professor Mairead Kennelly, *Consultant in Obstetrics and Gynaecology*

Professor Jan Miletin, *Consultant Neonatologist*

Professor Chris Fitzpatrick, *Consultant in Obstetrics and Gynaecology*

Professor Aisling Martin, *Consultant in Obstetrics and Gynaecology*

Professor Michael Carey, *Consultant Anaesthetist*

Professor Nadine Farah, *Consultant in Obstetrics and Gynaecology*

Professor Tom D'Arcy, *Consultant in Obstetrics and Gynaecology*

Professor Anne Doolan, *Consultant Neonatologist*

Professor Sharon Sheehan, *Master/CEO*

Research Fellows

Ms Rachel Kennedy (PhD)

Dr Eimer O'Malley (PhD)

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. In 2018, the Academic Council in UCD renewed its approval for the UCD Centre for Human Reproduction to continue 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, inadequate maternal diet, inadequate folic acid supplementation, cigarette smoking, infection and physical inactivity. In the decade 2010-19, Professor Turner served as the National Director 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.

Key Performance Indicators

- Publications in peer-reviewed journals.
- Research Fellows undertaking MD, PhDs.
- Contribution to national policies and guidelines.

Achievements in 2019

- Maintained research outputs for modifiable risk factors in pregnancy and maternity services quality improvement projects.
- Translated research output into national healthcare policies and guidelines.

Challenges for 2020

- Transform undergraduate teaching programme in response to pandemic.
- Retain status as a research centre recognised by the Academic Council.

Research

1. Dr Ciara Reynolds was awarded a PhD for her thesis on smoking cessation in pregnancy which has resulted in several publications in peer-reviewed international journals. As part of an intervention RCT, Dr Reynolds developed a customised smartapp to help women stop smoking after presentation for antenatal care. Ciara published a number of papers on the adverse impact of persistent smoking in pregnancy and the use of breath carbon monoxide (BCO) testing to identify women who have not disclosed their smoking at the first visit.
2. Ms Rachel Kennedy completed PhD on a RCT evaluating a customised smartapp designed to improve the dietary quality of women in early pregnancy. Ms Kennedy has also developed a novel peri-conceptual nutrition score (PENS) to assess dietary intake of micronutrients in early pregnancy. Her research has resulted in several international peer reviewed publications.
3. Dr Eimer O'Malley has converted her planned MD into a PhD. She is evaluating point-of-care maternal glucose and lipid measurements at the end of the

second trimester. As part of her PhD, Dr O'Malley will also be examining the relationship between an established panel of ten Biomarkers and the risk of developing Gestational Diabetes Mellitus and fetal macrosomia. The thesis will be submitted in Q3 2020.

4. Ms Laura Bowes continued her MSc in Human Resource Management in UCD Michael Smurfit Graduate Business School and is due to complete her studies in 2020. She also continued to provide strong support for the Centre's research workstreams in addition to her commitments with the teaching programme.

5. Dr Karen Power and Professor Turner continued their collaboration in developing NCEC Guidelines for the maternity services. The revision of the Irish Maternity Early Warning System (IMEWS) was completed and published in April 2019. This was the first of the NCEC suite of national guidelines to be successfully revised. The IMEWS has generated considerable attention in Norway, Scotland, England and Wales and the United States of America. As part of this work, Dr Catherine O'Regan developed a novel scoring system for the early detection of maternal infection which was published by the European Journal of Gynecology and Obstetrics in Reproductive Biology.

6. Dr Lean McMahon, Project Manager for the Irish Maternity Indicators System (IMIS) and Professor Turner continued their collaboration on this report for hospital performance measurements. This report is produced for individual hospitals, the six networks and nationally and allows each hospital to benchmark themselves nationally and against their own performance in the previous year. This work continues to evolve and improve in association with the HSE National Women and Infants Programme. Particular thanks are due to the individuals from different hospitals nationally who participate actively in the regular workshops.

7. Dr Aoife Brick from the ESRI Health Division and Professor Turner continued their collaboration. In particular, they investigated whether the rising levels of maternal obesity was contributing to the escalating Caesarean Section rates in Ireland.

8. Professor Turner completed his work as Chair of the Department of Health Policy Group on folic acid supplementation and a report revising current recommendations was sent to the Minister for Health. Professor Turner served as Member of the HSE National Guideline on smoking cessation which has been commissioned by the National Clinical Effectiveness Committee. Professor Turner also served as Member of the HIQA Special Purpose Maternity Advisory Group and as a Member of the RCPI Policy Group on Obesity.In February, Professor Turner was invited to speak on the prevention of Neural Tube Defects in Ireland at the Ulster Obstetric and Gynaecological Society Annual Meeting. In April, he was invited to deliver the Dr Noel McCarthy Memorial Lecture at the Annual Meeting of the New England Obstetrics and Gynaecology Society on Maternal Obesity. He was also invited to speak on Vaginal Birth after Caesarean Section at the 18th World Congress of the Academy of Human Reproduction. At the Guinness meeting he spoke on new developments in maternal sepsis.

