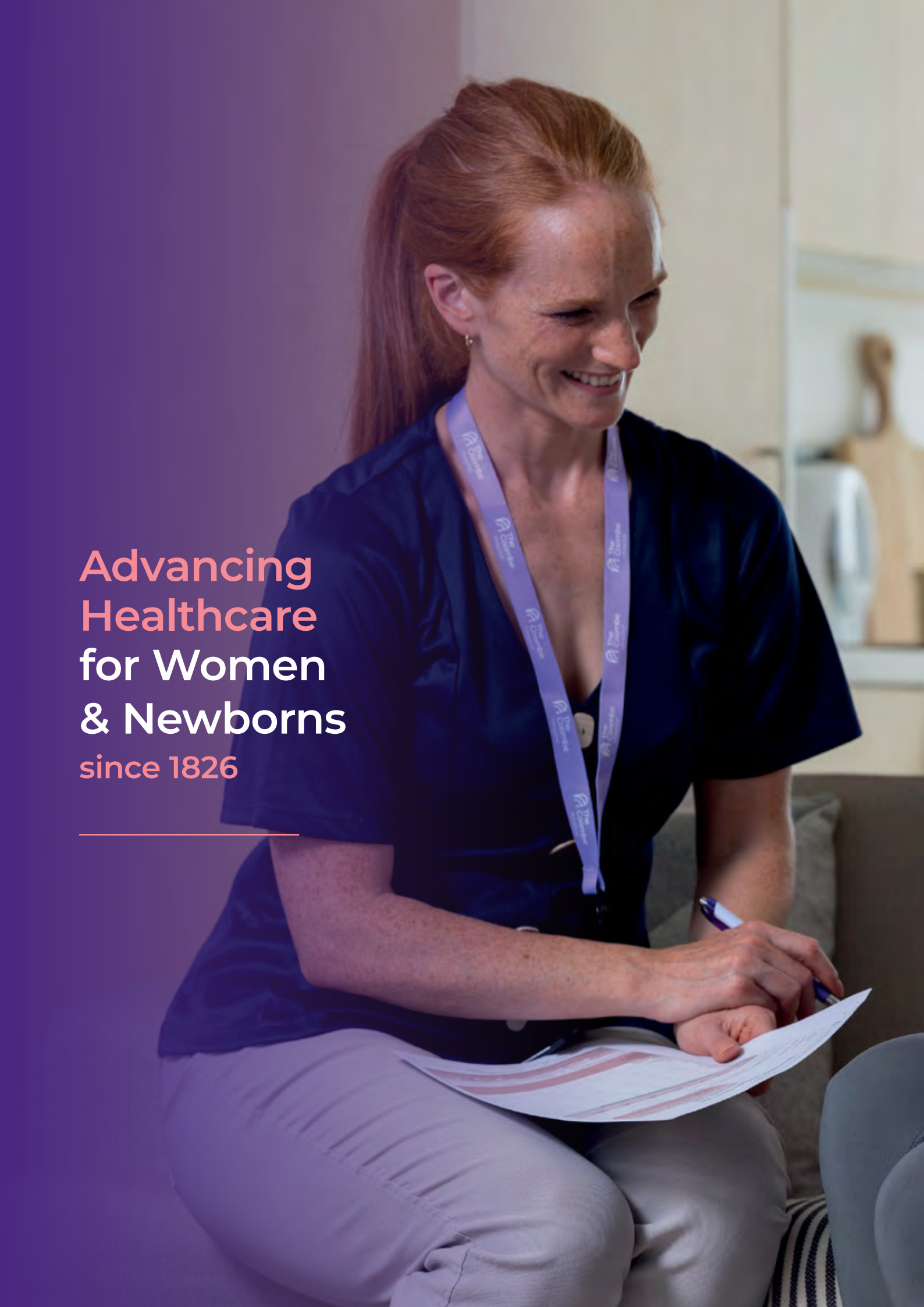
The Coombe Hospital

Annual Report 2022



Advancing Healthcare for Women & Newborns

since 1826

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The Coombe Hospital

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Our History

Our founder, Margaret Boyle, spearheaded the development of our hospital over 200 years ago, because she wanted to ensure that ALL women had access to the healthcare they needed, and deserved.

We've worked hard to deliver on that vision and we now need a confident, professional brand that represents all the elements that make up who we are, our name, reputation, culture and values . A brand that highlights our unique approach to healthcare.

Advancing Healthcare for all women and newborns at The Coombe Hospital.

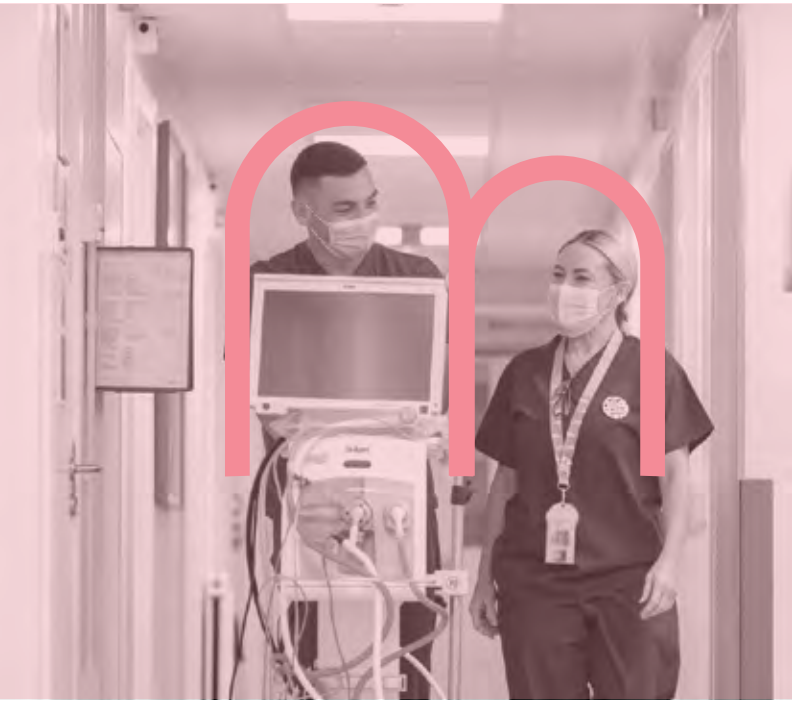
Our Purpose

We provide **specialist care for women and newborns** putting their needs at the heart of everything we do.

Our Vision

To be a nationally and internationally **recognised leader in healthcare** for women, newborns and their families.

Centuries
of Care



Community
of Care

Advancing
HealthCare

Our Values

Empathy for all

We listen to each other in order to understand; we always act with kindness and compassion. This is how we treat each other as colleagues, and it's how we treat every person who walks through our doors.

Teamwork

We all bring unique skills and knowledge to The Coombe and when they are combined, we are at our best. We work as a collective in the best interests of the women, the newborns, the families, staff and all the people who use our services.

Dignity & Respect

We are a diverse team, serving a diverse community. Our different backgrounds, skills and experience make The Coombe a very unique and special place, where we treat everyone with dignity and respect.

People at the heart of everything we do

The women, newborns, families, and all people who use our services are at the heart of everything we do. From a kind word, to a high-tech intervention, we strive to give people the very best possible care, and that's what makes The Coombe a truly human place.

Always striving to be at our best

We're passionate about what we do. We give our very best everyday and learn from our experiences with colleagues and those who use our services. This enables us to continually improve what we do, and how we do it.

We remain the largest provider of benign gynaecology services in Ireland.

The Coombe

Year Review 2022

Introduction from The Master

Professor Michael O'Connell - Hospital Master

It is my great privilege as the 31st Master of The Coombe Hospital to introduce the 2022 Annual Report. The Coombe Hospital has been offering care to women and newborns for 196 years.

In my role as Master, I am indebted to the Executive Management Team (Anna Deasy, Patrick Donohue, Melissa Lawlor, Ann McIntyre, John Robinson, Professor Martin White and AnneMarie Waldron) for their continued support and wise counsel. I am particularly grateful for the support of the Board as a whole, especially the Chair, Mary Donovan.

In 2022, 6,786 women gave birth to babies weighing ≥ 500 grams and we provided care for 134 babies weighing < 1,500 grams at birth or ≤ 29 weeks gestation and our corrected perinatal mortality rate was 3.8 per 1,000 total births.

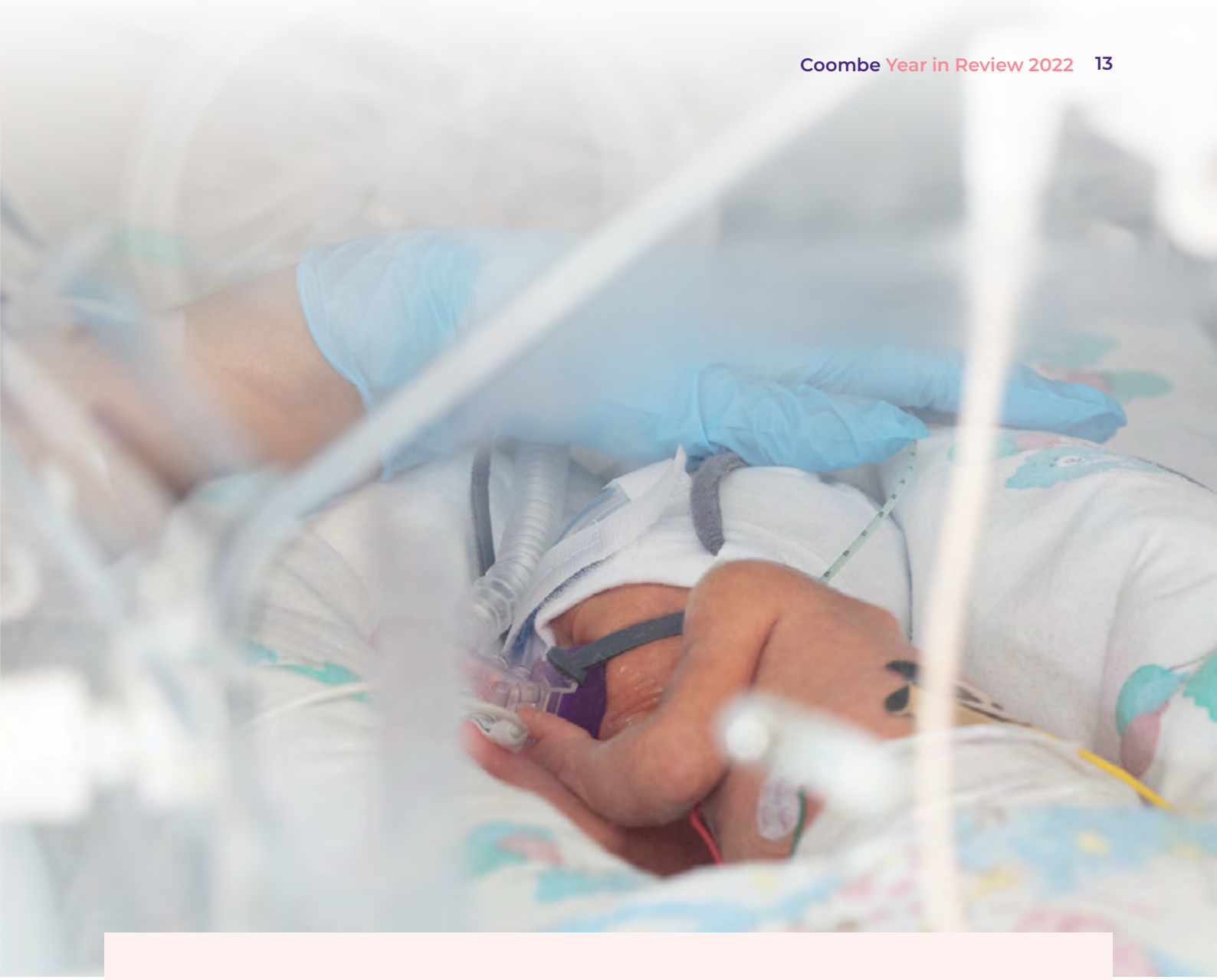
In 2022, we remained the largest provider of benign gynaecology services in Ireland. There were 17,408 gynaecology outpatient clinic attendances, 2,980 of which were in the Women's Health Centre and 6,176 gynaecological surgical procedures were performed.

The management of gynaecology waiting lists continued to be a priority in 2022. Gynaecology inpatient and day case admissions were 8% higher in 2022 when compared with 2019 (pre-COVID-19). The associated waiting list performance remained strong, despite the challenges posed by the COVID-19 pandemic. There was a 74% increase in the number of gynaecology referrals compared with 2019 (pre-COVID-19) and a 34% increase in activity in the outpatient setting.

With the support of the National Treatment Purchase Fund (NTPF) and the HSE Access to Care Plan, a number of initiatives were undertaken by the Hospital to reduce Inpatient, Day case and Outpatient waiting lists.

Twenty-six displaced women from Ukraine were provided care and support (with the assistance of both virtual and in-person interpreting services) in The Coombe Hospital between March and December 2022. Many thanks to Orla Cunningham and Emma Flynn, Team A - O'Connell for providing support to these vulnerable women.

COVID-19 continued to offer a challenge to our services in 2022, with the number of positive cases fluctuating significantly. In late February, for the first time since the start of the pandemic, we had a 48-hour period without any positive inpatient cases. The COVID-19 assessment unit continued to play an important role in the management of the pandemic. As the year progressed, and the positive benefits of the vaccination programme were seen, new guidance allowed for the evolution of the management. The COVID-19 Executive Team adapted the guidance as appropriate for our services. Our screening desk was stood down in October 2022 and despite the fact that the number of positive cases decreased significantly, vigilance was still required due to a small number of unvaccinated pregnant women who continued to pose significant risk to others. In collaboration with Dublin Midlands Hospital Group, The Coombe Hospital progressed a booster vaccination programme in Citywest for pregnant women booked to the Hospital. Great credit is due to all our staff for their expertise, adaptation and resilience throughout the pandemic.



At a glance:

6,786 babies born weighing ≥ 500 grams

134 babies born weighing ≥ 1,500 grams at birth

3.8 per 1,000 perinatal mortality rate

8% increase in inpatient and day case gynaecology admissions

34% increase in activity in the outpatient setting.

74% increase in the number of gynaecology referrals

The first Annual Guinness Day Lecture Series and Dinner since COVID-19 interruptions took place on Friday 14th October. The lecture series was well attended by staff. The lecture series was entitled 'Remembering the past and looking toward the future' at which Professor Michael Turner's significant contribution to all facets of the hospital life was honoured. The series included a number of consultants in obstetrics and gynaecology from The Coombe Hospital and other Dublin hospitals who had previously worked under Professor Turner in a research capacity. The Guinness Lecture was delivered by Professor Eugene Dempsey, Consultant Neonatologist and Professor of Neonatology in Cork University Maternity Hospital. Eugene worked as a consultant neonatologist in The Coombe Hospital between 2005 and 2007 and gave a lecture entitled 'Umbilical cord management at birth: getting the timing right'.

The Annual Guinness Dinner took place in St Patrick's Cathedral with 120 attendees, including clinical staff, management, board members and long serving retirees of the hospital. The cathedral interior was lit with the new Coombe Hospital brand colours.

To coincide with the Annual Guinness Day Lecture Series on 14th October, our new brand, strategy and values were introduced at two townhall meetings. The values and the pillars of the strategy were presented by the Master and members of the Executive Management Team. Promotional items including lanyards, pens and booklets with customised photography explaining the new brand and values were distributed. Staff turnout was high and feedback was very positive. However, this represented the beginning of a 12 to 18-month journey to live the brand and values. An ambitious strategic plan for 2022 – 2026 was launched on the same day. Like all strategies, it's success will be determined by its implementation.

The Coombe Hospital infrastructure continues to be challenging and Phase 1 of 3 of the St Patrick's Ward refurbishment was completed in December 2022. Adaptation of the Perinatal Centre as an interim Emergency Assessment Centre was commenced with the intention of centralising all acute care assessment across the hospital in one area.

The National Cervical Screening Laboratory (NCSL) building was formally handed over to The Coombe Hospital on Friday 14th October 2022. This laboratory will offer the opportunity in the future to have the majority of cervical screening for Irish women analysed in one laboratory in Ireland. Staff recruitment at all levels for the NCSL continued and an interim director was appointed in September 2022. There was a return to service for HPV testing and cytopathology following an INAB accreditation process pending closure of a number of nonconformances. We continue to work closely with the CervicalCheck Programme and the HSE on this important national project.

In November 2022, The Coombe Hospital reinstated a complex menopause clinic which is designed to provide a service for women in the Dublin Midland Hospital Region catchment area. It's noteworthy that this coincided with the 30th anniversary of the establishment of the first menopause clinic in The Coombe Hospital.

Pictured: (L to R) Kevin Donovan, Professor Stephen Lindow, Orla Cunningham (CNS Infectious Diseases) and Professor Michael O'Connell

I wish to acknowledge the massive contribution of 20 of our staff who retired in 2022. They contributed more than 450 years combined service to the women and newborns who attended for care at The Coombe Hospital. We wish them all a long, happy and healthy retirement. I'd like to acknowledge the contribution that Donal Gaynor made to the hospital with over 4,000 psychosexual counselling sessions over his years associated with The Coombe Hospital.

When I started as Master, I made a commitment to walk the Camino Frances over the seven years of the Mastership to raise money for Friends of the Coombe. COVID-19 intervened and this commitment has changed to walking the Camino over five years. In September 2022, a group of seven staff and staff family members began walking the Camino Frances.

Over the course of a week, the team walked from St Jean Pied De Port to Logrono and raised funds for Friends of the Coombe.

My thanks to all who contributed to the Annual Report, in particular Danielle, Emma, Julie, Aoife and Fiona.

I wish to offer my sincere thanks to all our staff who lived our values of empathy for all, teamwork, dignity and respect, people at the heart of everything we do, always striving to be our best during 2022 and ensuring that we fulfilled our purpose of providing specialist care for women and newborns, putting their needs at the heart of everything we do.

Highlights

The Women's Doc

Professor Caroline De Costa, who served as Assistant Master of The Coombe in the 1970s paid a visit to the hospital while in Ireland promoting her new book "The Women's Doc" which was released in 2022. After completing undergraduate and specialist training in Ireland, she returned to Australia and eventually became Australia's first female Professor in Obstetrics and Gynaecology. While training in The Coombe Hospital, she was awarded the first prize and gold medal in the examination in obstetrics for medical students at The Coombe Hospital in 1973. I presented Professor De Costa with a plaque to commemorate her time at The Coombe and congratulate her on her achievements.

First Baby Born 2022

During the course of 2022, I continued daily visits to all wards and a monthly Master's round calling into see all inpatients. All babies who were in the hospital on New Year's Day and Christmas Day were presented with a special Coombe badge and the first-born baby of 2022 was presented with a Master's Commemorative medal.

The Master's Prize

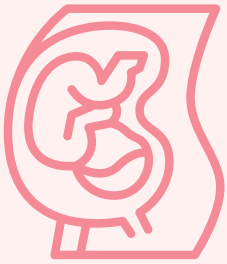
I have continued to grow our links with the European Board and College of Obstetrics and Gynaecology (EBCOG). Our first EBCOG subspecialty trainee in reproductive medicine completed training in December 2022. In November, I examined in the EBCOG examination in Lisbon and it proved a wonderful opportunity to meet in person key EBCOG leadership personnel and to continue our forging of links. By the end of 2022, the hospital had completed an EBCOG inspection for accreditation of maternal fetal medicine subspecialty training and we plan to launch this programme in 2023.