Finally, we thank the outgoing Master Professor Sharon Sheehan for her strong support of our teaching and research activities over the last seven years and wish her every success with the next leg of her professional journey. We welcome Professor Michael O'Connell as her successor and we look forward to a continuing collaboration between the Hospital and the University over the next seven years.

List of Grants received in 2019

Title: CICER/HIQA (Collaborator)

Start/End Dates: 2017 to date

Funder: HRB

Amount: €2,500,000.00

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) (Collaborator)
Start/End Dates: Oct 2016 (duration approx 40 months)

Funder: Health Research Board

Amount: €869,272.00

Academic Publications 2019

1. McArdle C, O'Duill M, O'Malley EG, Reynolds CME, Kennedy RAK, Turner MJ. The identification of maternal smokers postnatally in an Irish maternity hospital. Ir J Med Sci 2019;188:587-9. PMID:29916132

2. Kennedy RAK, Reynolds CME, Cawley S, O'Malley E, McCartney DM, Turner MJ. A web-based dietary intervention in early pregnancy and neonatal outcomes: a randomised controlled trial. J Public Health 2019;41:371-378. PMID:30010835

3. Reynolds CME, Egan B, Kennedy RA, O'Malley E, Sheehan SR, Turner MJ. The implications of high

carbon monoxide levels in early pregnancy for neonatal outcomes. Eur J Obstet Gynecol Reprod Biol 2019;233:6-11. PMID:30529257

4. Reynolds CME, Egan B, O'Malley EG, Kennedy RRA, Sheehan SR, Turner MJ. Feasibility of recruitment to a behavioural smoking cessation intervention combined with ongoing online support. Eur J Public Health 2019;29:170-172. PMID:30137297

5. Cawley S, O'Malley EG, Kennedy RAK, Reynolds CME, Molloy AM, Turner MJ. The relationship between maternal plasma homocysteine in early pregnancy and birth weight. J Matern Fetal Neonatal Med 2019:1-5 [Epub ahead of print] PMID:30621490

6. O'Regan C, O'Malley EG, Power KA, Reynolds CME, Sheehan SR, Turner MJ. Development of a novel bedside index for the early identification of severe maternal infection. Eur J Obstet Gynecol Reprod Biol 2019;235:26-29. PMID:30784824

7. Reynolds CME, Egan B, O'Malley EG, McMahon L, Sheehan SR, Turner MJ. Fetal growth and maternal alcohol consumption during early pregnancy. Eur J Obstet Gynecol Reprod Biol 2019;236:148-153. PMID: 30927706

8. Reynolds CME, Egan B, Daly N, McKeating A, Sheehan SR, Turner MJ. The interaction between maternal smoking, illicit drug use and alcohol consumption associated with neonatal outcomes. J Public Health (Oxf) 2019 [Epub ahead of print] PMID:30753536

9. Hehir MP, Burke N, Burke G, Turner MJ, Breathnach FM, McAuliffe FM, Morrison JJ, Dornan S, Higgins J, Cotter A, Geary MP, McParland P, Daly S, Cody F, Dicker P, Tully E, Malone FD. Sonographic markers of increased fetal adiposity and risk of Cesarean delivery. Ultrasound Obstet Gynecol 2019;54:338-43. PMID: 30887629

10. Turner MJ. Maternal sepsis is an evolving challenge. Int J Gynaecol Obstet 2019;146:39-42. PMID:31037723

11. Kennedy RAK, Turner MJ. Development of a novel Periconceptual Nutrition Score (PENs) to examine the relationship between maternal dietary quality and fetal growth. Early Hum Dev 2019;132:6-12. PMID: 30908989.

12. Reynolds CME, Egan B, McMahon L, O'Malley EG, Sheehan SR, Turner MJ. Maternal obesity trends in a large Irish maternity hospital. Eu J Obstet Gynaecol Reprod Biol 2019;238:95-99. PMID: 31125709

13. O'Malley EG, Walsh MC, Reynolds CME, Kennelly M, Sheehan SR, Turner MJ. A cross-sectional study of maternal-fetal attachment and perceived stress at the first antenatal visit. J Reprod Infant Psych 2019;4:1-10. PMID:31271307

14. Turner MJ Primary care holds the key to successful folic acid supplementation GP Ireland, Clinical 2019

15. O'Malley EG, Turner MJ. Gestational diabetes mellitus: primary-care management. GP Ireland, Diabetes Focus, 2019

16. McMahon L, McKenna P, Turner MJ. Irish Maternity Indicator System (IMIS) 2018 Annual Report, Published by the Health Service Executive, July 2019