The Master's Prize for Audit and QI presentations was reinstated for the first time since COVID-19 on Tuesday 6th December. Rebecca Salmon was the overall winner with a project entitled "Improved Standards in Red Cell Antibody Testing during Pregnancy in The Coombe Hospital".

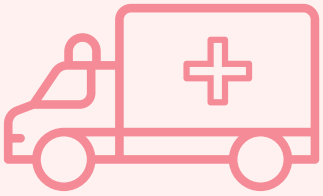
Year In Review 2022

Obstetrics and Newborns

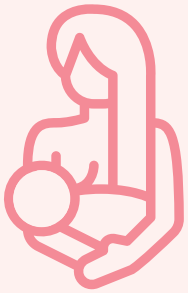
881
Babies were cared for in NICU and SCBU



6,786
Women gave birth

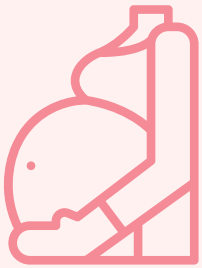


8,730
Emergency room attendances



6,914
Babies were born

4,401
Early pregnancy assessment unit attendances



2,450
Caesarean sections

24,752
Fetal Medicine and Perinatal scans

Gynaecology

17,048
Gynaecology **Outpatient Attendances**

6,176
Gynaecology **Surgical Procedures**

3,616
Uterine Surgical **Procedures**

2,605
Urogynaecology **Attendances** (doubled since 2021 1,057)

1,565 Hysteroscopic Procedures

1,326 Outpatient Hysteroscopy Clinic Attendances

997 Tubal and Ovarian Surgeries

901 Fertility Hub Attendances

178 Vaginal Repairs (Anterior and Posterior)

88 Laparascopic Hysterectomy

80.7% of Hysterectomies were Laparascopic

62 Vaginal Hysterectomy

Laboratory Specimens

362,164
Laboratory Specimens

The focus and aim for 2022 was to grow, protect, support and invest in our midwives and nurses to ensure we retain them.

Director of Midwifery and Nursing Report

Ann MacIntyre

January began with a surge of COVID-19 in the community with that our COVID-19 Assessment Unit and the red zones in St Joseph's Ward and the Delivery Suite were full. The established triage desk continued in the front hall until October 2022 and was supported by our student midwives and our retired midwives with support from the Security Team. This enabled the women and staff to continue to feel safe and protected. The COVID-19 pandemic continues to highlight how flexible, resilient, adaptable, caring and innovative our midwives, nurses, student midwives and healthcare assistants (HCAs) are. Sincere thanks to the ADoMNs, ANP, AMPs, CMMs, CMSs, CNSs, CSFs, CPC Team, HCAs and all the midwives, nurses and student midwives for their support and dedication throughout 2022. Sincere thanks to everyone for keeping our women, newborns and staff safe.

On 19th January the Dublin Midlands Hospital Group (DMHG) Midwifery and Nursing Strategy led by Eileen Whelan, Chief Director of Midwifery and Nursing, was hosted in The Coombe Hospital. The themes discussed covered health and wellbeing, education and research, quality, patient safety and experience, workforce planning, leadership for service delivery and integrated care and digital health technology. Participants included a staff midwife, CMM1, CMM2s, CNM3, CMM3, ADoMN, midwifery and nursing practice development and the DoMN. It was a very interactive meeting that reflected the wonderful passion of the midwives and nurses in The Coombe Hospital.

2022 brought major challenges in our growing shortage of midwifery and nursing staff. Staffing levels were a major concern throughout 2022 and with the support of the Executive Management Team and the Board of Guardians and Directors we continued to recruit worldwide. The support from the Board of Guardians and Directors improved the staffing levels in all areas, and this in turn improved the morale of our staff. The DoMN and midwifery and nursing staff sincerely appreciated the support from The Board.

The support and leadership of the Midwifery Executive Team in recruitment, retention and staff support was exemplary. Retention is vital to ensuring we retain our wonderful skilled, educated and experienced midwives and nurses, this leads to the delivery of quality care and greater teamwork. The focus and aim for 2022 was to grow, protect, support and invest in our midwives and nurses to ensure we retain them. The Midwifery Executive Team worked closely with the Master and the Chief Clinical Operation Officer (CCOO) to support the midwifery and nursing staff with the focus on safety of care for the women, newborns, families and staff.

The governance arrangement of private community midwives who provide homebirth services was transferred from Community Health Organisations to the Acute Hospitals Division. Paula Barry was appointed as Designated Midwifery Officer for The Coombe Hospital catchment area in October 2022.

The staffing challenges were escalated to the DMHG, National Women and Infants Health Programme (NWIHP) and the Nursing and Midwifery Board of Ireland (NMBI) and was recorded on our risk register. There was a crisis in midwifery and nursing staffing, both nationally and internationally. The DoMN continued to be involved in monthly DMHG Maternity Network meetings with a focus on recruitment and retention. Sincere thanks

to the DMHG team for their support and assistance with the Christmas social media recruitment. The three Dublin maternity DoMNs met with Rachel Kenna, Chief Nursing Officer in the Department of Health in November regarding the recruitment and retention of midwives.

> The crucial care that midwives and nurses provide to women and newborns is one of the most valuable resources that we have in The Coombe Hospital.

The care, support and passion given by the midwives, nurses and HCAs is reflected throughout this Annual Report. Their eagerness and enthusiasm to advance healthcare for women and newborns was demonstrated throughout 2022 and the achievements listed in the various clinical reports would not have been possible without the dedication and commitment of all our staff.

Workforce Planning

Vacancies of midwifery and nursing posts ranged from 27 whole time equivalents (WTE) to 55 WTE throughout 2022, giving a Birth Rate Plus ratio of 1:39. Sick leave averaged at 4% and COVID-19 special leave was 5.46% at peak times throughout 2022. The Haddington Road Agreement was implemented during 2022 with an impact of an immediate decrease of 15.5 WTE posts. All this combined, impacted on staffing levels throughout the wards and units. The Human Resources Department supported the midwifery and nursing team to recruit nationally and internationally, utilising six agencies with the support of the Board of Guardians and Directors.

To address staffing levels on the clinical areas the Midwifery Executive Team regularly met with the Master and CCOO. The induction pathway, the Delivery Suite theatre staffing and support structures for staff were reviewed. A business case for theatre staff to cover the Delivery Suite theatre was submitted to the DMHG.

Elaine McGeady was recruited as the ADoM for the Delivery Suite and St Monica's Ward.

To address staffing levels on the clinical areas the Midwifery Executive Team discussed and developed a pathway for a midwife assistant HCA role with a well-defined job description attached to the posts. This was further developed by the Practice Development Team and the Centre of Midwifery Education. Eleven of our student midwives accepted posts as HCA midwife assistants. This was extremely well received on the postnatal wards and the midwives found the role very supportive. At national level, the NWIHP and the HSE Acute Hospitals Division with the DoMNs input are establishing The National Manpower Midwifery Taskforce where midwifery assistant posts (e.g., HCA) are being discussed.

Midwifery and Nursing Education

Approval and funding from the Nursing and Midwifery Planning Development Unit (NMPDU) was secured for 25 midwives and nurses to continue or commence study at diploma, postgraduate diploma, graduate certificate or MSc level in modules in high dependency maternity care, diabetes in pregnancy and obstetric ultrasound. NWIHP and the NMPDU have also supported two cAMP posts in unscheduled care and fetal cardiac ultrasound. Once again sincere thanks to the NMPDU for the funding of the posts and support for all the education and financial support. This financial support is vital for the continued education enabling evidenced based care to be provided to all the women and newborns in The Coombe Hospital.

The theme for International Day of the Midwife 2022 was '100 years of progress - How important it is that we invest in quality midwifery to improve care and achieve best possible outcomes'. The theme for International Day of the Nurse on May 12th was 'A voice to lead - invest in nursing and respect rights to secure global health'. On May 5th International Day of the Midwife, there was a video of The Coombe Hospital midwives and nurses in the front hall and cupcakes and some treats from the canteen for all staff to celebrate and recognise the day. The compassion, commitment and professionalism shown by midwives and nurses reflects the importance

of investing in our staff. Midwifery care is women centred, safe and delivered with dignity and respect.

On May 16th a celebration for The Coombe Hospital midwives and nurses took place in the Rita Kelly Conference Centre. There were presentations on Quality Improvement Projects (QIPs), practice advancement and research from the midwives and nurses in The Coombe Hospital. Each presentation reflected the excellent work that the midwives and nurses in the Coombe strive for and achieved during the pandemic and the staffing challenges throughout 2022.

The NWIHP and the Office of the Nursing and Midwifery Services Director (ONMSD) hosted the National Midwifery Conference, to coincide with International Day of the Midwife, on Thursday 5th May 2022. The conference was attended by ten midwives from The Coombe Hospital. Paula Barry presented on water births in Ireland and the DoMN chaired the morning session. Orla Cunningham and the Master jointly presented on normalising high-risk pregnancies. Professor Trixie Mc Cree, National Midwifery Lead for Continuity of Carer NHS England presented on the care model for improvement of care and retention of staff.

Dr Ethel Burns from Oxford Brookes University visited The Coombe Hospital in August and presented her most recent paper 'Systematic review and meta-analysis to examine intra-partum interventions, and maternal and neonatal outcomes following immersion in water during labour and birth (2022)'. The presentation was attended by midwives, an obstetrician and an obstetric NCHD. We were delighted to re-open our pool in the Delivery Suite during 2022 when the incidence of COVID-19 decreased.

A new PROMPT programme commenced in October. The training has been revised and staff were updated and upskilled in the PROMPT teaching methods. Thanks to NWIHP who supported funding for new equipment for MDT training - a new Mama Natalie mannequin and two PROMPT Flex advanced with tablet. With the installation of Wi-Fi throughout the hospital, iPads for medication management were introduced on all the wards in November and December.

The NMBI visited on the 13th Oct to undertake a clinical learning environment audit for midwifery and nursing students, which occurs every five years. The NMBI team of three met the Master, DoMN, Practice Development Co-ordinator and many of the midwifery and nursing team. They also visited the wards and met with the student midwives. They were very complimentary of the wonderful passion and care that the midwives demonstrated and the friendliness and family atmosphere here in The Coombe Hospital. The Coombe Hospital reached the standard required and was deemed an optimum clinical learning environment for midwifery and nursing students as well as for the candidate midwives undertaking the Adaption Programme.

Fifteen theatre nurses attended the Theatre Study Day in the CME on November 12th, with great feedback from the staff. Topics covered were obstetric emergencies, breastfeeding, neonatal resuscitation, bereavement, difficult airway management and mindfulness tools for self-care.

The lactation consultants, neonatal CN/MSs in breastfeeding, CMM3 community, the antenatal education team and the DoMN met with NWIHP to pilot the self-assessment programme on the National Standards for Infant Feeding and Antenatal Education. The meeting reflected the great work that is being performed in The Coombe Hospital and also gave the team the opportunity to identify any gaps in our service.

The EMT provided funding for four midwives to attend the International Normal Labour and Birth Conference in Aarhus, Denmark in September 2022. Mariapia Dado (CSF) presented a paper entitled 'Women's experiences of water immersion during labour and childbirth in a hospital setting in Ireland'. Our neonatal Newborn Individualised Developmental Care and Assistant Programme (NIDCAP) professional, Mary O'Connor attended the 33rd NIDCAP conference in Germany. Iby Chacko and Lisa Conboy (NICU lactation CM/NS team) attended the 12th European Lactation Consultants Alliance (ELACTA) Conference in Bremen, Germany. They were were runners-up for their oral presentation entitled 'Impact of NICU a dedicated lactation specialist on breastfeeding outcomes of preterm infants – an audit review'. They also submitted a poster presentation entitled 'Giving voices to mothers – expressing breast milk for their preterm infants.' Over €55,000 was received from the HSE for breastfeeding pumps, baby cots and supports for the education of mothers and staff on the wards and the Neonatal Unit. Parent education staff attended a hypnobirthing training programme.

Quality Improvement Programme (QIP) and Risk Issues

The DoMN in collaboration with the Midwifery Executive Team commenced performance review meetings. The DoMN continues the positive performance management meetings with the ADoMNs individually with the purpose of rolling out the reviews to the clinical midwifery managers and staff. Staff have requested feedback and guidance on career pathways within The Coombe Hospital. The DoMN was invited by the NWIHP to join the National Professional Development Oversight Group.

The Community Midwifery Team commenced work on the development of a safe pathway for pregnant women seeking International Protection in the Citywest hub.

Throughout this Annual Report our values of empathy, teamwork, always striving to be at our best, people at the heart of what we do, dignity and respect are continually evidenced.

Retention is vital going forward so that we ensure we retain our wonderful skilled, educated and experienced midwives and nurses which leads to the delivery of quality care and greater teamwork. Staff turnover is expensive, recruiting and training new staff costs time and money. The loss of midwives and nurses means we lose valuable knowledge and experience and it also leads to low morale among staff. We need to grow, protect, support and invest in our midwives and nurses to ensure we retain them.

Dublin Maternity Hospitals - Combined Clinical Data

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

1. Women who attended The Coombe Hospital in pregnancy

	n
Women who gave birth to babies weighing ≥ 500 grams	6,786
Women who gave birth to babies weighing < 500 grams (including miscarriages)*	490
Gestational trophoblastic disease	7
Ectopic pregnancies	124
Total	**7,407**

** does not include all spontaneous miscarriages*

2. Maternal deaths, n = 0

3. Babies born weighing ≥ 500g

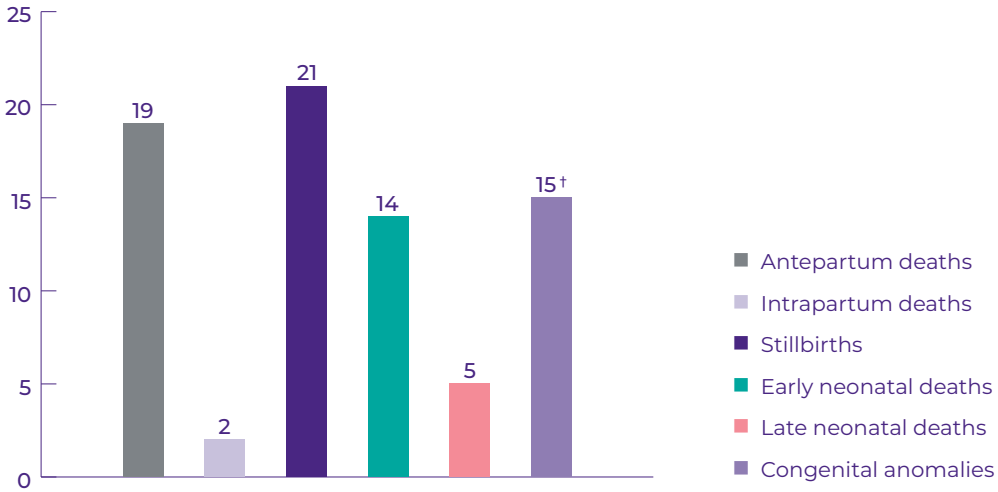
	n
Singletons	6,657
Twins*	254
Triplets	3
Quadruplets	0
Total	**6,914**

** excludes 2 babies weighing < 500g*

4. Obstetric outcome

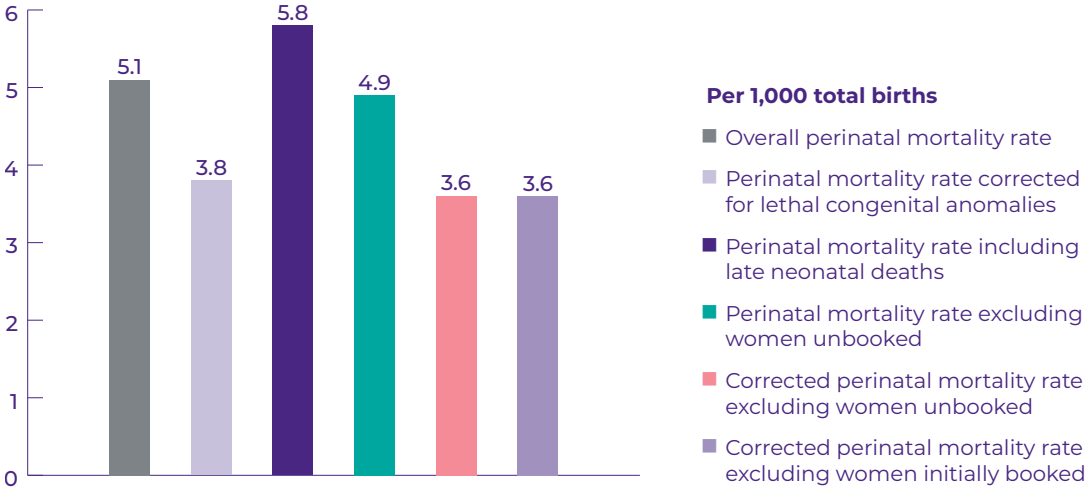
	%
Spontaneous vaginal birth	51.6
Forceps	3.7
Vacuum	8.8
Caesarean section	36.1
Induction of labour	42.0

5. Perinatal deaths ≥ 500g*



** excludes terminations of pregnancy and outborn babies*
† 5 stillbirths, 7 early neonatal deaths and 3 late neonatal deaths

6. Perinatal mortality rates



7. Age

Age at delivery (years)	Nulliparous (n)	Parous (n)	Total (n)	Total (%)
< 20	80	11	91	1.3
20 - 24	351	186	537	7.9
25 - 29	558	557	1,115	16.4
30 - 34	1,019	1,261	2,280	33.6
35 - 39	601	1,541	2,142	31.6
≥ 40	192	429	621	9.2
Total	**2,801**	**3,985**	**6,786**	**100.0**

8. Parity

Parity	Nulliparous (n)	Parous (n)	Total (n)	Total (%)
Para 0	2,801		2,801	41.3
Para 1		2,417	2,417	35.6
Para 2 - 4		1,483	1,483	21.8
Para 5+		85	85	1.3
Total	**2,801**	**3,985**	**6,786**	**100.0**

9. Country of birth and nationality

	n	%
Republic of Ireland	4,717	69.5
Britain	184	2.7
EU	617	9.1
Rest of Europe (including Russia)	157	2.3
Middle East	45	0.7
Rest of Asia	595	8.8
Americas	198	2.9
Africa	248	3.6
Australasia	21	0.3
Uncoded	4	0.1
Total	**6,786**	**100.0**

10. Birth weight

Birth weight (grams)	Nulliparous (n)	Parous (n)	Total (n)	Total (%)
500 - 999	24	26	50	0.7
1,000 - 1,499	33	16	49	0.7
1,500 - 1,999	58	48	106	1.5
2,000 - 2,499	141	180	321	4.7
2,500 - 2,999	438	564	1,002	14.5
3,000 - 3,499	1,031	1,368	2,399	34.7
3,500 - 3,999	867	1,374	2,241	32.4
4,000 - 4,499	235	422	657	9.5
4,500 - 4,999	26	61	87	1.3
≥ 5,000	1	1	2	0.0
Total	**2,854**	**4,060**	**6,914**	**100**

11. Gestational age

Gestational age (weeks)	Nulliparous (n)	Parous (n)	Total (n)	Total (%)
< 26^{+0}	9	14	23	0.4
26^{+0} - 29^{+6}	33	17	50	0.7
30^{+0} - 33^{+6}	49	57	106	1.5
34^{+0} - 36^{+6}	172	232	404	5.8
37^{+0} - 41^{+6}	2,570	3,721	6,291	91.0
≥ 42^{+0}	21	19	40	0.6
Total	**2,854**	**4,060**	**6,914**	**100.0**

12. Perineal injury after spontaneous vaginal birth (SVB)

Perineal injury after SVB	Nulliparous* n (%)	Parous* n (%)	Total* n (%)
Episiotomy	406 (37.2)	175 (7.3)	581 (16.6)
First degree tear	149 (13.7)	493 (20.5)	642 (18.3)
Second degree tear	507 (46.5)	761 (31.6)	1,268 (36.2)
Third degree tear	21 (1.9)	18 (0.7)	39 (1.1)
Fourth degree tear	0	0	0
Lacerations	702 (64.4)	1,164 (48.3)	1,866 (53.3)
Intact	39 (3.6)	562 (23.3)	601 (17.2)
Total SVB (n)	**1,090**	**2,409**	**3,499**

** may be recorded in more than one category*

13. Third degree tears

Third degree tears	Nulliparous (n)	Parous (n)	Total* (n)	Total * (%)
Occurring spontaneously	21	18	39	48.8
Associated with episiotomy	29	4	33	41.3
Associated with forceps	14	3	17	21.3
Associated with vacuum	15	4	19	23.8
Associated with vacuum and forceps	5	0	5	6.3
Associated with OP† position	4	2	6	7.5
Total (n)	**55**	**25**	**80**	

** percentage of all third degree tears; third degree tears may be recorded in more than one category † occipito posterior position*

14. Perinatal mortality in normally formed stillborn infants, n = 15

	Nulliparous (n)	Parous (n)	Total (n)
Specific placental conditions	3	1	4
Mechanical	1	0	1
Placental abruption	1	2	3
Infection	1	0	1
Twin to twin transfusion syndrome	0	0	0
Spontaneous preterm labour	0	0	0
Maternal disorder	0	2	2
Unexplained	1	0	1
Autopsy results unavailable/coroner	2	1	3
Total (n)	**9**	**6**	**15**

15. Perinatal deaths in infants with congenital anomalies*

	Nulliparous (n)	Parous (n)	Total (n)
Chromosomal anomaly	1	5	6
Renal anomaly	1	2	3
Cardiac anomaly	1	0	1
Multiple anomalies	1	0	1
Musculoskeletal anomaly	0	1	1
Total (n)	**4**	**8**	**12**

**5 stillbirths and 7 early neonatal deaths*

16. Early and late neonatal deaths ≥ 500g*

	Nulliparous (n)	Parous (n)	Total (n)
Congenital anomaly	4	6	10
Extreme prematurity/sepsis	2	3	5
Prematurity/intraventricular haemorrhage	1	0	1
Prematurity/born before arrival/unbooked	0	0	0
Twin to twin transfusion syndrome	1	0	1
COVID-19 placentitis	0	0	0
Multiorgan failure, preterm birth due to abruption	0	1	1
Postnatal diagnosis at CHI – Crumlin (LNND)	1	0	1
Total (n)	**9**	**10**	**19**

**14 early neonatal deaths and 5 late neonatal deaths*

17. Overall perinatal autopsy rate 54%

18. Hypoxic ischaemic encephalopathy (Grade II and III) inborn infants, n = 10

19. Severe maternal morbidity, n = 31

Severe maternal morbidity	Nulliparous (n)	Parous (n)	Total (n)
Major obstetric haemorrhage*	7	11	18
Renal or liver dysfunction	1	2	3
Pulmonary embolism	0	3	3
Sickle cell crisis	2	0	2
Septic shock	0	0	0
Uterine rupture	0	0	0
Other	3	2	5
Intensive care unit admission†	4 (4)	2 (2)	6 (6)
Peripartum hysterectomy	0	0	0

**Defined as an estimated blood loss ≥ 2.5 litres*

† numbers followed by a number in brackets indicate that the woman is already included in another category


The women, newborns, families, and all people who use our services are at the heart of everything we do.


The Coombe Hospital

The percentage of women booking born outside the EU or the UK has risen from 12.9% in 2016 to a peak of 21.2% in 2022. This reflects the evolution of a multicultural society in Ireland.

Section 1

Obstetrics and Midwifery

1.1 General Obstetric Medical Report

Professor Michael O'Connell

The number of women who gave birth to babies weighing greater than or equal to 500g in The Coombe Hospital decreased from 7,594 in 2021 to 6,786 in 2022 (Table 1.1.1). In 2022, 6,914 babies weighing greater than or equal to 500g were born in The Coombe Hospital compared with 7,176 in 2021 (Appendix One). This was the lowest number of births at The Coombe Hospital since 1998. This falling birth rate was reflected nationally. Contributing factors are difficult to ascertain with any degree of certainty.

The COVID-19 pandemic is likely to have impacted to some extent on this fall. Also, termination of pregnancy and its acceptance is likely to have had an impact on the birth rate. The number of multiple pregnancies decreased from a peak of 197 in 2017 to 120 in 2021, with an increase of nine in 2022 (Table 1.1.1). The number of multiple births was significantly impacted with the curtailment of assisted reproductive technology during the COVID-19 pandemic. While the increase seen in 2022 is small, it will be interesting to review future trends.

The rate of hypoxic ischaemic encephalopathy (HIE) (grades II and III) in infants was 1.45 per 1,000 livebirths in 2022 (Appendix One). Between 2016 and 2022, the lowest rate of HIE occurred in 2016 (0.71 per 1,000 livebirths). A small increase or decrease in absolute numbers can have a disproportionate impact on HIE rates.cIn 2022, 50% of the HIE cases were associated with sentinel events. Twenty percent (2/10) were associated with placental abruptions.

In 2022, the overall perinatal mortality rate (PMR) was 5.1 per 1,000 total births (Appendix One). The increase in PMR in 2022 was due to an increase in the number of early neonatal deaths. The Omicron variant of SARS-CoV-2 did not have the same impact as the Delta variant on perinatal mortality. This may have been due to the impact of prior infection and vaccination by the time the Omicron variant emerged. The corrected PMR was 3.8 per 1,000 total births (Appendix One). The corrected PMR excluding women initially booked elsewhere was 3.6 per 1,000 total births (Appendix One). The adjusted PMR of normally formed babies ≥ 34 weeks' gestation weighing ≥ 2.5kg was 1.7 per 1,000 (Appendix One). This rate peaked in 2022 and between 2016 and 2022 reached a nadir of 0.3 per 1,000. As with HIE rates a small increase or decrease in absolute numbers can also have a disproportionate impact on PMRs. Therefore, it is important not to look at the PMR of a particular year in isolation. Overall trends in PMR are a better reflection of obstetric and neonatal practice than PMRs in a single year.

The perinatal autopsy rate at The Coombe Hospital increased following the enactment of the Coroners (Amendment) Act 2019 when the mandatory reporting of any death of a stillborn child or infant death became a legal requirement. It was 48% in 2019, 64% in 2020, 71% in 2021 and fell to 54% in 2022.

There are discrepancies in the numbers of women reported with specific conditions in different sections of this Annual Report. This is due to different definitions used in reporting. The National Perinatal Epidemiology (NPEC) reports women with liver or renal dysfunction whilst The Coombe Hospital reports women with pre-eclampsia. Two women met the criteria for pre-eclampsia but did not meet the criteria for liver or renal dysfunction and were classified as 'other' by NPEC.

Table 1.1.1 Women who attended The Coombe Hospital in pregnancy, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Women who booked (n)	8,647	8,653	8,608	8,284	7,916	7,691	7,324
Women who gave birth to babies ≥ 500g (n)	8,233	7,975	8,154	7,746	7,405	7,594	6,786
Women with multiple pregnancies (n)	192	197	188	187	161	120	129

The general demographic characteristics of women who attended The Coombe Hospital between 2016 and 2022 have changed (Table 1.1.2). The percentage of women booking born outside the EU or the UK has risen from 12.9% in 2016 to a peak of 21.2% in 2022. This reflects the evolution of a multicultural society in Ireland. Between March 2022 and the end of December 2022, 26 pregnant women from the Ukraine were cared for, with the assistance of both virtual and in-person interpreting services. The percentage of women greater than or equal to 40 years of age at booking increased from 6.9% in 2016 to 8.9% in 2022. This reflects a societal trend toward delaying childbearing until a later age.

Table 1.1.2 Women's profile at booking - general demographic factors, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n = 7,324
Born in Republic of Ireland (%)	68.9	70.1	69.1	68.4	70.9	69.4	66.8	4,889
Born in rest of EU (%)	15.4	13.1	12.7	12.4	10.5	9.8	8.7	639
Born in Britain (%)	2.6	2.8	3.0	2.8	2.8	3.1	3.3	243
Born outside EU and Britain (%)	12.9	13.9	15.1	16.3	15.7	20.8	21.2	1,551
Country of birth unknown (%)	0.2	0.1	0.1	0.1	0.1	0.0	0.0	2
Resident in Dublin (%)	63.3	62.6	63.0	62.2	62.4	62.5	62.0	4,544
< 18 years (%)	0.6	0.3	0.3	0.3	0.4	0.3	0.3	24
≥ 40 years (%)	6.9	7.2	7.3	7.5	8.0	8.4	8.9	655
Unemployed (%)	21.5	20.5	19.5	18.4	17.2	18.2	16.9	1,237
Communication difficulties reported at booking (%)	5.7	6.1	5.1	4.8	3.2	3.1	3.7	272

All categories of body mass index (BMI) apart from healthy BMI and underweight BMI have been increasing since 2016 (Table 1.1.3). Since 2019, there has been an increase in the percentage of women that were overweight or obese compared with the percentage of women with a healthy BMI or indeed with underweight BMI combined. This has a significant impact on service delivery in terms of transferring women from supportive care models to assisted or high-risk models of care. This is associated with an increased incidence of gestational diabetes mellitus which in turn is associated with increased rate of induction of labour and Caesarean section. Morbidity associated with these interventions are also increased in this cohort of women.

The proportion of nulliparous women at booking increased from 39.3% in 2021 to 43.8% in 2022, the highest between 2016 and 2022 (Table 1.1.3). This increase in the nulliparous rate is reflective of a confidence in a service provided but creates challenges because the provision of care for nulliparous women is more intensive than care for parous women.

In Ireland, cervical screening is recommended from the age of 25 years. The number of women booking who have never had a cervical smear increased from 19.1% in 2016 to 22.9% in 2022 (Table 1.1.3). This increase is likely to be accounted for as cervical screening was either on hold or significantly decreased during Covid-19 pandemic. During this time period the percentage of women who gave birth in The Coombe Hospital under the age of 25 years decreased from 10.7% in 2016 to 9.2% in 2022 (Appendix One). There is an opportunity to educate and encourage this cohort of women to avail of cervical screening when appropriate.

The percentage of women with a history of mental health conditions increased from 16.7% in 2016 to 24.6% in 2022 (Table 1.1.3). It is difficult to know if this is due to less stigma associated with reporting or a true increase in rates.

The percentage of women at booking with two or more previous CS has increased from 4.0% in 2016 to 4.6% in 2022. In contrast, the percentage of women at booking with one previous CS decreased from a peak of 14.1% in 2020 to 13.4% in 2022 (Table 1.1.3).

Table 1.1.3 Women's profile at booking - general history, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n = 7,324
BMI underweight: < 18.5 kg/m^2 (%)	1.6	1.7	1.6	1.4	1.4	1.3	1.8	132
BMI healthy: 18.5 - 24.9 kg/m^2 (%)	50.7	49.3	48.1	47.1	45.0	44.1	43.9	3,215
BMI overweight: 25 - 29.9 kg/m^2 (%)	29.3	29.7	30.3	31.0	29.7	31.7	30.9	2,262
BMI obese class 1: 30 - 34.9 kg/m^2 (%)	11.9	12.3	12.7	13.0	13.0	14.2	14.8	1,087
BMI obese class 2: 35 - 39.9 kg/m^2 (%)	4.4	4.5	4.9	4.9	4.6	5.5	5.4	394
BMI obese class 3: ≥ 40 kg/m^2 (%)	1.8	2.3	2.1	2.4	2.4	2.8	2.6	192
Unrecorded (%)	0.2	0.2	0.3	0.2	3.9	0.5	0.6	42
Para 0 (%)	40.7	41.1	41.8	42.0	40.4	39.3	43.8	3,209
Para 1 - 4 (%)	57.8	57.9	57.0	56.9	58.5	59.4	55.0	4,028
Para 5$^+$ (%)	1.4	1.0	1.2	1.1	1.1	1.3	1.2	87

Unplanned pregnancy (%)	27.6	26.6	26.9	25.7	24.5	25.3	25.8	1,887
No preconceptual folic acid (%)	52.9	49.6	51.4	52.0	50.0	49.0	49.3	3,609
Current smoker (%)	10.0	9.4	9.5	8.9	8.0	7.7	7.0	510
Current alcohol consumption (%)	1.0	0.7	0.7	0.5	0.3	0.4	0.2	16
Taking illicit drugs/methadone (%)	0.2	0.3	0.2	0.2	0.2	0.3	0.1	7
Illicit drugs/methadone ever (%)	8.0	7.5	7.8	7.9	7.6	7.7	7.0	510
Giving history of domestic violence (%)	0.9	0.9	1.1	1.0	1.0	0.9	0.9	64
Cervical smear never performed (%)	19.1	19.2	20.0	19.9	19.4	21.3	22.9	1,677
History of psychiatric/ psychological illness/disorder (%)	16.7	18.5	21.1	21.0	23.4	23.9	24.6	1,800
History of postnatal depression (%)	4.4	4.6	4.1	4.1	4.5	4.0	4.0	295
Previous perinatal death (%)	1.5	1.7	1.5	1.5	1.5	1.6	1.5	109
Previous infant < 2,500g (%)	4.7	5.9	4.9	5.4	5.0	5.6	4.9	362
Previous infant < 34 weeks (%)	2.1	2.6	2.1	2.3	2.1	2.6	2.4	176
One previous Caesarean section (%)	12.7	12.7	12.7	13.5	14.1	13.9	13.4	983
Two or more previous Caesarean sections (%)	4.0	4.2	4.6	3.9	4.4	4.4	4.6	334

The profile of women who gave birth to babies weighing greater than or equal to 500g remained relatively unchanged between 2016 and 2022 (Table 1.1.4). No women developed eclampsia in 2022 or in the previous five years. The proportion of women with gestational diabetes mellitus (GDM) peaked at 12.0% in 2019 and decreased from 11.7% in 2021 to 10.9% in 2022.

Table 1.1.4 Women's profile in index pregnancy (women who gave birth to babies ≥ 500g), 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n = 6,786
Pregnancy induced hypertension (%)	7.3	6.8	6.8	6.2	6.1	7.1	6.7	453
Pre-eclampsia (%)	2.8	2.7	2.3	2.6	2.2	2.0	2.4	161
Eclampsia (%)	0.05	0.0	0.0	0.0	0.0	0.0	0.0	0
Type 1 diabetes mellitus (%)	0.3	0.4	0.4	0.4	0.2	0.4	0.4	26
Type 2 diabetes mellitus (%)	0.2	0.3	0.3	0.2	0.2	0.3	0.3	23
Gestational diabetes mellitus (%)	8.4	9.7	10.4	12.0	8.7	11.7	10.9	739
Placenta praevia (%)	0.4	0.4	0.6	0.4	0.5	0.4	0.4	29
Placental abruption (%)	0.2	0.1	0.4	0.3	0.3	0.3	0.2	14
Antepartum haemorrhage (%)	5.7	5.3	4.8	4.2	4.2	4.0	9.9	669
Haemolytic antibodies (%)	0.6	0.4	0.6	0.4	0.6	0.7	0.6	38
Hepatitis C (%)	0.4	0.3	0.2	0.2	0.1	0.2	0.1	6
Hepatitis B (%)	0.4	0.2	0.3	0.2	0.3	0.2	0.2	11
HIV (%)	0.2	0.2	0.1	0.2	0.1	0.2	0.2	13
Sickle cell trait (%)	0.4	0.2	0.4	0.3	0.3	0.2	0.2	14
Sickle cell anaemia (%)	0.05	0.03	0.05	0.1	0.1	0.06	0.1	8
Thalassaemia trait (%)	0.3	0.4	0.3	0.2	0.3	0.2	0.2	11
Delivery < 28 weeks (%)	0.5	0.5	0.5	0.7	0.5	0.7	0.7	48
Delivery < 34 weeks (%)	2.1	2.2	2.1	2.3	2.1	2.4	2.3	155
Delivery < 38 weeks (%)	13.9	14.5	15.5	16.7	15.4	16.6	16.5	1,123
Delivery < 1,500g (%)	1.3	1.4	1.1	1.4	1.1	1.5	1.4	94
Delivery < 2,500g (%)	6.1	6.6	6.6	6.7	6.2	6.1	6.9	467
Unbooked women (%)	0.7	1.0	1.1	1.1	1.0	1.1	1.2	81
Caesarean section (%)	31.3	31.8	33.8	33.8	32.8	35.5	36.1	2,450
Admissions to HDU (%)	2.0	2.2	2.0	2.2	2.0	1.9	1.8	119
Severe maternal morbidity (%)	0.8	0.7	0.8	1.0	0.6	0.5	0.5	33
Uterine rupture (n)	0	3	2	0	1	2	0	0
Maternal deaths (n)	0	0	1	0	0	0	0	0

The rate of induction of labour in 2022 was 42.0% (Table 1.1.5). This rate has gradually increased since 2016 (33.9%) with a higher increase in nulliparous women compared with parous women (Table 1.1.6). The increased PMR associated with the Delta variant of SARS-CoV-2 in 2021 certainly contributed to the increase in 2021. There was uncertainty about the potential impact of the Omicron variant in 2022.