17. Raba AA, O'Sullivan A, Semberova J, Martin A, Miletin J. Are antibiotics a risk factor for the development of necrotizing enterocolitis-case-control retrospective study. Eur J Pediatr 2019;178:923-928. PMID: 30949889

18. Coyne S, Flynn L, McGovern M, Miletin J. A Review of Out-of-hours Outpatient Neonatal Presentations to a Standalone Tertiary Neonatal Centre. Ir Med J 2019;112:879. PMID: 30896140

19. Perrem L, Semberova J, O'Sullivan A, Kieran EA, O'Donnell CPF, White MJ, Miletin J. Effect of Early Parenteral Nutrition Discontinuation on Time to Regain Birth Weight in Very Low Birth Weight Infants: A Randomized Controlled Trial. J Parenter Enteral Nutr 2019;43:883-890. PMID: 30613992

20. Treston BP, Semberova J, Kernan R, Crothers E, Branagan A, O'Cathain N, Miletin J. Assessment of neonatal heart rate immediately after birth using digital stethoscope, handheld ultrasound and electrocardiography: an observational cohort study. Arch Dis Child Fetal Neonatal Ed 2019;104:F227. PMID: 30355779

21. O'Malley EG, Reynolds CME, Turner MJ. Letter to the editor in response to: Evidence in support of the international association of diabetes in pregnancy study groups' criteria for diagnosing gestational diabetes worldwide in 2019. Am J Obstet Gynecol 2019;220:610. PMID: 30807763

22. O'Duill M, McArdle C, O'Malley EG, Reynolds CME, Kennedy RAK, Turner MJ. A Postpartum Survey of Vitamin Supplementation during Pregnancy in Ireland. Ir Med J. 2019;112:942.

Abstracts 2019

1. McGrath R, Barrett T, O'Cuiv L, Caruth G, Walsh A, Biesma R, Turner MJ, Miletin J, Doolan A. "MyCoombe" mhealth app – a pilot study ADC 2019;104(Suppl 3):A1-A428.

2. Farren M, Daly N, McKeating AM, O'Malley E, Turner MJ, Daly S. Maternal biomarkers and their role in the prediction of GDM.BJOG 2019 (2529)

3. Daly N, Farren M, McKeating A, Reynolds CM, Egan B, Turner MJ. The effect of a medically-supervised exercise intervention for obese pregnant women on quality of life and fitness: a randomised controlled trial. Blair Bell Research Society, Annual Academic Meeting Abstracts

4. Finnegan, C., Burke, N., Burke, G., Breathnach, F., McAuliffe, F., Morrison, J., Dornan, S., Turner, M., Higgins, J., Cotter, A. and Geary, M., 2019. Defining the upper limits of second stage of labor-results of the genesis study. American Journal of Obstetrics and Gynecology, 220(1).

5. Farren, M., Daly, N., Keating, A.M., O'Malley, E., Turner, M. and Daly, S., 2019, June. Maternal biomarkers and their role in the prediction of GDM. BJOG - An International Journal of Obstetrics and Gynaecology (Vol. 126, pp. 174-175). 111 River St, Hoboken 07030-5774, NJ USA: Wiley.

6. Daly, N., Farren, M., McKeating, A., Reynolds, C.M., Egan, B. and Turner, M.J., 2019, May. The effect of a medically-supervised exercise intervention for obese pregnant women on quality of life and fitness: a randomised controlled trial. BJOG - An International Journal of Obstetrics and Gynaecology (Vol. 126, No. 6, pp. E131-E131). 111 River St, Hoboken 07030-5774, NJ USA: Wiley.

7. Murphy, N., Burke, N., Breathnach, F., Burke, G., McAuliffe, F., Morrison, J., Turner, M., Dornan, S., Higgins, J., Cotter, A. and Geary, M., 2019, March. Why do low-risk nulliparous women with a normal sized fetus need emergency caesarean delivery? BJOG - An International Journal of Obstetrics and Gynaecology (Vol. 126, pp. 111 River St, Hoboken 07030-5774, NJ USA: Wiley.

8. O'Malley, E., Goodman, D., Reynolds, C., Kennedy, R. and Turner, M.J., 2019. Weight trajectories between pregnancies–Can we predict with body mass index (BMI) or bioelectrical impedance analysis (BIA)? European Journal of Obstetrics and Gynecology and Reproductive Biology, 234, p.e35.

9. O'Malley, E., Cawley, S., Kennedy, R., Reynolds, C., Molloy, A. and Turner, M.J., 2019. Folate and vitamin B12 levels in early pregnancy and maternal obesity. European Journal of Obstetrics and Gynecology and Reproductive Biology, 234, p.e36.