Table 1.1.5 Labour, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n = 6,786
Induction of labour (%)	33.9	34.8	37.0	38.2	38.9	40.8	42.0	2,848
Epidural analgesia in labour (%)	37.8	39.7	40.6	40.8	41.7	41.0	40.2	2,731
Prolonged labour (%)	3.4	3.4	2.9	3.5	4.0	3.5	3.5	236
Fetal blood sampling (%)	10.5	8.8	7.2	5.5	4.4	3.3	3.0	205

Table 1.1.6 Labour according to parity, 2016 to 2022

Nulliparous	2016	2017	2018	2019	2019	2019	2022	n = 2,801
Induction of labour (%)	42.8	42.7	45.3	46.3	47.2	51.2	51.9	1,454
Epidural analgesia in labour (%)	55.8	56.8	57.9	58.1	58.9	59.6	57.3	1,604
Prolonged labour (%)	7.3	7.3	4.1	7.0	8.4	8.0	7.3	206
Parous	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**n = 3,985**
Induction of labour (%)	27.9	29.4	30.9	32.4	33.1	34.0	35.0	1,394
Epidural analgesia in labour (%)	25.8	27.8	28.1	28.6	29.7	29.0	28.3	1,127
Prolonged labour (%)	0.9	0.8	1.3	0.8	1.0	0.5	0.8	30

The total spontaneous vaginal birth (SVB) rate was 51.6% in 2022, compared to 54.5% in 2016 and 51.8% in 2018 (Table 1.1.7). The SVB rate in nulliparous women was 38.9% in 2022, compared to 36.9% in 2018 and 40.0% in 2020 (Table 1.1.7). The total instrumental birth rate in 2022 was 12.5% compared with 14.9% in 2017 and 12.0% in 2021 (Table 1.1.7). The total forceps rate decreased from 5.3% in 2016 and 2017 to 3.5% in 2020 and 2021 and increased slightly to 3.7% in 2022 (Table 1.1.7). The CS rate increased in both nulliparous and parous women in 2022.

Table 1.1.7 Mode of delivery according to parity, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Nulliparous							
Spontaneous vaginal birth (%)	38.9	37.8	36.9	39.2	40.0	39.3	38.9
Forceps (%)	11.5	11.0	9.7	8.4	7.4	7.6	7.7
Vacuum (%)	16.9	17.6	18.1	14.3	19.4	17.7	16.9
Caesarean section (%)	33.2	34.0	35.7	34.4	33.4	35.5	36.6
Parous							
Spontaneous vaginal birth (%)	64.9	64.3	62.7	63.2	63.0	61.1	60.5
Forceps (%)	1.2	1.4	1.2	1.1	1.0	0.8	0.9
Vacuum (%)	3.9	4.1	3.8	2.6	3.9	2.6	3.1
Caesarean section (%)	30.0	30.3	32.4	33.3	32.4	35.5	35.7
Total							
Spontaneous vaginal birth (%)	54.5	53.4	51.8	54.3	53.6	52.5	51.6
Forceps (%)	5.3	5.3	4.8	4.3	3.5	3.5	3.7
Vacuum (%)	9.1	9.6	9.8	7.8	10.2	8.5	8.8
Caesarean section (%)	31.3	31.8	33.8	33.8	32.8	35.5	36.1

The episiotomy rate in nulliparous women increased from 32.0% in 2016 to a peak on 37.7% in 2021 and decreased to 36.4% in 2022 (Table 1.1.8). The rate in parous women ranged from 4.4% in 2016 and 6.9% in 2020.

Table 1.1.8 Episiotomy (total deliveries), 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n
Nulliparous (%)	32.0	34.5	33.8	32.2	34.6	37.7	36.4	1,021
Parous (%)	4.4	6.4	6.4	5.2	6.9	6.3	6.6	263
Total (%)	**15.5**	**17.9**	**17.9**	**17.2**	**18.2**	**18.6**	**18.9**	**1,284**

Obstetric anal sphincter injuries (OASIS) include third degree and fourth degree perineal tears. OASIS rates in all deliveries in 2022, according to parity are presented in Table 1.1.9. Tables 1.1.10 and 1.1.11 present third degree and fourth degree perineal tear rates using all deliveries and vaginal deliveries as the denominators, respectively. Both rates were the same in 2020 and 2022 and both were lower than the rates in 2021.

Table 1.1.9 Obstetric anal sphincter injuries (all deliveries, including CS) according to parity, 2022

All deliveries	Nulliparous	Parous	Total
Third degree tears, n (%)	55 (2.0)	25 (0.6)	80 (1.2)
Fourth degree tears, n (%)	3 (0.1)	0	3 (0.04)
Total, n (%)	**58 (2.1)**	**25 (0.6)**	**83 (1.2)**

Table 1.1.10 Obstetric anal sphincter injuries (all deliveries, including CS), 2016 to 2022

All deliveries	2016	2017	2018	2019	2020	2021	2022
Third degree tears, n (%)	147 (1.8)	110 (1.4)	139 (1.7)	92 (1.2)	87 (1.2)	107 (1.4)	80 (1.2)
Fourth degree tears, n (%)	11 (0.1)	3 (0.04)	7 (0.1)	3 (0.04)	5 (0.07)	2 (0.03)	3 (0.04)
Total, n (%)	**158 (1.9)**	**113 (1.4)**	**146 (1.8)**	**95 (1.2)**	**92 (1.2)**	**109 (1.4)**	**83 (1.2)**

Table 1.1.11 Obstetric anal sphincter injuries (vaginal deliveries only), 2016 to 2022

Vaginal deliveries	2016	2017	2018	2019	2020	2021	2022
Third degree tears, n (%)	147 (2.6)	110 (2.0)	139 (2.6)	92 (1.8)	87 (1.7)	107 (2.2)	80 (1.8)
Fourth degree tears, n (%)	11 (0.2)	3 (0.1)	7 (0.1)	3 (0.1)	5 (0.1)	2 (0.04)	3 (0.1)
Total, n (%)	**158 (2.8)**	**113 (2.1)**	**146 (2.7)**	**95 (1.9)**	**92 (1.9)**	**109 (2.2)**	**83 (1.9)**

The rate of shoulder dystocia in 2021 and 2022 was 0.5%, the lowest rate between 2016 and 2022 (Table 1.1.12). It is difficult to draw meaningful conclusions about trends in the numbers of deliveries complicated by shoulder dystocia when the numbers are low (Table 1.1.13).

Table 1.1.12 Shoulder dystocia, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Women, n (%)	53 (0.6)	51 (0.6)	65 (0.8)	51 (0.7)	73 (1.0)	40 (0.5)	32 (0.5)

Table 1.1.13 Shoulder dystocia according to parity and birthweight, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n
Nulliparous (%)	0.8	0.5	0.8	0.8	1.4	0.7	0.3	9
Parous (%)	0.6	0.8	0.8	0.7	0.7	0.4	0.6	23
Mothers of babies < 4kg (%)	0.4	0.3	0.5	0.4	0.6	0.4	0.3	18
Mothers of babies ≥ 4kg (%)	2.0	2.7	2.6	2.6	3.2	1.4	1.9	14

The total rate of primary postpartum haemorrhage (1˚ PPH) has continued to decrease since 2020 (Table 1.1.14). The rate of 1˚ PPH in twin pregnancy decreased from 50.4% in 2021 to 46.9% in 2021. In nulliparous women it decreased from 75.6% in 2021 to 58.2% in 2022. The rates of 1˚ PPH in other categories increased from 2021 to 2022.

Table 1.1.14 Primary postpartum haemorrhage (1˚ PPH), 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n
Total 1˚ PPH (%)	18.0	21.9	21.6	21.8	22.7	21.9	21.7	1,596
Spontaneous labour								
Nulliparous (%)	15.1	18.2	18.2	16.7	18.2	19.4	20.0	182
Parous (%)	8.4	8.8	9.4	9.7	10.3	7.6	11.3	157
Total (%)	**11.0**	**12.6**	**13.1**	**12.6**	**13.5**	**12.2**	**14.8**	**339**
Induced labour								
Nulliparous (%)	25.3	30.8	29.9	30.7	29.7	31.6	32.3	470
Parous (%)	10.9	12.1	13.3	12.2	12.4	9.8	12.6	176
Total (%)	**18.2**	**21.5**	**21.9**	**21.5**	**21.0**	**20.6**	**22.7**	**646**
Spontaneous vaginal birth								
Nulliparous (%)	10.2	11.5	11.9	12.3	11.6	11.4	12.9	141
Parous (%)	6.3	7.4	7.7	8.0	7.9	5.7	8.3	201
Total (%)	**7.4**	**8.6**	**9.0**	**9.4**	**9.0**	**7.4**	**9.8**	342
Forceps								
Nulliparous (%)	19.4	29.6	31.2	28.7	30.5	40.1	39.4	85

Parous (%)	21.3	16.4	15.3	16.7	32.4	17.9	28.6	10
Total (%)	**19.6**	**27.5**	**28.8**	**26.9**	**30.8**	**36.8**	**37.8**	**95**
Vacuum								
Nulliparous (%)	13.3	16.7	13.4	20.7	21.1	22.1	22.6	107
Parous (%)	8.7	10.4	11.0	5.2	15.2	10.8	11.4	14
Total (%)	**12.1**	**15.2**	**12.9**	**17.7**	**19.8**	**20.0**	**20.3**	**121**
Caesarean section								
Nulliparous (%)	43.2	50.0	45.6	48.0	49.8	49.1	49.2	504
Parous (%)	34.1	41.8	38.5	38.0	41.8	37.8	37.6	536
Total (%)	**38.0**	**45.3**	**42.8**	**42.2**	**45.1**	**42.2**	**42.4**	**1,040**
Caesarean section by priority status								
Elective (%)	32.7	40.9	36.5	36.9	39.2	36.6	36.1	504
Emergency (%)	43.7	50.1	49.3	48.3	52.7	50.2	50.9	536
Total (%)	**38.0**	**45.3**	**42.8**	**42.2**	**45.1**	**42.2**	**42.4**	**1,040**
Twin pregnancy								
Nulliparous (%)	50.6	60.5	58.1	51.8	70.4	75.6	58.2	32
Parous (%)	43.3	39.8	40.2	39.8	41.6	36.8	38.4	28
Total (%)	**46.9**	**48.9**	**49.1**	**45.7**	**54.4**	**50.4**	**46.9**	**60**

The rate of manual removal of retained placenta (MROP) was 1.1% in 2021 and 2022 (Table 1.1.5). The rate of 1˚ PPH associated with MROP decreased from 71.4% in 2021 to 64.5% in 2022, the second lowest rate between 2016 and 2022.

Table 1.1.15 Manual removal of retained placenta (MROP) and 1˚ PPH, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n
MROP (%)	1.2	1.0	1.1	1.3	1.2	1.1	1.1	76
MROP and 1˚ PPH (%)	67.4	62.3	70.0	65.0	70.9	71.4	64.5	49

It is difficult to draw meaningful conclusions about trends in maternal transfusion rates due to the small numbers (Table 1.1.16).

Table 1.1.16 Maternal transfusion, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n
Mothers who received a transfusion (%)	2.4	2.8	3.0	2.1	2.8	2.3	2.5	169
Mothers who received ≥ 5 units of RCC (%)	0.06	0.1	0.1	0.1	0.2	0.03	0.1	6

Between 2016 and 2022, the total CS rate in women with a singleton breech presentation ranged from 92.5% to 95.1% (Table 1.1.7). In 2022, the rate in nulliparous women was 93.2%, the lowest between 2016 and 2022. The total rate of CS in women with a twin pregnancy increased from 65.8% in 2021 to 70.3% in 2022 (Table 1.1.18).

Table 1.1.17 Caesarean section - singleton breech presentation, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Nulliparous (n)	180	166	185	184	159	188	147
CS rate (%)	93.9	94.6	97.3	94.0	97.5	94.7	93.2
Parous (n)	167	157	160	175	160	177	162
CS rate (%)	91.0	93.0	92.5	92.6	92.5	93.8	93.2
Total (n)	**347**	**323**	**345**	**359**	**319**	**365**	**309**
CS rate (%)	92.5	93.8	95.1	93.3	95.0	94.2	93.2

Table 1.1.18 Caesarean section - twin pregnancies, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Nulliparous (n)	87	81	86	85	71	41	55
CS rate (%)	69.0	67.9	75.6	84.7	74.6	87.8	87.3
Parous (n)	90	103	87	88	89	76	73
CS rate (%)	62.2	58.2	55.2	60.2	56.2	53.9	57.5
Total (n)	**177**	**184**	**173**	**173**	**160**	**117**	**128**
CS rate (%)	65.5	62.5	65.3	72.2	64.4	65.8	70.3

Analysis of the Robson Ten Group Classification, 2018 to 2021 is presented in the Delivery Suite section of this Annual Report and in Appendix One.

Table 1.1.19 Caesarean section - Robson Ten Group Classification, 2022

	Groups	CS (n)	Women (n)	Size of group (%)	CS rate (%)
1	Nulliparous, singleton, cephalic, ≥ 37 wks, spontaneous labour	103	818	12.1	12.6
2	Nulliparous, singleton, cephalic, ≥ 37 wks, induced labour or CS before labour	664	1,635	24.1	40.6
2a	Nulliparous, singleton, cephalic, ≥ 37 wks, induced labour	441	1,412	20.8	31.2
2b	Nulliparous, singleton, cephalic, ≥ 37 wks, CS before labour	223	223	3.3	100.0
3	Parous (excl. prev. CS) singleton, cephalic, ≥ 37 wks, spontaneous labour	25	1,105	16.3	2.3
4	Parous (excl. prev. CS) singleton, cephalic, ≥ 37 wks, induced labour or CS before labour	163	1,355	20.0	12.0
4a	Parous (excl. prev. CS), singleton, cephalic, ≥ 37 wks, induced labour	55	1,247	18.4	4.4
4b	Parous (excl. prev. CS), singleton, cephalic, ≥ 37 wks, CS before labour	108	108	1.6	100.0
5	Previous CS, singleton, cephalic, ≥ 37 wks	929	1,091	16.1	85.2
6	Nulliparous, singleton, breech	137	144	2.1	95.1
7	Parous, singleton, breech (incl. prev. CS)	151	159	2.3	95.0
8	All multiple pregnancies (incl. prev. CS)	91	129	1.9	70.5
9	Abnormal lies, singleton (incl. prev. CS)	6	6	0.1	100.0
10	Singleton, cephalic, < 37 wks (incl. prev. CS)	181	344	5.1	52.5
	Total	**2,450**	**6,786**		

The proportion of women with one previous CS who underwent an elective CS decreased from 74.9% in 2021 to 72.3% in 2022 (Table 1.1.20). The total rate of vaginal birth after Caesarean section (VBAC) decreased from 57.4% in 2020 to 54.4% in 2022. The rate of VBAC after one previous CS (all women with one previous CS as the denominator) decreased from a peak of 27.6% in 2016 to a trough of 17.6% in 2021 followed by a small increase to 18.7% in 2022 (Table 1.1.21).

Table 1.1.20 Mode of delivery with one previous lower segment Caesarean section, 2020 to 2022

	Elective CS	VBAC attempted	VBAC achieved	Emergency CS
2020				
Para 1, n (%)	565 (69.8)	245 (30.2)	121 (49.4)	124 (50.6)
Para 2+, n (%)	80 (37.4)	134 (62.6)	96 (71.6)	38 (28.4)
Total, n (%)	645 (63.0)	379 (37.0)	217 (57.3)	162 (42.7)
2021				
Para 1, n (%)	637 (74.9)	214 (25.1)	101 (47.2)	113 (52.8)
Para 2+, n (%)	102 (44.5)	127 (55.5)	89 (70.1)	38 (29.9)
Total, n (%)	739 (68.4)	341 (31.6)	190 (55.7)	151 (44.3)
2022				
Para 1, n (%)	549 (72.3)	210 (27.7)	88 (41.9)	122 (58.1)
Para 2+, n (%)	79 (39.9)	119 (60.1)	91 (76.5)	28 (23.5)
Total, n (%)	**628 (65.6)**	**329 (34.4)**	**179 (54.4)**	**150 (45.6)**

Table 1.1.21 Vaginal birth with one previous lower segment Caesarean section, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n
Para 1 (%)	19.7	14.9	15.4	11.8	14.9	11.9	11.6	88
Para 2+ (%)	49.0	51.9	46.7	46.8	44.9	38.9	46.0	91
Total (%)	**27.6**	**25.0**	**22.7**	**19.3**	**21.2**	**17.6**	**18.7**	**179**

Data on neonatal outcomes are presented in Table 1.1.22. The rate of admission of babies greater than or equal to 38 weeks' gestation decreased from a peak of 6.7% in 2016 to a trough of 4.2% in 2021 but increased to 5.4% in 2022. The rates of the other three neonatal outcomes remained stable between 2016 and 2022.

Table 1.1.22 Neonatal outcomes, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022	n
Apgar score < 7 at 5 mins (%)	0.8	0.9	0.7	0.9	0.8	0.8	0.9	62
Arterial cord pH < 7 (%)	0.5	0.5	0.4	0.4	0.5	0.6	0.5	37
Admission to Neonatal Unit ≥ 38 weeks (%)	6.7	5.1	4.9	4.4	4.8	4.2	5.4	370
Born before arrival (%)	0.3	0.4	0.3	0.4	0.4	0.4	0.4	28

A new category of obstetric surgical procedure in theatre (bilateral salpingectomy at the time of CS) was included in 2022 (Table 1.1.23) to align with current clinical practice. These data are not available for previous years but 200 such procedures were performed in 2022.

Table 1.1.23 Obstetric surgical procedures in theatre, 2016 to 2022

Type of surgical procedure (n)	2016	2017	2018	2019	2020	2021	2022
Lower segment Caesarean section	2,571	2,534	2,746	2,611	2,423	2,692	2,447
Bilateral salpingectomy at time of CS	-	-	-	-	-	-	200
Classical Caesarean section	5	6	8	7	9	5	3
Peripartum hysterectomy	5	3	6	5	3	2	0
Evacuation of retained products of conception (ERPC)	544	538	509	510	482	431	469
ERPC postpartum	19	14	26	22	24	16	22
Laparotomy for ectopic pregnancy	2	1	1	1	2	0	1
Laparoscopy for ectopic pregnancy	57	62	44	62	53	66	45
Cervical cerclage	36	41	59	65	52	65	58
Postpartum perineal repair	211	166	165	133	187	146	124
Manual removal of retained placenta	90	68	64	77	74	70	68
Instrumental vaginal birth	91	80	69	73	51	56	51
Surgical termination of pregnancy	-	-	-	21	28	36	58
Surgical termination of pregnancy following unsuccessful medical termination of pregnancy	-	-	-	0	4	18	22
Other	33	33	22	27	16	12	30
Total (n)	**3,364**	**3,546**	**3,748**	**3,614**	**3,358**	**3,615**	**3,598**

1.2 Addiction and Infectious Diseases Services

Deirdre Carmody & Orla Cunningham

In 2022, 65 women were referred to the drug liaison midwife (DLM) with a history of drug use. Of this cohort, 26 women attended Team A, Professor O'Connell Clinic, including six women who were pregnant year ending 31st December 2022. Seven women smoking cannabis chose to remain on another obstetrical team and continued to link in with the DLM.

Twenty women reported past drug use only at phone or/and face consultation. The majority of these women reported cannabis use. They declined the offer of any further follow-up with the DLM service. Following referral to the DLM, 12 women miscarried or had a negative pregnancy test.

Fourteen of the 26 women who attended Team A, Professor O'Connell Clinic had opiate use disorder. Twelve women were on prescribed methadone at the time of booking with a further one woman on prescribed Subutex. One woman who booked late in pregnancy who was smoking heroin at the time of booking declined opiate substitute therapy. A further twelve women with non-opiate use disorder reported cannabis, cocaine, alcohol or benzodiazepines as their choice of drug. Fourteen women reported taking cocaine in pregnancy (nine women were smoking crack and five women were snorting cocaine).

Seventeen women were referred to the Perinatal Mental Health Service in The Coombe Hospital. Seven women were admitted to residential drug stabilisation treatment programmes in the Community Addiction Service.