10. O'Malley, E., Cawley, S., Reynolds, C., Kennedy, R., Molloy, A. and Turner, M.J., 2019. The relationship between maternal dietary and supplemental intakes and blood folate levels with Haemoglobin in pregnancy. European Journal of Obstetrics and Gynecology and Reproductive Biology, 234, p.e72.

11. O'Malley, E.G., Cawley, S., Kennedy, R.A., Reynolds, C., Molloy, A. and Turner, M.J., 2019. Dietary intakes of smokers compared to non-smokers at the first prenatal visit. European Journal of Obstetrics, Gynecology, and Reproductive Biology, 234, p.e159.

12. Healy, E.F., Burke, N., Burke, G., Breathnach, F., McAuliffe, F., Morrison, J., Turner, M.J., Dornan, S., Higgins, J., Cotter, A. and Geary, G., 2019. 772: A comparison of low and high-dose oxytocin for induction of labor in term nulliparous women. American Journal of Obstetrics & Gynecology, 220(1), pp.S505-S506.

13. Hehir, M.P., Burke, N., Burke, G., Breathnach, F.M., McAuliffe, F.M., Morrison, J.J., Turner, M., Dornan, S., Higgins, J.R., Cotter, A. and McParland, P., 2019. 1047: Increased abdominal circumference to head circumference ratio in late pregnancy is predictive of shoulder dystocia. American Journal of Obstetrics & Gynecology, 220(1), pp.S671-S672.

14. Murphy, N.C., Breathnach, F.M., Burke, N., Burke, G., McAuliffe, F.M., Morrison, J.J., Turner, M.J., Dornan, S., Higgins, J., Cotter, A.M. and Geary, M.P., 2019. 55: Simple inter-hospital comparison of cesarean delivery rates is inappropriate as a marker of care quality. American Journal of Obstetrics & Gynecology, 220(1), pp.S44-S45.

15. Reynolds C, Egan B, O'Malley E, Sheehan S, Turner MJ. The predictors of interpregnancy change in body mass index. 13th European Nutrition Conference, FENS 2019 (E444)

16. Kennedy R, Reynolds C, O'Malley E, Turner MJ. Assessing maternal dietary quality in early pregnancy in the programming of intrauterine fetal growth. Irish Society for Clinical Nutrition & Metabolism. 5th IrSPEN Conference, Dublin, 2019.

Support Services

Human Resources Department

Head of Department

AnneMarie Waldron

Staff Complement

Bridie Horan, *HR Business Partner*
Carthach McCarthy, *HR Executive Assistant*
Gina Elliott, *HR Executive*
Hilda Reddy, *HR Administrative Assistant*
Jayan Thomas, *HR Executive Assistant*
Niamh McGlade, *HR Executive Assistant*
Theresa Dempsey, *HR Executive*
Pamela Smith, *HR Clerical Officer*

Key Performance Indicators

- Absence rates
- Labour Turnover
- EWTD compliance rates

Achievements in 2019

- Recruitment Activity - 156 staff were employed excluding Consultant and medical rotations.
- National/International Midwifery & Nursing - 80 appointments.
- Offered permanent contracts to all our Graduate Nurses.
- Implement Final phase of electronic clocking for NCHDs.
- Delivered a number of activities under Health & Wellbeing Programme in line with the DMHG HI Implementation plan 2018 – 2020.
- Retirement Planning Programme held in May.
- Customer Care & Quality Conversation Training Programmes.
- Recruitment Planning Programme.
- Support Contact Persons appointed & trained under the Dignity at Work Policy.
- New Cycle to Work scheme.

Plans for 2020

- Local & International Recruitment Campaign for Midwifery & Nursing.
- Health & Wellbeing – continue to develop and deliver a wide range of supports for staff - our motto is "Caring for health & wellbeing together".
- Develop HR Digital Transformation.
- E-Learning – Staff on-boarding NCHD & Midwifery Nursing Programme.
- Garda Re-vetting of staff.
- Retirement Planning Programme.
- Staff retention, progression and succession planning.
- Focus on provision of Professional Service to deliver HR service in line with Sláintecare Action Plan.
- Midwifery staffing attracting, recruitment and retention.
- Systems are required to continue to embed Staff Health & Wellbeing Action Plan within the hospital through resources, staff engagement and skills development.
- E-Learning & Development Strategies.

Hygiene Services

Head of Department

Vivienne Gillen, *Operations/Hygiene Services Manager*

Staff Complement

Household Services Manager
Support Services Supervisor
2.4 WTE Assistant Supervisors
40.8 WTE Cleaners
6.5 Multi-task Attendants

Key Performance Indicators

- Hygiene Audits carried out by Ward Managers, Household Supervisors and Hospital Management.
- Waste Segregation and Recycling.
- Compliments and Complaints.