One woman delivered a preterm baby (less than 37 weeks' gestation). Eight babies of mothers with opiate use disorder were admitted to the special care baby unit. Three babies required pharmacological treatment for neonatal abstinence syndrome.

There continues to be a decrease in the number of women prescribed opioid substitute treatment presenting to The Coombe Hospital but within this cohort there is an aging population who are presenting with more complex needs. Cocaine use has taken over from heroin use as the primary drug of choice, particularly smoking crack. As we are reliant on women self-reporting their drug use, it is likely that illicit drug use in pregnancy particularly cocaine and cannabis may even be higher than reported.

Homelessness remains a concern. In 2022, 26.9% of women attending the Addiction Service identified as homeless. This is a crisis and detrimental to both the women and their families.

Mental health issues are prominent with 65.3% of women needing referral to the Perinatal Mental Health Service in The Coombe Hospital. The DLM continues to work between the multidisciplinary teams in the Addiction Service, HSE and The Coombe Hospital to provide and support women disclosing drug use and on opiate substitute therapy to provide comprehensive care in meeting the needs of this group of vulnerable women.

Infectious Diseases

In 2022, over 250 women attended the infectious diseases service, the majority of whom were provided with full antenatal care and postnatal follow up. In addition, a number of antenatal and gynaecological women also attended for consultation and follow-up regarding potential or confirmed sexually transmitted infections (STIs).

Twelve women who booked for antenatal care tested positive for hepatitis B, two of whom were counselled and educated about a new diagnosis. Of the 12 women with HBsAg positive results, three were born in Africa, three in Asia, three in Eastern Europe, two in South America and one in Europe. Four women were delivered by Caesarean section. Eleven of this cohort of women were breastfeeding on discharge. Five additional women attended for care with positive hepatitis B core antibody status.

Nine antenatal women tested positive for hepatitis C. One of these women tested polymerase chain reaction

(PCR) positive on booking. Of those testing PCR negative, seven had been successfully treated in the recent past and one infection had resolved spontaneously. Four women were born in Ireland, four in Eastern Europe and one in Asia. Two women were delivered by Caesarean section. Two women opted to artificially feed their babies.

Fifteen antenatal women tested positive for human immunodeficiency virus (HIV), with no new diagnoses. One woman presented in labour without receiving antenatal care. One woman was co-infected with hepatitis B virus and three had resolved hepatitis B infection. Six women originated from Africa, four from Ireland, three from Eastern Europe and one each from Europe and South America. Five women were delivered by Caesarean section and all women artificially fed their babies.

One hundred and one women with a current or past history of genital herpes simplex virus (HSV) were cared for in The Coombe Hospital. Forty-eight women had a positive PCR or were antibody positive for HSV-1. Thirty-seven women had a positive PCR or were antibody positive for HSV-2. Samples from sixteen women could not have type specific testing performed.

Thirteen antenatal women were confirmed positive for syphilis (Treponema pallidum). Seven women were treated in pregnancy as they were newly diagnosed. Three of these women were diagnosed with early infectious syphilis (EIS) with one woman becoming newly infected during her pregnancy. The three women with EIS were from Ireland. The women who required treatment for latent infection were from Asia, Eastern Europe and South America. Six women had been treated appropriately prior to pregnancy. Two women were delivered by Caesarean section. Three women chose to artificially feed their babies. Eighty-six women required follow up and or repeat testing due to indeterminate serology which was attributed to cross-reactivity in pregnancy.

There was no diagnosis of mother to child transmission of an infectious disease in 2022.

The diagnosis and management of women with 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 and 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, preventing mother to child transmission and significantly reducing future healthcare costs in this high-risk patient cohort.

A shared care approach is taken for a number of our high-risk women. Under the managed clinical care network, they can opt to attend the Midland Regional Hospital Portlaoise (MRHP) and GP services for part of their care. Women also attend for shared care with maternity services in the Midland Regional Hospital Mullingar and Wexford General Hospital. Specialist services are also provided for additional women with high-risk pregnancies e.g., pregnancy loss, serodiscordant couples, current STI and tuberculosis. In 2022, couples continued to be seen in our conception clinic, which provides fertility investigations for both seropositive and serodiscordant couples attempting to optimise conception, while safeguarding the risk of transmission of HIV.

As a service which provides continuity of care for pregnant women with complex needs, our team provided care in 2022 to pregnant woman who were displaced to Ireland by the war in Ukraine. Between March 2022 and the end of December 2022, 26 women were cared for, with the assistance of both virtual and in-person interpreting services.

In October 2022, our team was invited to present to the Women's Health Taskforce and the Department of Health on 'Maintaining Normality in Complex Pregnancies – A Team Approach' which encapsulated the commitment, respect and continuity of care approach provided by our service.

1.3 Adult Outpatient's Department

Anitha Selvanayagam

The adult Outpatients Department (OPD) facilitates public and semi-private antenatal clinics and public gynaecology clinics. It houses the emergency room (ER) which cares for pregnant women up to 24 weeks' gestation and those with postnatal and gynaecology complications. The Early Pregnancy Assessment Clinic (EPAU) is also located in the adult OPD.

Table 1.3.1 shows the attendances at clinic appointments and the ER from 2019 to 2022. A decrease in adult OPD attendance figures was seen in 2020 and 2021 but numbers in 2022 were similar to those in 2019.

Table 1.3.1 Attendances at clinics in the adult OPD (excluding gynaecology clinics), 2019 to 2022

Attendances (n)	2019	2020	2021	2022
Antenatal booking history appointments (public and semi-private)	6,635	4,990	5,806	6,200
Consultant led antenatal appointments (public and semi-private)	34,404	26,751	29,779	33,600
Specialist consultant led antenatal appointments*	3,840	2,414	2,890	2,235
Hospital based midwife appointments†	4,936	3,288	4,720	4,381
Emergency room (ER)	9,606	7,663	9,127	8,730
Total (n)	**59,421**	**45,106**	**52,322**	**55,146**

** including addiction and infectious disease clinic, fetal cardiology clinic, multiple birth clinic and preterm birth prevention clinic*

† midwives' antenatal clinics and anti-D prophylaxis clinic as per TRAADP which commenced in 2021

1.4 Community Midwifery Service

Kate Johnson

In 2022, the Community Midwifery Service facilitated community antenatal booking and follow-up clinics, the Early Transfer Home (ETH) Service and the DOMINO Service. The Community Midwifery Service maintained full antenatal and postnatal services while working within COVID-19 guidelines. The Naas General Hospital combined Midwifery and Obstetric Clinic continued to be provided in The Coombe Hospital due to the COVID-19 pandemic. Kildare midwifery services continued in the Newbridge Health Centre with the addition of a new midwifery led clinic in Celbridge Health Centre.

The activity of the Community Midwifery Service consisted of:

In 2022, 245 women booked for DOMINO care in The Coombe Hospital. This was a reduction on previous years, largely in part due to COVID-19 guidelines. The community midwives provided care for women in the DOMINO service in The Coombe Hospital. The spontaneous vaginal birth rate, the instrumental birth rate and the CS rate for this cohort of women improved in comparison with previous years at 73%, 9% and 9% respectively. In 2021, these rates were 69%, 15% and 15% respectively. The CS rate for women receiving DOMINO care decreased from 15% in 2021 to 8% in 2022. The CS rate for women in Robson Group 1 receiving DOMINO care was 7.9% compared with an overall rate of 12.6%.

There was an overall increase in community activity in 2022 compared to 2021. Booking appointments increased by 8% and follow-up appointments increased by 12%.

We continue to promote, advertise and expand our community-based services and improve awareness and uptake of the DOMINO service.

Services Overview

- **16** Antenatal clinics per week
- **1,938** Women booked in community-based midwife led antenatal clinics
- **1,996** Women availed of the ETH* scheme
- **4,216** Follow-up antenatal appointments in community-based midwifery led clinics
- **4,423** Postnatal visits in total
- **18%** Of ETH* women were breastfeeding non-exclusively on day five
- **31%** Of ETH* women were breastfeeding exclusively on day five
- **51%** Of ETH* women were artificially feeding on day five

Early transfer home

1.5 Delivery Suite

Elizabeth Johnson

The tables referred to in this report are in the General Obstetric Medical Report.

In 2022, 6,801 women gave birth to 6,914 babies weighing ≥ 500g in The Coombe Hospital whilst continuing to adhere to protocols related to COVID-19. The total spontaneous vaginal birth (SVB) rate was 51.6% in 2022, compared to 54.5% in 2016 and 51.8% in 2018 (Table 1.1.7). The SVB rate in nulliparous women was 38.9% in 2022, compared to 36.9% in 2018 and 40.0% in 2020 (Table 1.1.7). The total instrumental birth rate in 2022 was 12.5% compared with 14.9% in 2017 and 12.0% in 2021 (Table 1.1.7). The total forceps rate decreased from 5.3% in 2016 and 2017 to 3.5% in 2020 and 2021 and increased slightly to 3.7% in 2022 (Table 1.1.7).

The induction of labour rate was 42.0% in 2022. This rate has continued to increase gradually since 2016 when the rate was 33.9% (Table 1.1.5).

The rate of obstetric anal sphincter injuries (OASIS) in vaginal births was 1.9% compared with 2.2% in 2021 and 2.8% in 2016 (Table 1.1.11). This reduction is in line with national target rates. In 2022, the OASIS quality improvement team recommenced meetings to monitor rates and to respond to any identified concerns. Additionally, clinical skills facilitators provided updated education with regard to perineal protection and care.

The total Caesarean section (CS) rate in 2022 was 36.1% compared with 31.3% in 2016 and 35.5% in 2021 (Table 1.1.7). The Robson Group 1 CS rate increased from 9.8% in 2021 to 12.6% in 2022 reflecting the significant challenge associated with the provision of one to one midwifery care in the context of staff shortages. The CS rate in this group continues to be monitored weekly to enable continual learning from practice. The Robson Group 2 CS rate ranged from 39.5% in 2020 to 44.2% in 2018 but it has been stable since 2019 (Appendix One) and was 40.5% in 2022. From 2018 to 2022 the Robson Group 4 CS rate ranged from 14.6% in 2018 to 20.8% in 2021 but this rate decreased to 12.0% in 2022 (Appendix One). The Robson Group 10 CS rate has increased from 47.1% in 2018 to 52.5% in 2022.

The size of Robson Group 2a increased from 18.4% in 2018 to 24.1% in 2022 (Appendix One). However, the CS rate in this group decreased from 36.8% in 2018 to 30.2% in 2021 and was stable in 2022 (31.7%). The size of Robson Group 5 increased from 14.7% in 2018 to 16.3% in 2021 and was stable in 2022 (16.1%). The total rate of CS in Robson Group 5 was 85.2% in 2022 compared with a rate of 81.6% in 2018 and 86.2% in 2021 (Appendix One). The overall rate of elective CS in Robson Group 5 was 65.6% compared with 63.0% in 2020 and 68.4% in 2021 (Table 1.1.20). In 2022, the rate of elective CS in women with one previous delivery was 72.3% and 39.6% in women with two or more previous deliveries (Table 1.1.20). Overall, VBAC was achieved in 54.4% of women who attempted a VBAC in 2022 compared with 57.3% in 2020 and 55.7% in 2021. VBAC was achieved in 41.9% of women with one previous delivery, the lowest rate since 2020 and in 76.5% of women with two or more previous deliveries, the highest rate since 2020 (Table 1.1.20).

During 2022, 119 women who delivered in The Coombe Hospital required higher level care. They were cared for in the Delivery Suite but not always in the High Dependency Unit (HDU) because of reorganisation of clinical space due to the COVID-19 pandemic and staffing shortages. These women were provided with an enhanced level of multidisciplinary care.

In March 2022 the birthing pool on the Delivery Suite was reopened providing the option of water immersion to women. This is reflective of the principles of facilitating choice to women on the supported care pathway within the National Maternity Strategy.

2022 continued to be a challenge with regard to midwifery staffing but the commitment of the staff has been reflected in the high standard of care they provided to women and their families.

1.6 Early Pregnancy Assessment Unit

Nicole Mention

There was a total of 4,401 attendances at the Early Pregnancy Assessment Unit (EPAU) in 2022. Attendances included women who had more than one visit to the EPAU. Diagnoses made at EPAU attendances are presented in Table 1.6.1.

Table 1.6.1 Diagnoses made at EPAU attendances

EPAU attendances	New	Return	Total
Ongoing pregnancy (n)	477	891	1,368 (31.1%)
Pregnancy of uncertain viability (n)	300	443	743 (16.9%)
Miscarriage (n)	633	885	1,518 (34.5%)
Pregnancy of unknown location (n)	295	376	671 (15.2%)
Ectopic pregnancy* (n)	69	29	98 (2.2%)
Gestational trophoblastic disease (n)	1	2	3 (0.1%)
Total (n)	**1,775**	**2,626**	**4,401 (100.0%)**

** excludes women who were admitted directly to theatre, from the Emergency Room or women who were diagnosed outside of normal working hours*

Table 1.6.2 Management of women with delayed or incomplete miscarriage, 2020 to 2022

Type of management	2020	2021	2022
Surgical (n)	221 (45.9%)	185 (30.0%)	303 (39.1%)
Medical (n)	240 (49.9%)	225 (36.6%)	288 (37.2%)
Conservative (n)	20 (4.2%)	206 (33.4%)	184 (23.7%)
Total (n)	**481 (100.0%)**	**616 (100.0%)**	**775 (100.0%)**

In 2022, 775 women had delayed or incomplete miscarriage. The management of these women (excluding women with a complete miscarriage) is presented in Table 1.6.2. The use of mifepristone in the medical management of women with miscarriage was introduced into The Coombe Hospital in 2020. Surgical management was the most common type of management (39.1%) in 2022 whilst medical management was the most common in 2020 (49.9%) and 2021 (36.6%). Most women with ectopic pregnancy were managed surgically (43.8%) whilst 18.4% were managed medically (Table 1.6.3).

Table 1.6.3 Management of women with ectopic pregnancy, 2022

Type of management	n (%)
Surgical	43 (43.8%)
Conservative	37 (37.8%)
Medical	18 (18.4%)
Total	**98 (100.0%)**

Staff in the EPAU provided training in transvaginal early pregnancy ultrasound and facilitated the training of midwives in the UCD EPAU module.

Publication

See Appendix Two for the details of a peer reviewed publication from the Early Pregnancy Assessment Unit listed under University College Dublin Centre for Reproduction.

1.7 Endocrine Service

Ailbhe McCarthy, Dr Neil O'Gorman and Professor Brendan Kinsley

The number of women diagnosed with gestational diabetes mellitus (GDM) in 2022 decreased to 739 (including all subcategories) in line with the decrease in the overall births in The Coombe Hospital (Table 1.7.1).

Table 1.7.1 Type of diabetes mellitus, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Type 1 DM (n)	26 (0.3%)	32 (0.4%)	33 (0.4%)	31 (0.4%)	18 (0.2%)	30 (0.4%)	26 (0.4%)
Type 2 DM (n)	17 (0.2%)	25 (0.3%)	24 (0.3%)	16 (0.2%)	16 (0.2%)	20 (0.3%)	23 (0.3%)
GDM (n)	694 (8.4%)	775 (9.7%)	851 (10.4%)	933 (12.0%)	646 (8.7%)	891 (11.7%)	739 (10.9%)

In 2022, 39 women with Type 1 DM booked in The Coombe Hospital, 26 of whom gave birth in The Coombe Hospital (Table 1.7.2). Twenty-eight women with Type 2 DM booked in The Coombe Hospital, 23 of women gave birth in The Coombe Hospital. One woman with Type 1 DM and two women with Type 2 DM gave birth to twins.

Table 1.7.2 presents obstetric, maternal and neonatal outcomes for women with pre-existing DM. Macrosomia was suspected antenatally in 14 women with Type 1 DM and in five women with Type 2 DM. Twenty-three percent of women with Type 1 DM and 30.4% of women with Type 2 DM were delivered less than 37 weeks' gestation. The CS rate in women with Type 1 DM was 65.4%. It was 65.2% in women with Type 2 DM. Two women with type 1 DM gave birth to babies weighing greater than or equal to 4.5kg.

Two babies born to women with pre-existing DM had congenital anomalies. One woman with Type 2 DM had an intrauterine death. The birth of two babies was complicated by shoulder dystocia (one woman with Type 1 DM and one woman with Type 2 DM). Babies of nine mothers with Type 1 DM and babies of six mothers with Type 2 DM were admitted to NICU or SCBU.

Table 1.7.2 Pre-existing diabetes mellitus – demographic and obstetric data

Type of diabetes mellitus	Type 1	Type 2
Obstetric data	n = 39	n = 28
Women booked	39	28
Spontaneous miscarriages	12	4
Women delivered elsewhere	1	1
Women delivered in The Coombe Hospital	26	23
Babies born in The Coombe Hospital	27	25
Twins	1	2

Maternal data	n = 39	n = 28
Age (years) (mean, sd)	28.7 ± 6.6	36.9 ± 5.3
Duration of DM (years) (mean, sd)	17.1 ± 8.6	3.9 ± 3.6
Complications of diabetes mellitus	**n = 35**	**n = 28**
Hypertension	2	5
Retinopathy	13	6
Nephropathy	1	0
Pre-eclampsia	4	3
Gestation at first visit to clinic (weeks) (mean, sd)	7.3 ± 3.2	8.3 ± 3.3
Booking HbA1c (IFCC) (mean, sd)	55 ± 16	51 ± 14
Delivery HbA1c (IFCC) (mean, sd)	49 ± 11	41 ± 4
Booking Fructosamine (mean, sd)	329 ± 62	284 ± 50
Delivery Fructosamine (mean, sd)	289 ± 30	254 ± 55
Antenatal course	**n = 26**	**n = 23**
Macrosomia suspected antenatally	14	5
Macrosomia at delivery (weight for gestational age) (n)	11	5
Intrauterine fetal death	0	1
Delivered < 37 weeks' gestation	6	7
Mode of delivery (women)	**n = 26**	**n = 23**
Spontaneous vaginal birth	9	8
Elective Caesarean section	9	9
Emergency Caesarean section	8	6
Infant outcomes	**n = 26**	**n = 23**
Gestation at delivery (weeks) (mean, sd)	36.8 ± 1.9	36.7 ± 2.6
Birth weight (grams) (mean, sd)	3,523 ± 831	3,005 ± 872
< 4,000 grams	20	20
4,000 - 4,499 grams	4	5
4,500 - 4,999 grams	2	0
≥ 5,000 grams	0	0
Shoulder dystocia	1	1
Congenital anomalies	1	1
NICU or SCBU admission	9	6

In 2022, the number of women with GDM managed by metformin and insulin decreased to 7.8% (Table 1.7.3).

Table 1.7.3 GDM - treatment type, 2020 to 2022

GDM - treatment type	2020	2021	2022
Diet alone (n)	364 (56.4%)	418 (46.9%)	362 (49.0%)
Metformin alone (n)	123 (19.0%)	265 (29.7%)	201 (27.2%)
Insulin alone (n)	88 (13.6%)	131 (14.7%)	118 (16%)
Metformin and insulin (n)	71 (11.0%)	77 (8.6%)	58 (7.8%)
Total (n)	**646 (100.0%)**	**891 (100.0%)**	**739 (100.0%)**

Thirteen women with GDM had a multiple pregnancy (including one triplet pregnancy) (Table 1.7.4). There were two intrauterine fetal deaths. One in a woman treated with diet alone and another in a woman treated with insulin alone. The birth weights of babies born in 2022 to women with GDM were similar to those in 2020 and 2021. The birth of two babies was complicated by shoulder dystocia (one woman treated with diet alone and one woman treated with metformin alone). The total CS rate increased from 25.1% (162/646) in 2020 to 38.1% (339/891) in 2021 and to 44.1% (326/739) in 2022.

Table 1.7.4 GDM - demographic and obstetric data, 2020 to 2022

	2020	2021	2022
Treatment with diet alone			
Women (n)	364	418	362
Delivered elsewhere (n)	0	0	3
Twin (n)	7	6	8
Triplet pregnancies (n)	0	0	1
Babies (n)	371	424	368
Gestation at delivery (weeks) (mean, sd)	38.7 ± 1.53	38.6 ± 1.5	38.5 ± 1.6
Birth weight (grams) (mean, sd)	3,343 ± 544	3,339 ± 542	3,251 ± 576
Suspected macrosomia on USS (n)	21	22	33
Caesarean section (n)	112 (30.8%)	180 (43.1%)	149 (41%)
Shoulder dystocia (n)	5	1	1
Intrauterine fetal death (n)	1	1	1
Treatment with metformin alone			
Women (n)	123	265	201
Delivered elsewhere	0	0	2

Twin pregnancies (n)	4	6	3
Babies (n)	127	271	202
Gestation at delivery (weeks) (mean, sd)	36.5 ± 1	38.6 ± 0.9	38.0 ± 1.3
Birth weight (grams) (mean, sd)	3,248 ± 469	3,363 ± 454	3,339 ± 509
Macrosomia suspected antenatally (n)	9	17	7
Macrosomia at delivery weight for gestational age) (n)	0	0	0
Suspected intrauterine growth restriction (n)	13	7	3
Caesarean section (n)	24 (19.5%)	113 (42.6%)	93 (46.3%)
Shoulder dystocia (n)	1	1	1
Treatment with insulin alone			
Women (n)	88	131	118
Delivered elsewhere			5
Twin pregnancies (n)	2	2	1
Babies (n)	90	133	113
Gestation at delivery (weeks) (mean, sd)	38.3 ± 0.9	38.3 ± 5.1	38.0 ± 2.0
Birth weight (grams) (mean, sd)	3,292 ± 499	3,213 ± 668	3,368 ± 600
Suspected macrosomia (n)	2	4	16
Caesarean section (n)	13 (14.8%)	12 (9.2%)	51 (43.2%)
Intrauterine fetal death (n)	0	0	1
Treated with metformin and insulin			
Women (n)	71	77	58
Delivered elsewhere	0	0	1
Twin pregnancies (n)	1	1	1
Babies (n)	72	78	58
Gestation at delivery (weeks) (mean, sd)	38.5 ± 1.3	38.5 ± 0.9	38.0 ± 1.3
Birth weight (grams) (mean, sd)	3,161 ± 862	3,375 ± 490	3,315 ± 524
Macrosomia suspected antenatally (n)	2	4	7
Caesarean section (n)	13 (18.3%)	34 (44.2%)	33 (56.9%)

In March 2022, a flow chart for central administration was introduced. This provided a rapid referral pathway for our high-risk category of women i.e., Type 1 DM, Type 2 DM, hyperthyroidism, Grave's Disease and hyperparathyroidism.

This has been very successful in ensuring early identification of these women, predominantly women with Type 1 DM who had a first visit to the diabetes MDT at 7.3 +/- 3.2 weeks' gestation. We would like to acknowledge and thank our clerical and administrative colleagues for their adherence to this flow chart and their ongoing assistance.

The management flow chart for women with previous GDM, following discussion and agreement with the CMM3 of the adult Outpatient Department, was introduced in March 2022. More work is required in the early identification and increased surveillance of women with GDM in a previous pregnancy.

Use of the remote management pathway of care for women with hypothyroidism continued into 2022. Eight women benefited from remote management on a weekly basis. These women receive a minimum of one in-person endocrinology review at clinic and then transfer to the remote management pathway. The thyroid management care pathway continues to allow for streamlined process for the care of the woman and the management of the endocrine MDT clinic, by reducing the number of inappropriate referrals.

Women with hyperthyroidism (n = 5) or hyperparathyroidism (n = 2) continued to attend the diabetes MDT for both endocrine and obstetric care, women with these conditions attended the clinic weekly.

1.8 Fetal Cardiology National (All-Ireland) Service

Dr Caoimhe Lynch

The Fetal Cardiology Service continued to be provided by Dr Orla Franklin, Consultant Fetal and Paediatric Cardiologist, Dr Caoimhe Lynch, Consultant Obstetrician and Fetal Medicine Specialist and Felicity Doddy, CMM2 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, 129 women attended the clinic. Structural cardiac anomalies were detected in 72 cases and an abnormality of cardiac rhythm detected in a further ten pregnancies (Table 1.8.1). Twelve structural cardiac abnormalities were associated with a chromosomal abnormality that was confirmed antenatally. The service continued to attract referrals from 12 sites across Ireland including the cross-border referral group from Northern Ireland. Forty-two cardiac anomalies were detected in women who were originally booked to deliver outside The Coombe Hospital. The team co-ordinated combined antenatal care with their local hospital with planned delivery at The Coombe Hospital. Site of delivery was dictated by the likely need for urgent cardiac surgical or catheter intervention in the immediate postnatal period.

Table 1.8.1 Congenital heart disease, 2022

Structural cardiac anomaly	n = 72
Hypoplastic left heart disease	10
Hypoplastic right heart disease	5
Complete atrioventricular septal defect	9
Ventricular septal defect	14
Tetralogy of Fallot	3
Double outlet right ventricle	7
Transposition of the great arteries +/- ventricular septal defect	8
Congenitally corrected transposition of the great arteries	2
Coarctation of the aorta/arch hypoplasia/interrupted aortic arch	4
Tricuspid stenosis and/or pulmonary stenosis	2
Mitral stenosis and/or aortic stenosis	4
Truncus arteriosus	1
Rhabdomyomata	2
Azygos continuation of the inferior vena cava	1
Arrhythmia	**n = 10**
Supraventricular tachycardia (including atrial flutter)	4
Congenital complete heart block	3
Premature atrial contractions	3

1.9 Fetal Medicine and Perinatal Ultrasound

Dr Caoimhe Lynch

A total of 24,752 ultrasound examinations were performed in 2022 (Table 1.9.1).

Table 1.9.1 Indications for ultrasound scans, 2022

Type of ultrasound scan	n
First trimester and dating scans	4,981
Structural survey at 20 - 22 weeks' gestation	7,015
Fetal wellbeing assessments (3rd trimester and follow-up scans)	Growth, amniotic fluid volume and Dopplers (n = 7,143) Cervical length (n = 224) Placental site (n = 658) Single umbilical artery (n = 66) Pyelectasis (n = 28)
Naas Clinic ultrasound service – performed in The Coombe Hospital	792
Subtotal (Sonographer ultrasound scans)	20,907
Fetal Medicine	**n**
Non-invasive prenatal diagnosis (NIPT)	793
Fetal medicine consultant ultrasound scans	2,272
Fetal Echo	668
Screening Echo Service	458
Fetal Cardiac Service	210
Invasive procedures	112
Total (n)	**24,752**

Table 1.9.2 Invasive procedures, 2022

Type of invasive procedure	n
Amniocentesis	69
CVS	42
Amniodrainage	1
Total (n)	**112**

Table 1.9.3 Chromosomal abnormalities detected, 2022

Type	n
Trisomy 21	18
Trisomy 18	14
Trisomy 13	4
Triploidy	2
Other	4
Total (n)	**42**

Table 1.9.4 Diagnosis of chromosomal abnormalities, 2022

Chromosomal anomaly	Indication for invasive testing
Trisomy 21 (n = 18)	Cystic hygroma (n = 3) Increased nuchal fold (n = 1) Cardiac anomaly (n = 2) Structural anomalies (n = 3) High risk NIPT (n = 9)
Trisomy 18 (n = 14)	Cystic hygroma (n = 7) Structural anomalies (n = 3) High risk NIPT (n = 4)
Trisomy 13 (n = 4)	Structural anomalies (n = 2) High risk NIPT (n = 2)

Table 1.9.5 Structural fetal anomalies detected antenatally

Category of fetal anomaly	Type of fetal anomaly
Neural tube defects (n = 7)	Spina bifida (n = 3) Anencephaly (n = 3) Encephalocele (n = 1)
Head and neck (n = 26)	Cystic hygroma (n = 26)
Facial (n = 4)	Facial clefts (n = 3) Facial tumour/neck mass (n = 1)
Cardiac (n = 65)	Structural cardiac abnormalities (n = 55) Cardiac arrhythmia (n = 10)
Thoracic (n = 5)	Diaphragmatic hernia (n = 3) Cystic lung lesions (n = 2)
Abdominal wall defect (n = 6)	Gastroschisis (n = 1) Exomphalos (n = 5)

Renal (n = 29)	Renal tract anomalies (n = 27) Renal agenesis (n = 2)
Skeletal (n = 8)	Skeletal dysplasia (n = 2) Isolated talipes (n = 6)
Neurological (n = 25)	
Total (n)	**175**

In 2022, all women continued to be offered a routine booking scan at their first visit and a fetal anatomy scan at 18 - 22 weeks' gestation.

Over 2,700 ultrasounds were performed for fetal surveillance due to COVID-19 infection in pregnancy. The high-risk CMS sonographer list, commenced in 2021, continued to ensure that pregnancies at high-risk of intrauterine growth restriction were provided with continuity and expertise at this level, liaising closely with the FMS consultants.

Opportunities for professional development continued in 2022. Online learning continued due to the COVID-19 pandemic. Staff availed of multiple webinars provided by The Fetal Medicine Foundation. Clinical practice guideline documents based on best practice were developed and agreed and implemented at department level. These were made available for viewing on Q pulse. A rotational staff midwife commenced the Graduate Certificate in Ultrasound in January 2022. A new candidate commenced the Masters in Ultrasound programme in September 2022.

Our dedicated team of midwife sonographers, radiographer, fetal medicine consultants, fetal medicine midwives and administrative support continued to provide the highest quality care to women and their babies. The department provides a comprehensive fetal anomaly screening and fetal surveillance programme in addition to specialist fetal medicine service for fetal abnormalities, invasive and non-invasive testing, multiple pregnancies, haemolytic disease of fetus, fetal cardiology and screening for preterm birth.

Ms Felicity Doddy and Ms Leanne Curtis, our prenatal diagnosis co-ordinators, continued to provide ongoing support to patients following a diagnosis of a fetal anomaly. As a tertiary referral centre, they also provided support and co-ordinated shared care with 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. We have a multidisciplinary network of neonatology, paediatric subspecialties in Children's Health Ireland, clinic genetics, radiology, medical social work and bereavement support to provide comprehensive care to women and their families following a prenatal diagnosis of a fetal abnormality. Sadly, there were 35 families who received a diagnosis of a fatal fetal abnormality/life limiting condition in 2022, of whom, 24 chose termination of pregnancy and 11 continued their pregnancy.

Opportunities for professional development continued In 2022, there were a number of staff changes in the department. Ms Louise Rafferty was successfully appointment as CMM3 of the obstetric ultrasound department. She has provided excellent leadership in maintaining the fetal screening and surveillance service despite significant challenges with staff recruitment and retention. I would like to thank Ms Elaine McGeady, who joined the department in 2004 and was CMM3 since 2015, for her development and vision for the ultrasound service at The Coombe Hospital over the past 18 years and wish her every success in her in role at The Coombe Hospital, as Assistant Director of Midwifery/Nursing.

The department continues to promote continuous professional development with sonographers completing Graduate Certificates and Masters in Obstetric Ultrasound. Ms Christina McLoughlin was appointed into the role candidate Advanced Midwife Practitioner (AMP) in Fetal Cardiology. This will be the first AMP in Fetal Cardiology in Ireland.

In October 2022 we were delighted with the appointment of Professor Amy O'Higgins, Fetal Medicine Consultant and UCD Professor of Obstetrics and Gynaecology. Finally, I would like to thank my fetal medicine colleagues, Professor Mairead Kennelly, Dr Carmen Regan, Professor Aisling Martin, Dr Neil O'Gorman and Professor Amy O'Higgins for their support. In September 2022, Dr Carmen Regan took over as Head of Department and I wish her every success in her new role.

1.10 Haemolytic Disease of Fetus and Newborn

Dr Carmen Regan

The presence of red cell antibodies is established at the time of booking when a blood group and antibody screen is performed. Rhesus negative women have a repeat blood group and antibody screen prior to routine anti-D prophylaxis at 28 weeks' gestation. Women with red cell antibodies are referred to the Rhesus Clinic using a clinical algorithm based on prior history, antibody type and level. The management of cases at risk of haemolytic disease in the fetus and newborn (HDFN) involves risk assessment with paternal genotyping and fetal DNA typing as indicated. At risk pregnancies are followed with antibody levels and ultrasound with middle cerebral artery (MCA) Dopplers when appropriate. In 2022, there were 38 new referrals to the Rhesus Clinic. Of these, 35 were diagnosed with red cell antibodies for the first time. Nine neonates were direct Coombs test (DCT) positive and six of these required admission to the Special Care Baby Unit for treatment. Couples who have a risk of fetal isoimmunisation in a pregnancy are also seen for preconceptual advice.

Table 1.10.1 Isoimmunised pregnancies referred for evaluation in 2022

Red cell antibody	n	DCT positive
Anti D	3	3
Anti c	2	1
Anti E	8	1
Anti K	1	1
Anti C	2	1
Anti Jka	2	0
Anti Cw	5	0
Anti M	9	1
Multiple antibodies	6	1
Total (n)	**38**	**9**

Table 1.10.2 Neonatal outcomes, 2020 to 2022

Neonatal outcomes	2020	2021	2022
Affected neonates (DCT positive at birth), (n)	12	18	9
SCBU admission (n)	6	9	6
Phototherapy only (n)	4	9	3
Phototherapy and IVIG* (n)	1	0	2
Phototherapy, IVIG and RCC transfusion (n)	1	0	1
Intrauterine death (n)	0	1	0

**intravenous immunoglobulin*

1.11 Infant Feeding

Kathy Cleere

The Coombe Hospital promotes and supports evidence-based practice in infant feeding in line with HSE/National Infant Feeding Policy, HSE Policy on the Marketing of Breast Milk Substitutes and Breastfeeding Policy for Staff working in the public health service.

Comprehensive breastfeeding support and care is provided throughout antenatal, intrapartum, postnatal and post discharge periods. In conjunction with the Parent Education Department, the team continued online breastfeeding classes for mothers who are at high risk for lactation challenges. This led to an increase in awareness and requests for harvesting colostrum antenatally. Harvesting colostrum prior to birth helps to reduce formula supplementation especially among our high-risk population, e.g., mothers with diabetes. This is particularly important in the early days to prevent admission to the NICU.

The Coombe Hospital supported the pilot project for the revised Baby Friendly Initiative (BFI), co-ordinated by the National Women and Infants Health Programme (NWIHP). This involved assessment of all National Infant Feeding Standards along with interviews with service users and staff in The Coombe Hospital. This enabled a self-assessment of our infant feeding services against National Infant Feeding Standards and helped to identify our priority areas prior to the planned national rollout of BFI assessment in 2023. Infant feeding statistics from 2016 to 2022 are presented in Table 1.11.1.

The team continued to support midwives in the Breastfeeding Support Team on an individual basis and ran a study day to consolidate their learning.

The team continued individual consultations for inpatients and outpatients. In collaboration with CME, a staff breastfeeding education programme was delivered using a hybrid approach.

The team continued to review, assess and support babies with ankyloglossia, in collaboration with the Department of Paediatric and Newborn Medicine. The team offered follow-up appointments for babies after frenotomy.

Table 1.11.1 Infant feeding statistics*, 2016 to 2022

Babies	2016	2017	2018	2019	2020	2021	2022
Liveborn and eligible for feeding (n)	8,244	8,156	8,305	7,799	7,372	7,684	6,889
Breastfeeding initiated (%)	63.7%	65.6%	66.6%	67.0%	65.5%	63.9%	65.1%
Breastfeeding exclusively at discharge (%)	38.9%	36.8%	37.5%	35.7%	32.0%	29.1%	29.1%
Breastfeeding non-exclusively at discharge (%)	21.8%	23.5%	23.9%	25.8%	33.6%	30.1%	31.9%

**based on data available on K2*

1.12 Medical Clinic

Dr Carmen Regan

The Medical Clinic at The Coombe Hospital was established over 20 years ago and is dedicated to the management of medical disorders in pregnancy. As the identification of women with pre-existing medical disorders is key to improving pregnancy outcomes, the clinic has developed a set of referral criteria at booking and also facilitates and encourages referral of high-risk pregnant women from other hospitals through communication with the Medical Clinic AMP. The clinic is the national referral centre for patients with coagulation or bleeding disorders (through the NCC, National Centre for Coagulation, St James's Hospital and for patients with sickle cell disease (through the Adult Haemoglobinopathy Service at St James's Hospital).

Multidisciplinary team involvement is at the heart of management of complex cases and this is delivered in conjunction with designated and dedicated specialists in thrombosis and bleeding disorders (Dr Kevin Ryan), renal medicine (Dr Catherine Wall), sickle cell disease (Dr Emma Tuohy), cardiology (Dr John Cosgrove) and the departments of perioperative medicine, pharmacology and neonatology. Dr Catherine Flynn provides advice and expertise in relation to red cell and platelet disorders, blood dyscrasias and haematological oncology. Streamlined and early access to ultrasound imaging

at The Coombe Hospital (Professor Mary Keoghan) and screening echocardiography at St James's Hospital allow for rapid assessment and management of cases. Table 1.12.1 present new referrals to the Medical Clinic by type of medical condition.

We have close links with our colleagues at St James's Hospital and Tallaght University Hospital who provide advice and review in the specialty areas of gastroenterology, rheumatology and dermatology. Midwifery input, key to management of labour and delivery planning is facilitated by our midwifery team members and by the excellent care provided by the delivery suite staff. Adherence to up to date guidelines and protocols ensures best practice. In 2022, clinical protocols for the management of thrombocytopaenia and sickle cell disease in pregnancy were developed by the team to improve care.

Multidisciplinary team meetings are convened on a two monthly basis to review care and management of our more complex cases. In these high-risk cases an individualised plan of care is formulated which assists with communication, handover and management, and ultimately a reduction in risk.

The Medical Clinic is recognised as a valuable resource for teaching and research. In 2022, Dr Bridgette Byrne was successful in securing funding for a post-CSCST Aspire Fellowship in Severe Maternal Morbidity through the auspices of the Royal College of Physicians of Ireland.