Overall Auditing	**92%**
Environmental Auditing	**95%**
Recycling Figure	**75%**

Waste Management:

- Total waste generated by Hospital in 2019 was 484 tonnes.
- Recycling figure steady at 75%.

Achievements in 2019

- Electronic Auditing system throughout Hospital now embedded within Hospital.
- Increase of 2 multi-task attendants for night-time cleaning.
- Work completed on CSSD – now operating as a Class 8 facility.
- Continuous upgrading of hand hygiene sinks during refurbishment programmes.
- Training of staff continues to be ongoing.

Challenges for 2020

- 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.
- Cleaning equipment will continue to be upgraded over 2020.

Information Communications Technology (ICT) Department

Head of Department

Melissa Lawlor, *ICT Manager*

Staff Complement

Anne Clarke, *IT Midwife (0.5 WTE)*
Emma McNamee, *Business Intelligence Analyst (1 WTE)*
Carol Cloonan, *Technical Support Officer (1 WTE)*
Gordon McMahon, *Technical Support Officer (1 WTE Fixed Term Contract)*
Darragh McGiveny, *Technical Support Officer (1 WTE)*
Vlad Hodoraba, *Senior Systems Administrator (1 WTE)*

Key Performance Indicators

- Maintained the integration of systems and services and ensured over 99% availability of ICT equipment and services.
- During the course of the year, the ICT Service Desk responded to 2,155 service requests with 97.5% calls resolved the same day.
- Compliance with HSE & Hospital reporting requirements through the provision of monthly data returns, Robson Report, etc.
- All K2 clinical questionnaires (12) were modified to meet clinical requirements.
- Provided an effective business intelligence service to clinical and business users through the creation of clinical audit, statistical or activity requests. During 2019, 311 report requests were actioned.

Achievements in 2019

- Completed an ICT infrastructure review and submitted relevant business cases to the HSE to fund replacement of critical infrastructure (Phase 1).
- Ongoing maintenance of the hospital's core operational and technical environment. A scheduled maintenance plan for the hospitals Linux servers was introduced.
- A new VPN and Firewall solution was implemented.
- E-Gov fibre link upgraded to meet future hospital needs.
- FMD tracing system was implemented to meet requirements of Falsified Medicines Directive.
- An ICT asset management system was implemented.

Challenges for 2020

- On receipt of funding from the HSE, the hospital will commence replacing the hospitals core infrastructure i.e. Network, SAN, Servers.
- Replacement of Windows 7 Devices on receipt of funding.
- Implement a number of additional changes to enhance security.

- Ongoing engagement with national ICT clinical and infrastructure projects such as MN-CMS (Maternal & Newborn Clinical Management System).
- Upgrade a number of hospital applications:-
  - Mediscan upgrade
  - CliniSys Instrument Manager to V8.16
  - CliniSys Lab Centre application to V14

Friends of the Coombe

Friends of the Coombe

Head of Department

Ms Ailbhe Gilvarry, *Chair*

Staff Complement

Liz Burke

Once again we find ourselves humbled by the very many families and individuals who have offered their time and their talents to raise money for Friends of the Coombe to enable us to invest in projects that support maternity services, women's health and neonatology at the Coombe Women & Infants University Hospital.

The highlight of the year was the conclusion of a €75,000 fundraising campaign to purchase a Paul Simulator for the Coombe to transform the way in which doctors and neonatal nurses develop and maintain critical clinical skills as the first phase of a larger campaign to enable the hospital to develop a state-of-the-art clinical skills laboratory. We were particularly pleased that the Paul Simulator received national media attention, not least because it is the first simulator of its kind to be used by a hospital in Ireland. We very much look forward to being able to expand on this work by raising funds to acquire other simulation equipment for other specialties across the hospital.

This year we introduced a new Christmas campaign to enable families to celebrate all of the babies that have come into their lives. With the support of Johnstown Garden Centre and a volunteer knitter, we unveiled our 'Family Christmas Tree'. Bedecked with hundreds of hand-knitted miniature baby hats bearing the names of babies special to our supporters, it took pride of place in the Hospital entrance hall during the festive period.

Finally, we would like to express our deepest gratitude to Professor Sharon Sheehan who stood down from the Board at the end of her Mastership. Professor Sheehan made an exceptional contribution over her seven-year term, strengthening the work of the charity and further enabling Friends of the Coombe to work hand in hand with the Hospital to support ***"excellence in the care of women and babies".***

Examples of the support provided during 2019

- Purchase of a new incubator for the Neonatal Unit and Paul Clinical Skills Simulator.
- Ongoing accommodation support for parents whose babies are being cared for in the Neonatal Unit having been transferred from other hospitals in Ireland.
- Support for the voluntary Neonatal Support Group.
- Support for the Palliative Care and Bereavement Service.
- Continuation of 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 2020

- A campaign to raise €65,000 to purchase a new internal transport incubator.
- Development of a new strategic plan and board recruitment.
- Development of a new donor recognition programme.
- Building on the level of support we provide to families and individuals who would like to raise funds for Friends of the Coombe.
- Expanding our digital footprint, particularly in the area of social media, as a means of engaging with the wider general public.