Table 1.12.1 New referrals to the Medical Clinic by type of medical condition (n = 321)

Medical condition	n
Thromboprophylaxis	**46**
History of venous thromboembolism (VTE)	29
Pulmonary embolism (current pregnancy)	4
Other (including family history of VTE, DVT in pregnancy)	13
Thrombophilia	**13**
Antiphospholipid syndrome	2
Thrombophilias	11
Clotting factor deficiencies	**26**
Von Willebrand's disease	6
Severe haemophilia carrier	5
Bleeding disorders of unknown aetiology	9
Partner haemophilia	3
Other (other clotting factor deficiencies)	3
Platelet disorders	**17**
Immune thrombocytopaenia	16
Other	1
Red cell disorders	**14**
Thalassemia	4
Sickle cell disease	6
Other	4

Hypertensive disease	**36**
Essential hypertension	36
Cardiac disease	**37**
Arrhythmias/palpitations	11
Congenital heart disease	6
Long QT syndrome	1
Mitral valve prolapse	4
Metallic mitral valve	1
Cardiomyopathy	3
Wolf Parkinson White syndrome	2
Other	9
Renal disorders	**17**
Respiratory	**9**
Connective tissue disease	**32**
Rheumatoid arthritis	13
Systemic lupus erythematous	7
Sjogrens syndrome	4
Psoriatic arthritis	5
Ehlers Danlos syndrome	2
Ankylosing spondylitis	1
Cerebrovascular disease/neurological	**23**
History of cerebrovascular accident	3
Multiple sclerosis	5
Arnold Chiari malformation	2
History of brain tumour	6
History of brain aneurysm	2
Other	5
Liver and gastrointestinal disease	**33**
Ulcerative colitis	13
Crohn's disease	10
Liver transplant	1
Other	9
Preconceptual care	**11**
Oncology	**3**
Metabolic	**4**

1.13 Multiple Birth Clinic

Professor Aisling Martin

One hundred and thirty-five women with multiple pregnancies booked at The Coombe Hospital in 2022, comprised of 134 twin pregnancies and one triplet pregnancy. One hundred and eleven of the twin pregnancies were dichorionic diamniotic (DCDA), 22 were monochorionic diamniotic (MCDA) and one was monochorionic monoamniotic (MCMA). Three sets of DCDA multiple pregnancies were lost to follow up as they delivered elsewhere. These twins were excluded from the data presented in Tables 1.13.1 and 1.13.2 (n = 108). Both babies were miscarried before 20 weeks' gestation in two DCDA twin pregnancies (n = 106) and one twin was miscarried in the first trimester in another DCDA twin pregnancy (n = 105). Therefore, 105 DCDA twin pregnancies were delivered in The Coombe Hospital in 2022.

The birth of one baby of two sets of twin pregnancies were not registered because they weighed < 500g at the time of delivery. Therefore, a total of 257 babies were born weighing ≥ 500g (254 twins and 3 triplets). Details of the gestational age at delivery and mode of delivery of twins and triplets are presented in Tables 1.13.1 and 1.13.2, respectively. No twins or triplets were born between 23+0 and 24+6 weeks' gestation. The triplet pregnancy was delivered between 32+0 and 33+6 weeks' gestation while 82.0% of the twin pregnancies were delivered ≥ 34 weeks' gestation and 10.2% were delivered between 32 and 33+6 weeks' gestation. No twin pregnancy was delivered between 23+0 and 24+6 weeks' gestation (Table 1.13.1). The rate of CS in twin pregnancies from 2018 to 2022 are presented in Appendix One. This CS rate ranged from 64.4% to 73.0% and was 70.5% in 2022.

Table 1.13.1 Gestational age at delivery of twin and triplet pregnancies (women)

GA at delivery (weeks)	DCDA n = 105	MCDA n = 22	MCMA n = 1	All twins n = 128	Triplets n = 1
≥ 37 weeks	41 (39.1%)	0	0	41 (32.0%)	0
34^{+0} - 36^{+6}	46 (43.8%)	18 (81.8%)	0	64 (50.0%)	0
32^{+0} - 33^{+6}	10 (9.5%)	2 (9.1%)	1 (100.0%)	13 (10.2%)	1 (100.0%)
28^{+0} - 31^{+6}	3 (2.8%)	1 (4.5%)	0	4 (3.1%)	0
26^{+0} - 27^{+6}	3 (2.8%)	1 (4.5%)	0	4 (3.1%)	0
25^{+0} - 25^{+6}	2 (1.9%)	0	0	2 (1.6%)	0
Total (n)	**105 (100.0%)**	**22 (100.0%)**	**1 (100.0%)**	**128 (100.0%)**	**1 (100.0%)**

Table 1.13.2 Mode of delivery of twin and triplet pregnancies

Mode of delivery (women)	DCDA n = 105	MCDA n = 22	MCMA n = 1	All twins n = 128	Triplets n = 1
SVB*/SVB	22 (20.9%)	2 (9.1%)	0	24 (18.8%)	0
SVB/AVB†	7 (6.7%)	0	0	7 (5.4%)	0
SVB/instrumental	1	0	0	1 (0.8%)	0
Instrumental/SVB	1	0	0	1 (0.8%)	0
Instrumental/AVB	4	0	0	4 (3.1%)	0
Instrumental x 2	1	0	0	1 (0.8%)	0
Vaginal birth/LSCS‡	1	1 (4.5%)	0	2 (1.6%)	0
Elective LSCS	36 (34.3%)	14 (63.6%)	1 (100.0%)	51 (39.8%)	0
Emergency LSCS	32 (30.5%)	5 (22.7%)	0	37 (28.9%)	1 (100.0%)
Total (n)	**105 (100.0%)**	**22 (100.0%**	**1 (100.0%)**	**128 (100.0%)**	**1 (100.0%)**

**spontaneous vaginal birth † assisted vaginal breech ‡ lower segment Caesarean section*

There were no cases of twin to twin transfusion syndrome requiring laser in the 22 sets of MCDA twin pregnancies. The single set of MCMA twins were delivered electively at 31+6 weeks' gestation and did very well. The triplets were delivered by emergency LSCS at 32+6 weeks' gestation because of intrauterine growth restriction and abnormal Dopplers in triplet three. All three babies did well.

1.14 Options in Pregnancy Service

Dr Aoife Mullally

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 GP or community women's health provider. The majority of women are referred as they are between nine and twelve weeks' gestation or because they have a comorbidity which makes them unsuitable for early medical abortion (EMA) 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 EMA are also seen in this clinic. Women are offered follow-up appointments for insertion of long acting reversible contraceptives.

Table 1.14.1 presents the clinical outcomes of women who attended the service in 2020 and 2022. The non-attendance rate in 2021 was 7.2% (18 women) and 9.7% (31 women) in 2022.

Table 1.14.1 Clinical outcomes of women, 2020 to 2022

Clinical outcomes	2020	2021	2022
Medical termination of pregnancy (n)	50	79	103
Surgical termination of pregnancy (n)	41	36	52
Management of complication post-community EMA (n)	98	88	109
Other (miscarriage, continued with pregnancy, left clinic without decision) (n)	15	28	23
Total (n)	**204**	**231**	**287**

The number of women being referred to the service continues to increase compared to previous years. We have seen an increase in referrals for hospital-based care as well as an increase in complications post-community EMA. There is an increasing trend for both surgical termination of pregnancy and surgical management of incomplete termination of pregnancy. The recently published Independent Review of the Operation of the Health (Regulation of Termination of Pregnancy) Act 2018 has placed a significant emphasis on access to surgical termination and manual vacuum aspiration. With this in mind, we intend to establish a manual vacuum aspiration (MVA) service for women with incomplete termination of pregnancy or early miscarriage in order to offer choice to women and to ease the burden on the theatre department. We would like to acknowledge Dr Lindsay Cresswell, Bernard Stuart Fellow, for sharing her expertise in this area and her assistance is running a successful pilot service. The continued training of medical, midwifery and nursing staff to ensure the availability of trained providers remains a challenge.

We would like to acknowledge the support that we have received from the multidisciplinary team, and in particular Miriam Strong, Emma O'Neill and Dr Niamh Murphy.

1.15 Parent Education

Megan Sheppard

Live, interactive antenatal education classes facilitated by the Department of Parent Education continued to be facilitated online throughout 2022. Class attendances reached 7,020. To ensure choice and accessibility for all parents, classes for first time parents were facilitated on weekday mornings, evenings and at weekends with unrestricted access to all. Parents attended for a comprehensive package of antenatal education inclusive of preparation for birth and parenting, 'Birth Dynamics', maternal wellbeing and breastfeeding programmes.

Courses for second time parents which included preparation for birth, 'Birth Dynamics', refresher breastfeeding, birth choices after Caesarean birth were also facilitated online on weekdays.

Interactive online classes were complimented by a suite of antenatal education videos housed on The Coombe Hospital website.

One on one sessions, both face to face and online, were facilitated weekly for women in need of additional support. Women either self-referred to these sessions or were referred by the multidisciplinary team which included medical social worker and specialist mental health services.

In January 2022, phase 3 of the 'Birth Dynamics' project (an 80-page workbook), was launched and made available in hard copy to all parents attending antenatal classes at The Coombe Hospital. 'Birth Dynamics' is a programme of evidence-based preparation for labour and birth developed by the Department of Parent Education. It is a toolkit for labour and birth designed to support women in labour, optimise physiology and assist parents in navigating the intensity and challenges of birth, irrespective of the pathway.

This workbook compliments phases 1 and 2 of the project (the online interactive 'Birth Dynamics' class and the 'Birth Dynamics' video housed on The Coombe Hospital website).

1.16 Preterm Birth Prevention Clinic

Dr Neil O'Gorman and Dr Lyndsay Creswell

In 2022, 231 women attended the Preterm Birth Prevention Clinic (four women were lost to follow up). This equated to 545 clinic appointments. There was one 2nd trimester miscarriage at 21 weeks' gestation. One hundred and fifty women who attended the Preterm Birth Prevention Clinic delivered in The Coombe Hospital in 2022 at greater than or equal to 24 weeks' gestation, with the remaining 77 women delivering in 2023. A further four women were lost to follow-up. Women are referred to the clinic via strict referral criteria including; previous preterm birth, previous preterm, pre-labour rupture of membranes (PPROM), previous second trimester miscarriage, previous cervical surgery, previous cerclage or congenital uterine anomaly.

We have recently updated our referral criteria to include previous Caesarean section at full dilatation, in keeping with the Royal College of Obstetricians and Gynaecology guidance on cervical cerclage. We continue to assess women who attend the clinic using the QUiPP algorithm which provides an individualised risk for delivery at 30 weeks, 34 weeks and 37 weeks' gestation depending on the cervical length, fetal fibronectin and maternal history. The application additionally predicts the likelihood of delivering within the next week, two weeks and four weeks. This approach aims to rationalise obstetric hospital admissions, and time antenatal corticosteroid administration for women at high risk of spontaneous preterm delivery. Twenty-five women who gave birth in 2022 were prescribed Cyclogest (progesterone vaginal pessaries).

Six women with twin pregnancies attended the clinic and all delivered less than 37 weeks' gestation. Three women were delivered by Caesarean section. Two women laboured spontaneously at 34 weeks' (cerclage in situ) and 36 weeks' gestation (on Cyclogest) respectively. Four women were delivered iatrogenically between 34 and 36 weeks' gestation because of obstetric complications.

One hundred and thirteen women (75.3%) gave birth at greater than or equal to 36+6 weeks' gestation. Thirty-seven women delivered preterm (≥24 weeks' gestation). Fifteen (40.5%) of these were iatrogenic with induction of labour or planned Caesarean section for obstetric indications.

Spontaneous preterm birth occurred in 22 women (14.7%). Of these women, two (9.1%) gave birth prior to 28 weeks', one (4.6%), gave birth between 28+0 and 31+6 weeks', three (13.6%) gave birth between 32+0 and 33+6 weeks' and sixteen (72.7%) gave birth between 34+0 and 36+6 weeks' gestation.

Spontaneous onset of labour occurred in 59 women, and 57 had inductions of labour. One hundred women had vaginal births (66.7%). Twenty-seven women had elective Caesarean sections (18%) and 23 women had emergency Caesarean sections (15.3%).

One woman who had a transvaginal cervical cerclage in situ transferred her care to the UK in the second trimester. Nineteen women who attended the Preterm Birth Prevention Clinic and delivered in 2022 had a cervical cerclage in situ. Four women had a transabdominal cerclage in situ and 15 had a transvaginal cerclage in situ. Four women with cerclages in situ delivered between 34 and 36 weeks' gestation (three iatrogenic and one spontaneous preterm birth). The remaining 15 women delivered at term.

1.17 Severe Maternal Morbidity and High Dependency Unit

Julie Sloan, Dr Cathy Monteith and Dr Bridgette Byrne

Thirty-three of the 6,786 women (4.9 per 1,000) who delivered a baby/babies ≥ 500g in The Coombe Hospital fulfilled the criteria for the diagnosis of severe maternal morbidity (SMM). The number of cases and criteria met are outlined below (Table 1.17.1).

Table 1.17.1 Number of cases and causes of severe maternal morbidity, 2022

Organ dysfunction categories	n
Major obstetric hemorrhage	19*
RCC ≥ 5 units	6
EBL ≥ 2.5 litres	18
Renal or liver dysfunction	3
Pulmonary embolism	3
Septic shock	0
Uterine rupture	0
Eclamptic seizure, PRES syndrome	1
Other - arachnoid cyst	1
Other - seizure	1
Management based categories	**n**
ICU admission	6*
Peripartum hysterectomy	0
Total	**33**

Abbreviations: n- number; RCC – red cell concentrate; EBL – estimated blood loss; PRES – posterior reversible encephalopathy syndrome; ICU – intensive care unit *one case of MOH required transfer to ICU care and is represented in both sections

High Dependency Unit (HDU)

One-hundred and nineteen women (1.7% of the obstetric population) who delivered in The Coombe Hospital in 2022 required higher level care. They were cared for in the Delivery Suite but not always in the HDU area because of reorganisation of clinical space due to the COVID-19 pandemic and staffing shortages.

Table 1.17.2 Obstetric related HDU admissions, 2022

Indication for HDU admission	n
Major obstetric haemorrhage	17
Postpartum haemorrhage	28
Antepartum haemorrhage	1
Pre-eclampsia ± HELLP (haemolysis elevated liver enzymes and low platelets)	35
Hypertension	2
Threatened preterm labour	5*
Magnesium sulphate (fetal neuroprotection)	5
Sepsis	7
Liver or renal dysfunction	1
Septic shock	0
Anaesthetic problem	3
Sickle cell disease	4
Seizure activity	3
Miscellaneous	8†
Total	**119**

**includes one case of preterm ruptured membranes*

† miscellaneous causes include: Addison's disease, anticoagulation, arachnoid cyst, fetal distress, hypokalaemia, posterior encephalopathy syndrome, von Willebrand disease, vaginal haematoma

In 2022, six women required transfer to St James's Hospital for ICU care. Detailed data for MOH cases were collated and submitted to NPEC in 2022.

High level care continued to be provided despite staff shortages and infrastructural challenges with a reduction in the number of women requiring HDU level care.

In 2022, funding for a post-CSCST Aspire fellowship in Severe Maternal Morbidity was obtained.

1.18 Specialist Perinatal Mental Health Service

Dr Joanne Fenton

In 2022, the Perinatal Mental Health Service saw an increase in mental health conditions of women booking from 16.7% in 2016 to 24.6% in 2022. This has resulted in greater number of referrals to the service. There were 874 new patient assessments in 2022 and 2,834 review clinic appointments. Clinics returned to face to face consultations. There was an expansion of group therapy offered and the addition of a walking group.

The multidisciplinary team continued to expand. A senior occupational therapist joined the team, the first occupational therapist in The Coombe Hospital.

There was a focus on education throughout the year with all members of the team teaching all disciplines including medical students, midwives, psychology and mental health nurses. Seminars were provided within and outside of The Coombe Hospital.

The Schwartz Rounds continued monthly and were well attended by all hospital staff.

We continued to engage in research in collaboration with the Trinity Health Services and the other maternity hospitals in Dublin.

The implementation of a phone triage system resulted in a reduction of waiting times and the number of non-attendances thus ensuring all patients continued to receive high quality care.


The Coombe Hospital

The Coombe Hospital continues to provide the largest benign gynaecology service in Ireland.

Section 2

Gynaecology Services

2.1 Gynaecology Services Report Overview

Professor Michael O'Connell

The Coombe Hospital continues to provide the largest benign gynaecology service in Ireland. There was a total of 17,048 attendances at gynaecology outpatient clinics in 2022 (Table 2.1.1). This has been above 17,000 since 2019 apart from 2020 as a result of COVID-19 restrictions.

The number of urogynaecology attendances doubled between 2021 and 2022 and for the period of 2016 to 2022 the number of attendances peaked in 2022 (Table 2.1.1). This coincided with the appointment of a new subspecialist in urogynaecology and the development of a ring pessary clinic run by the clinical nurse specialist. There was also an increase following the COVID-19 pandemic of the urodynamic assessment service. The number of attendances at the enhanced endometriosis clinic, which was established in March 2021 increased to 149 in 2022 (Table 2.1.1). In 2021, a colposcopy/gynaecology clinic was established to provide care for symptomatic women who tested negative for human papilloma virus (HPV) on cervical screening. This clinic commenced in September 2021 and a total of 289 women attended in 2021 (Table 2.1.1). However, 208 women attended in 2022 as the service evolved and became more focused. A complex menopause clinic commenced in November 2022 and was attended by 15 women (Table 2.1.1).

Table 2.1.1 Gynaecology outpatient clinic attendances at The Coombe Hospital, 2016 to 2022

Type of outpatient clinic	2016	2017	2018	2019	2020	2021	2022
General gynaecology clinic (n)	4,981	6,155	5,798	7,547	5,186	7,128	5,192
Colposcopy clinic (n)	6,006	5,909	5,993	6,606	5,226	5,780	5,456
Urogynaecology clinic (n)	1,564	1,736	1,648	1,561	584	1,057	2,605
Endocrine clinic* (n)	449	483	494	530	420	100	68
Enhanced endometriosis clinic	-	-	-	-	-	100	149
Fertility hub (n)	-	-	-	-	-	816	818
Miscarriage clinic (LEAF) (n)	-	-	-	-	-	363	390
Options in pregnancy clinic (n)	-	-	-	174	248	312	397
Outpatient hysteroscopy† (n)	-	-	738	687	987	960	1,326
Colposcopy/gynaecology clinic	-	-	-	-	-	289	208
GP led mirena clinic‡	-	-	-	-	205	348	-
GP led long acting reversible contraception clinic	-	-	-	-	-	265	424
Complex menopause clinic	-	-	-	-	-	-	15
Total (n)	**13,000**	**14,283**	**14,671**	**17,105**	**12,856**	**17,518**	**17,048**

**prior to 2021 the subfertility clinic (now called the fertility hub) was combined with the endocrine clinic †non-attendances included in error in previous Annual Reports ‡service changed to GP led long acting reversible contraception clinic in May 2021*

The Women's Health Centre at The Coombe Hospital was established in 2018. Since then, services provided in the Women's Health Centre have expanded to include the colposcopy service, ambulatory gynaecology (outpatient hysteroscopy and endometrial ablation), the options in pregnancy clinic, a GP led long acting reversible contraception clinic and a complex menopause clinic. The number of outpatient hysteroscopies increased from 857 in 2018 to 1,473 in 2021 and this number remained stable in 2022 (Table 2.1.2).