Appendices

Appendix One

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 Celebrated the Hospital's Golden Jubilee on the current site

Appendix Two

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
Charles Joseph O'Hara	1835 - 1835
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 - 1875
George Hugh Kidd	1876 - 1883
Samuel Robert Mason	1884 - 1890
John Colclough Hoey	1891 - 1899
Thomas George Stevens	1900 - 1907
Michael Joseph Gibson	1907 - 1914
Robert Ambrose MacLaverty	1914 - 1921
Louis Laurence Cassidy	1921 - 1928
Timothy Maurice Healy	1928 - 1935
Robert Mulhall Corbet	1935 - 1942
Edward Aloysius Keelan	1942 - 1949
John Kevin Feeney	1949 - 1956
James Joseph Stuart	1956 - 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 R. Sheehan	2013 - 2019

Appendix Three

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 – 2016
Ann MacIntyre	DoM&N	2016 – Present

Appendix Four

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

2018 'Domestic Violence and the Obstetrician'
Professor Stephen Lindow, Division Chief of Obstetrics at Sidra Medical and Research Centre, Qatar

2019 'From Queen Victoria to the Duchess of Cambridge'
Professor Rob Dyer, University of Cape Town, New Groote Schuur Hospital

Guinness Lecture Symposium	
Date:	**18th October 2019**
Time:	**12.30pm**
Venue:	**Rita Kelly Conference Centre, CWIUH**
12.30	Registration & Lunch
13.00	Welcome Address Dr Sharon Sheehan, Master/CEO, CWIUH
13.05	Peri-operative Medicine at the Coombe Dr Petar Popivanov, Consultant Anaesthesiologist, CWIUH
13.30	LEAN Healthcare Fidelma McSweeney, Assistant Director of Midwifery & Nursing with responsibility for Maternity Services, Community Services, Diabetic Services, Parent Education Services & Infant Feeding
14.00	Predicting postpartum haemorrhage Dr Michelle Lavin, Clinical Lead for Coagulation Haematology Research in the Irish Centre for Vascular Biology at the RCSI
14.30	New developments in identifying maternal sepsis Prof Michael Turner, Consultant Obstetrician & Gynaecologist, UCD Professor of Obstetrics & Gynaecology
15.00	Collaborative care of the critically ill pregnant woman - "what happened to the patient we transferred to St James's Hospital?" Dr Elizabeth Connolly, Consultant Anaesthesiologist & Intensivist, Chairperson, Department of Anaesthesia, St James's Hospital
15.30	The future of healthcare in Ireland Dr Thomas Ryan, Consultant Anaesthesiologist & Intensivist Clinical Lead, Intensive Care Medicine, St James's Hospital
16.00	Refreshments
16.15	**Guinness Lecture - 'From Queen Victoria to the Duchess of Cambridge'** Prof Rob Dyer, University of Cape Town, New Groote Schuur Hospital
17.00	End

Appendix Five

Winner of the Dr James Clinch Prize for Audit 2019

Congratulations to Dr Paul Hession, winner of the Dr James Clinch Prize for Audit 2019. His audit was entitled "Pre-operative reconciliation of regular medications: the development of a guideline for the Pre-Assessment Clinic".

This audit was undertaken as patients fasting for surgery frequently miss their regular medications leading to significant risk and adverse outcomes by assessing the quality of instructions issued at the pre-operative assessment clinic to gynaecology patients on taking their regular medications while fasting for surgery.

Submission for Dr James Clinch Prize

Audit Title: Pre-operative reconciliation of regular medications: the development of a guideline for the pre-assessment clinic

Title of Audit:	*Pre-operative reconciliation of regular medications: the development of a guideline for the pre-assessment clinic*		
Audit lead:	Dr Paul Hession		
Supervisor:	Dr Terry Tan		
Speciality:	Anaesthesia	Will a re-audit be conducted by you or someone in your department? (answer Yes or No)	Yes (already complete)
Date of report:	30/09/2019		
Key Stakeholders:	Departments of Periopreative Medicine, Gynaecology and Pharmacy	Proposed Re-audit date:	Already complete

Introduction:

Say why the audit was done.

Perhaps a problem had been identified?

Statement of what the project is trying to achieve:

Patients fasting for surgery frequently miss their regular medications leading to significant risk and adverse outcomes.1 Hence, the management of regular medications during the peri-operative period is a priority for any service. Our institution is a major stand-alone obstetric hospital performing a significant number of gynaecology procedures per year.

Methodology:

State
• Chosen population
• How sample selected
• Retrospective or prospective
• Sample size
• Describe tool Used
• State the standard(s) or guideline(s) you are auditing against.

We undertook an audit to assess the quality of instructions issued at the pre-operative assessment clinic to gynaecology patients on taking their regular medications while fasting for surgery. This was followed by several interventions:

1. Raising awareness of pre-operative medication management.
2. Development of a detailed peri-operative medications guideline with interdisciplinary input from all stakeholders (anaesthetists, gynaecologists and pharmacists). It included the majority of medications encountered, as well as an instruction to the anaesthetist on the recommended approach. This included continuing, holding or making a decision on a case-by-case basis.
3. A written instruction leaflet displaying those medications the patient is recommended to take on the morning of surgery.
4. Staff education and training prior to implementation.
5. Re-audit to assess improvements in the service.

Results:

(State the results.

Start with total number (n=). Data may be presented visually (graphs, tables)

	Baseline audit	Re-audit
Total number of patients audited	159	176
Patients on regular medications	92 (58%)	88/176 (50%)
Instructions given - Written - Verbal only	41/92 (45%) 0/92 41/92(45%)	76/88 (86%) 35/88 (40%) 41/88 (46%)
Medications taken as instructed	39/92 (42%)	71/88 (81%)

After intervention, the number of patients taking medications as instructed on the morning of surgery increased from 42% to 81%. If patients were not given instructions they took medications on only 25% of occasions. This increased to 90% if given verbal, or 97 % if given written instruction.

Conclusion: (List key points that flow from results)	The overall evidence for stopping most medications on the morning of surgery is limited. In contrast there is evidence that continuing medications, particularly those acting on the cardiovascular system, may lead to better outcomes.2 The results of our baseline audit showed that the majority of our patients could not recall receiving instructions on which medications to take and, as a result, tended to not take any. This often included medications that would be beneficial to continue. After implementing the above interventions, the number of patients receiving instructions increased dramatically. Both audits show that, when instructed, the majority of patients comply with advice. Therefore, the success of pre-operative medication management is largely in the hands of service providers. Further projects to improve the number of patients receiving specific written instructions are planned.

References:

1. Kennedy JM, Van Rij AM, Spears GF, et al. Polypharmacy in general surgical unit and consequences of drug withdrawal. Br J Cl Pharm. 2000; 49(4): 353-62.
2. Fleisher LA, Fleischmann KE, Auerbach AD et al. 2014 ACC/AHA Guideline on Perioperative Cardiovascular Evaluation and Management of Patients Undergoing Noncardiac Surgery. Circulation. 2014; 130: e 278-e333.

ACTION PLAN		
Action Required	**Person(s) Responsible**	**Timeframe**
Development of detailed peri-operative medicine guideline	Paul Hession	Complete (approved by D&T Oct 18)
Patient instruction leaflet	Paul Hession	Complete (June 18)
Staff education and training (presentations to new anaesthesia NCHDs, gynaecology NCHDs, pre-assessment nurses)	Petar Popivanov	Complete (Jul 18 – Jan 19)
Reaudit to assess improvement in service	Rory Linehan, Neil McAuliffe	Complete (Jun 19)

Appendix Six

Glossary of Terms

Booked patient: a patient who is seen at the antenatal clinic, other than the occasion on which she is admitted. This includes patients seen by the consultant staff in their consulting rooms.

Miscarriage: expulsion of products of conception or of a fetus weighing less than 500 grams.

Maternal Mortality: death of a patient for whom the hospital has accepted medical responsibility, during pregnancy or within six weeks of delivery (whether in the hospital or not). Maternal mortality is calculated against the total number of mothers attending the hospital including miscarriages, ectopic pregnancies and hydatidiform moles.

Stillbirths (SB): a baby born weighing 500 grams or more who shows no sign of life.

First week neonatal death (NND): death within seven days of a live born infant weighing 500 grams or more.

Late neonatal death (late NND): death between 7 and 28 days of a live born baby weighing 500 grams or more.

Perinatal Mortality: the sum of stillbirths and first week neonatal deaths as defined above. The perinatal mortality rate refers to the number of perinatal deaths per 1,000 total births infants weighing 500 grams or more in the hospital.

The following abbreviations are used throughout the report:

ABG	arterial blood gas
ACA	anticardiolipin antibody
AC	abdominal circumference on ultrasound
AEDF	absent end diastolic flow in uterine arteries
AMNCH	Adelaide, Meath, incorporating the National Children's Hospital (Tallaght Hospital)
Amnio	amniocentesis
ANA	antinuclear antibody
ANC	antenatal care
APH	antepartum haemorrhage
ALPS	anti-phospholipid syndrome
ARM	artificial rupture of membranes
ASD	atrial septal defect
ATIII	Anti-thrombin III
BBA	born before arrival
BPP	biophysical profile
CANC	combined antenatal care
CIN	cervical intraepithelial neoplasia
CBG	capillary blood gas
CNM	clinical nurse manager
CNO	chief nursing officer
CMM	clinical midwife manager
Cord pH (a)	arterial cord pH
Cord pH (v)	venous cord pH
CPD	cephalopelvic disproportion
CPR	cardio-pulmonary resuscitation
CRP	c reactive protein
CTPA	computerised axial tomography pulmonary arteriography
Cryo	cryoprecipitate
CT	Chlamydia trachomatis
CTG	cardiotocograph
CWIUH	Coombe Women & Infants University Hospital

DCDA	dichorionic diamniotic
D&C	dilatation and curettage
DIC	disseminated intravascular coagulopathy
DoH	Department of Health
DMHG	Dublin Midlands Hospital Group
DVT	deep venous thrombosis
EBL	estimated blood loss
ECV	external cephalic version
ECHO	echocardiogram
EEG	electroencephalogram
EFM	electronic fetal monitoring
EFW	estimated fetal weight
EPAU	early pregnancy assessment unit
ERPC	evacuation of retained products of conception
ETT	endotrachial tube
EUA	examination under anaesthetic
FAS	fetal assessment scan
FBS	fetal blood sample in labour
FHNH	fetal heart not heard
FM	fetal movement
FMNF	fetal movement not felt
FTA	failure to advance
FV Leiden	factor V Leiden
GA	general anaesthesia
HB	haemaglogin
HCG	human chorionic gonadotrophin
Hep B	Hepatitis B
Hep C	Hepatitis C
HFOV	high frequency oscillatory ventilation
HRT	hormone replacement therapy
HVS	high vaginal swab
HIV	infection with human immuno deficiency virus
Hx	history of
INAB	Irish National Accreditation Board
IOL	induction of labour
IPPV	intermittent positive pressure ventilation
IPS	Irish Perinatal Society
ITP	idiopathic thrombocytopoenia
IUCD	intrauterine contraceptive device
IUD	intrauterine death
IUGR	intrauterine growth retardation
IVH	intraventricular haemorrhage
LFD	large for dates
LLETZ	large loop excision of the transformation zone
LMWH	low molecular weight heparin
LSCS	lower segment caesarean section
LV	liquor volume
MSU	mid stream urinalysis
NAD	no abnormality detected
NEC	necrotising enterocolitis
NETZ	needle excision of transformation zone
NG	neisseria gororrhoea
NICU	neonatal intensive care unit
NNC	neonatal centre
NND	neonatal death
NO	nitric oxide
NR	not relevant
NS	not sent
NTD	neural tube defect
NWIHP	National Women and Infants Health Programme
OGTT	oral glucose tolerance test
OFC	occipitio-frontal circumference
OLCHC	Our Lady's Children's Hospital Crumlin
OP	occipito-posterior
PCO	polycystic ovary
PET	pre eclamptic toxemia
PDA	patent ductus arteriosus
Pg	prostaglandin
PIH	pregnancy-induced hypertension
PMB	post menopausal bleeding
POP	persistent occipito posterior
PPH	postpartum haemorrhage
PPHN	persistent pulmonary hypertension of the newborn
PTL	preterm labour
PVB	per vaginal bleeding

QII	Quality Improvement Initiative
QIP	Quality Improvement Project
RBS	random blood sugar
RCSI	Royal College of Surgeons in Ireland
RDS	respiratory distress syndrome
RV	right ventricle
Rx	treated with
SB	stillbirth
SCBU	special care baby unit
SE	socio economic group
SFD	small for dates
SIDS	sudden infant death syndrome
SIMV	synchronised intermitent mandatory ventilation
SJH	St James's Hospital
SOL	spontaneous onset of labour
SpR	specialist registrar
SROM	spontaneous rupture of membranes
SVD	spontaneous vaginal delivery
TAH	total abdominal hysterectomy
TCD	Trinity College Dublin
TOP	Termination of Pregnancy
TPA	transposition of the great vessels
TTTS	twin to twin transfusion syndrome
TVT	tension free vaginal tape
UCD	University College Dublin
US	ultrasound
USS	ultrasound scan
UTI	urinary tract infection
VBAC	vaginal birth after caesarean section
VBG	venous blood gas
VG	volume guaranteed
VE	vaginal examination
VSD	ventriculo-septal defect

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Coombe Women & Infants University Hospital
Ospidéal Ollscoille Ban agus Náionán an Chúim
Excellence in the Care of Women and Babies
Foirfeacht i gCuram Ban agus Naionán

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Foirfeacht i gCúram Ban agus Naíonán