In 2022, 6,176 gynaecological surgical procedures were performed (Table 2.1.2), the highest number between 2016 and 2022. Tables 2.1.2 to 2.1.7 present the numbers of surgical procedures by category of gynaecological surgery (excluding urogynaecology) from 2016 to 2022. The temporary cessation of CervicalCheck screening services in 2020 impacted on the number of cervical surgical procedures performed that year (Table 2.1.2). In 2021, 1,001 cervical surgical procedures were performed, the highest number between 2016 and 2022. A total of 3,616 uterine surgical procedures were performed in 2022 (Table 2.1.2), the highest number between 2016 and 2022.

Table 2.1.2 Category of gynaecological surgery, 2016 to 2022

Category of surgery	2016	2017	2018	2019	2020	2021	2022
Cervical (n)	828	844	872	902	620	1,001	841
Uterine (n)	2,761	2,543	2,564	2,656	3,152	3,108	3,616
Tubal and ovarian (n)	847	812	775	769	952	1,010	997
Vulval and vaginal (n)	423	360	427	405	361	373	386
Urogynaecology (n)	365	410	377	363	282	243	304
Other (n)	31	43	56	40	57	48	32
Total (n)	**5,255**	**5,012**	**5,071**	**5,135**	**5,424**	**5,783**	**6,176**

Table 2.1.3 Cervical surgery, 2016 to 2022

Type of cervical surgery	2016	2017	2018	2019	2020	2021	2022
LLETZ/NETZ/SWETZ/LEEP (inpatient) (n)	87	82	101	110	82	76	77
LLETZ (outpatient) (n)	563	604	563	614	373	735	569
Cone biopsy (n)	5	2	6	1	5	1	2
Biopsy of cervix (n)	17	14	11	16	23	25	22
Cervical polypectomy (n)	56	36	32	30	17	30	35
Diathermy to cervix (n)	4	3	2	2	1	4	1
Colposcopy +/- cervical smear	82	95	149	114	93	113	116
Other (n)	14	8	8	15	26	17	19
Total (n)	**828**	**844**	**872**	**902**	**620**	**1,001**	**841**

Between 2016 and 2022, the highest number of diagnostic inpatient hysteroscopy was performed in 2022 (Table 2.1.4). The number of diagnostic outpatient hysteroscopy performed increased from 430 in 2020 to 507 in 2022 (Table 2.1.4). Between 2016 and 2022, the highest number of hysteroscopic procedures was performed in 2022 (1,565) and the lowest

number in 2017 (931) (Table 2.1.4). In 2022, 109 total abdominal hysterectomies (TAH) were performed, fewer than in the preceding three years (Table 2.1.5). Of these, 88 (80.7%) were performed laparoscopically (Table 2.1.5). Prior to 2022, this rate reached a peak of 67.4% in 2016 and reached a trough of 50.6% in 2018. The increase in the percentage of TAH performed laparoscopically in 2022 was a result of the expansion of the service with the appointment in 2021 of three consultant obstetricians and gynaecologists with a special interest in benign gynaecology and minimally invasive surgery.

Between 2016 and 2022, the total number of vaginal hysterectomies performed ranged between 51 in 2021 and 104 in 2017 with 71 performed in 2022 (Table 2.1.5). The number of vaginal hysterectomies performed non-laparoscopically increased from a nadir of 51.1% in 2016 to a peak of 87.3% in 2022.

Table 2.1.4 Uterine surgery, 2016 to 2022

Type of uterine surgery	2016	2017	2018	2019	2020	2021	2022
Hysteroscopy (n)							
Diagnostic inpatient	939	856	853	864	841	833	950
Diagnostic outpatient	-	-	-	-	430	457	507
Operative							
– Myomectomy	10	6	11	8	8	5	4
– Resection of uterine septum	3	7	7	7	7	6	1
– Resection of uterine adhesions	1	3	1	0	2	1	1
– Removal of endometrial polyp	49	59	104	111	92	69	70
– Other	5	0	5	3	27	20	32
Subtotal (n)	1,007	931	981	993	1,407	1,391	1,565
Laparoscopy (n)							
Laparoscopic assisted vaginal hysterectomy	45	34	28	19	27	11	9
Laparoscopic total abdominal hysterectomy	60	52	40	75	68	68	88
Laparoscopic subtotal abdominal hysterectomy	7	5	1	0	1	0	1
Laparoscopic radical hysterectomy	0	1	0	2	0	0	0
Laparoscopic myomectomy	8	8	8	11	18	10	17
Subtotal (n)	120	100	77	107	114	89	115
Laparotomy (n)							
Total abdominal hysterectomy	29	34	39	59	43	47	21
Subtotal hysterectomy	1	3	0	1	4	4	2
Radical hysterectomy	0	0	1	0	0	0	1
Omentectomy	2	4	2	7	4	3	2
Myomectomy	16	10	15	22	15	17	12
Subtotal (n)	48	51	57	89	66	71	38

Vaginal hysterectomy							
(n)	47	70	56	44	46	40	62
Other (n)							
Dilatation and curettage	827	737	708	729	681	684	829
Transcervical resection of endometrium	24	26	28	24	9	5	5
Endometrial ablation (inpatient)	71	69	76	84	86	73	60
Myosure (outpatient)	-	-	-	-	77	88	184
Mirena coil insertion	317	279	290	302	297	303	386
Mirena coil removal	148	121	156	128	123	109	106
Examination under anaesthesia	97	114	79	103	147	125	115
Other	55	45	56	53	99	130	151
Subtotal (n)	1,539	1,391	1,393	1,423	1,519	1,517	1,836
Total (n)	**2,761**	**2,543**	**2,564**	**2,656**	**3,152**	**3,108**	**3,616**

The increase in the number of Myosure treatments performed in The Women's Health Centre reflects an evolution of the ambulatory service to not only diagnosing, but also treating menstrual conditions (Table 2.1.4).

Table 2.1.5 Type of hysterectomy, 2016 to 2022

Total abdominal hysterectomy	2016	2017	2018	2019	2020	2021	2022
Laparoscopic (n)	60	52	40	75	68	68	88
Laparotomy (n)	29	34	39	59	43	47	21
Total (n)	**89**	**86**	**79**	**134**	**111**	**115**	**109**
Laparoscopic	67.4%	60.5%	50.6%	60.0%	61.3%	59.1%	80.7%
Vaginal hysterectomy (n)	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Laparoscopic assisted (n)	45	34	28	19	27	11	9
Non-laparoscopic assisted (n)	47	70	56	44	46	40	62
Total (n)	**92**	**104**	**84**	**63**	**73**	**51**	**71**
Laparoscopic assisted	48.9%	32.7%	33.3%	30.2%	37.0%	21.6%	12.7%
Non-laparoscopic assisted	51.1%	67.3%	66.7%	69.8%	63.0%	78.4%	87.3%

The increase in total laparoscopic hysterectomies in 2022 is reflective of new consultant appointments with advanced laparoscopic skills. Also, the increase in vaginal hysterectomies (non-laparoscopically assisted) reflects the development of the urogynaecology service.

A total of 997 tubal and ovarian surgical procedures were performed in 2022 (Table 2.1.6) which was the highest number between 2016 and 2022, apart from 2021 (1,010). The number of diagnostic laparoscopies peaked at 272 in 2022. Similarly, the number of bilateral salpingectomies performed laparoscopically and the number of adhesiolysis procedures performed laparoscopically peaked at 88 and 98, respectively, in 2022.

Table 2.1.6 Tubal and ovarian surgery, 2016 to 2022

Type of tubal and ovarian surgery (n)	2016	2017	2018	2019	2020	2021	2022
Laparoscopy (n)							
Diagnostic	234	249	247	267	236	243	272
Sterilisation	44	58	28	28	17	14	19
Dye test	101	85	91	53	83	125	106
Tubal reconstructive surgery	0	0	0	0	1	0	0
Unilateral salpingectomy	20	12	14	9	10	8	17
Bilateral salpingectomy	42	26	39	45	59	76	88
Unilateral oophorectomy	12	4	12	7	9	4	10
Bilateral oophorectomy	4	1	4	1	3	0	0
Unilateral salpingo-oophorectomy	19	17	8	14	15	15	15
Bilateral salpingo-oophorectomy	74	75	46	66	81	47	70
Unilateral ovarian cystectomy	51	75	77	60	50	70	74
Bilateral ovarian cystectomy	8	7	6	2	10	5	9
Aspiration of ovarian cyst(s)	15	6	3	3	4	10	4
Adhesiolysis	74	58	50	58	74	85	98
Ablation/diathermy	110	98	95	75	110	92	52
Other	15	14	7	9	35	33	35
Subtotal (n)	823	785	727	697	797	827	869
Laparotomy (n)							
Sterilisation	1	0	0	0	13	26	13
Tubal reconstructive surgery	0	0	0	0	0	0	1
Unilateral salpingectomy	1	1	3	2	3	3	3
Bilateral salpingectomy	3	4	11	14	92	107	69
Unilateral oophorectomy	0	0	2	6	2	0	1
Bilateral oophorectomy	0	0	1	0	0	0	0
Unilateral salpingo-oophorectomy	7	5	0	5	5	7	6
Bilateral salpingo-oophorectomy	0	5	23	35	24	23	11
Unilateral ovarian cystectomy	10	6	4	2	6	8	13
Bilateral ovarian cystectomy	1	1	1	0	2	4	2
Adhesiolysis	0	2	0	1	5	2	4
Ablation/diathermy	1	0	1	2	2	3	1
Other	0	3	2	5	1	0	4
Subtotal (n)	24	27	48	72	155	183	128
Total (n)	**847**	**812**	**775**	**769**	**952**	**1,010**	**997**

In 2022, 384 vulval and vaginal surgical procedures were performed in 2022 (Table 2.1.7), 102 of which were anterior repairs. Between 2016 and 2022, a peak of 105 anterior repairs was reached in 2017 and a trough of 69 was reached in 2020. Following a review of the category 'other' the number of procedures in this category decreased and the number of procedures in the category 'hymenectomy/hymenotomy' increased.

Table 2.1.7 Vulval and vaginal surgery*, 2016 to 2022

Type of vulval and vaginal surgery (n)	2016	2017	2018	2019	2020	2021	2022
Simple vulvectomy	4	0	2	1	0	1	0
Vaginal repair for dyspareunia/vaginoplasty	0	0	5	0	0	1	1
Anterior repair	87	105	95	88	69	72	102
Posterior repair	87	76	90	63	52	57	76
Suturing of vaginal vault	0	0	0	0	3	1	2
Hymenectomy/hymenotomy	3	5	1	2	1	1	17
Excision of vulval/vaginal cysts/biopsy	93	55	94	95	72	82	85
Bartholin's cyst/abscess	42	24	16	19	18	17	9
Labial reduction	5	4	3	2	1	0	5
Fenton's procedure	4	7	9	8	3	5	3
Other cyst/abscess/lesions	12	14	14	11	11	5	7
Other	86	70	98	116	131	131	77
Total (n)	**423**	**360**	**427**	**405**	**361**	**373**	**384**

**excludes urogynaecology surgery*

Table 2.1.8 Miscellaneous surgery*, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Total (n)	**31**	**43**	**56**	**40**	**57**	**48**	**32**

**includes appendicectomy, abdominal wound repair and laparotomy for other reasons etc.*

2.2 Colposcopy Service

Olivia McCarthy and Professor Tom D'Arcy

The Coombe Hospital Colposcopy Service is consultant led, supported by three nurse colposcopists. In 2022, the service provided six clinical sessions per week. Two were nurse-led and four were consultant-led with support from a trainee nurse colposcopist.

There were 213 fewer referrals to the Colposcopy Service in 2022 compared with 2021 (Table 2.2.1). An increase in the number of referrals occurred in 2021 as a result of the curtailment of services in 2020 due to the COVID-19 pandemic. In 2022, 76.3% (1,678/2,198) of women referred to the Colposcopy Service had an abnormal screening test (Table 2.2.2).

There were 324 less total attendances in 2022 compared with 2021 but the number of total attendances in 2022 was similar to those prior to the pandemic. (Table 2.3.2). There were also 126 fewer new attendances in 2022 compared with 2021 (Table 2.3.2). Similarly, this number was higher than it was between 2017 and 2020.

Table 2.2.1 Referrals to Colposcopy Service, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Total (n)	**2,071**	**1,915**	**2,094**	**2,330**	**1,492**	**2,411**	**2,198**

Table 2.2.2 Screening abnormalities in women referred to Colposcopy Service, 2022

Type	n
Atypical squamous cells of undetermined significance	632
Low-grade cytological abnormality	409
High-grade cytological abnormality or worse	162
HPV and no cytological change	475
Total (n)	**1,678**

Table 2.2.2 Colposcopy attendances, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
New attendances (n)	2,064	1,863	1,986	2,152	1,376	2,171	2,045
Total attendances (n)	6,006	5,909	5,993	6,606	5,226	5,780	5,456

At the end of each colposcopy session, the clinician reviews the charts of women who did not attend their appointments. Based on clinical need, the individual woman is either offered another appointment or discharged back to GP care. If a woman did not attend following an urgent referral we would telephone her to establish a reason for non-attendance and to re-schedule another appointment. The non-attendance rate increased from 11.9% in 2021 to 15.9% in 2022 (Table 2.2.3). This increase can be attributed in some part to technical issues with the text reminder system during the year. In order to manage this, women who did not attend their appointments were offered return appointments until such time as the technical issues were rectified.

Table 2.2.3 Non-attendances, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Non-attendances (n)	1,137	871	904	920	721	687	868
Total attendances (n)	6,006	5,909	5,993	6,606	5,226	5,780	5,456
Non-attendances	18.9%	17.5%	15.1%	13.9%	13.8%	11.9%	15.9%

The numbers of diagnostic punch biopsies and large loop excisions of the transformation zone (LLETZ) conducted in the Colposcopy Service from 2018 to 2022 are presented in Table 2.2.4. As with numbers of referrals and attendances, there was an increase in numbers of procedures conducted in 2021 which had been preceded by a reduction in 2020.

Table 2.2.4 Procedures conducted in Colposcopy Service, 2018 to 2022

	2018	2019	2020	2021	2022
Diagnostic punch biopsies (n)	1,659	1,843	1,314	1,872	1,478
LLETZ (n)	619	726	456	810	646
Total (n)	**2,278**	**2,569**	**1,770**	**2,682**	**2,124**

In 2022, 1,478 diagnostic punch biopsies were conducted. The histology results are presented in Table 2.2.5.

Table 2.2.5 Histology results of diagnostic punch biopsies, 2022

Histology	n
Adenocarcinoma in-situ/CGIN	4
Cancer (including micro-invasive)	5
CIN uncertain grade	32
CIN1	763
CIN2	204
CIN3	85

HPV/cervicitis only	180
Inadequate/unsatisfactory	0
No CIN/no HPV (normal)	126
VAIN1	26
VAIN2	5
VAIN3	1
VIN1	3
VIN2	0
VIN3	2
Unknown	42
Total	**1,478**

In 2022, 646 LLETZ were conducted in either the Colposcopy Clinic or the operating theatre. The histology results of the LLETZ performed from 2018 to 2022 are presented in Table 2.2.6.

Table 2.2.6 Histology results of LLETZ, 2018 to 2022

Histology	2018 n = 619	2019 n = 726	2020 n = 456	2021 n = 810	2022 n = 646
Adenocarcinoma in situ/CGIN	11	11	9	24	5
Cancer (including micro-in-vasive)	6	11	1	3	5
CIN uncertain grade	NR	6	0	6	2
CIN1	249 (40.2%)	274 (37.7%)	199 (43.6%)	314 (38.8%)	299 (46.3%)
CIN2	134 (21.6%)	135 (18.6%)	126 (27.6%)	228 (28.1%)	141 (21.8%)
CIN3	154 (24.9%)	200 (27.5%)	93 (20.4%)	193 (23.8%)	97 (15.0%)
HPV/cervicitis only	NR	0	0	9	50
Inadequate/unsatisfactory	2	0	0	0	0
No CIN/no HPV (normal)	56	69	24	21	38
Blank/unrecorded	7	20	4	12	9

NR - not reported

In 2022, multidisciplinary team meetings were re-established. These are held every second month. There is one British Society for Colposcopy and Cervical Pathology (BSCCP) accredited trainer in The Coombe Hospital who supports trainees in colposcopy. In 2022, there was one trainee nurse colposcopist in post.

Table 2.2.7 CervicalCheck Quality Standards, 2022

Category of Quality Standard	The Coombe Hospital
Communication	
Results and management plan communicated to woman and GP within six weeks of woman's attendance	94.4%
Management of waiting times for new referrals	
Proportion of women with a clinical suspicion of invasive cancer or a screening test suggestive of invasive cancer seen within two weeks	100.0%
Proportion of women with screening test suggestive of high-grade disease (HSIL/ASCH) or any glandular abnormality seen within four weeks	71.4%
Proportion of all other women seen within eight weeks	68.2%

One CervicalCheck quality standard (QS), with a minimum target of 90%, relates to communication (Table 2.2.7). The Colposcopy Service had a compliance rate of 94.4% with this QS in 2022. Two other QS relate to appointments management (management of waiting times for new referrals) (Table 2.2.7). The minimum target for management of waiting times for new referrals to the Colposcopy Service is 90%. In 2022, all women with a clinical suspicion of invasive cancer or a screening test suggestive of invasive cancer were seen within two weeks (Table 2.2.7). Many factors affected the ability and capacity of the Colposcopy Service to see women within timeframes set out by CervicalCheck QS. The two cyberattacks, experienced by both HSE and The Coombe Hospital had an impact on the management of waiting times for new referrals. Improved rates of attendance and increased numbers of referrals in 2021, following the lifting of COVID-19 restrictions, also had an impact on this.

2.3 Complex Menopause Clinic

Professor Michael O'Connell

There has been a menopause service in The Coombe Hospital since 1992. A Menopause Clinic was established in 2005 by Professor O'Connell following Professor Niall Duignan's retirement and over the years, the clinics numbers reduced, while the complexity of the cases increased. The Menopause Clinic was integrated into a general clinic for a number of years. However, with recent changes in menopause management and with the advent of additional high-quality research data, there has been an increased demand for such services. Clinics to manage this increased demand have been funded by the National Women and Infants Programme. The Complex Menopause Clinic in The Coombe Hospital commenced in November 2022 and is run by Professor O'Connell and Dr Amaliya Morgan Brown, with the purpose of providing care to women in the Midland Regional Hospital Group catchment area. In the first month, a total of 15 women attended three clinics.

2.4 Fertility Hub

Sinead Gavin and Professor Nadine Farah

The public fertility hub, which established in June 2021, offers a comprehensive, multidisciplinary team approach to individuals and couples experiencing fertility issues in the Dublin Midlands Hospital Group (DMHG). In 2022, 818 couples accessed the service (Table 2.4.1). This comprised 401 new visits and 417 return visits across consultant led fertility clinics and clinical nurse specialist clinics. Table 2.5.2 presents data on the management of women who attended the fertility hub.

In 2022, 360 hysterosalpingo-contrast-sonography (HyCoSy) tests were performed. Twenty-three women with suspected tubal occlusion were referred to Tallaght University Hospital for a hysterosalpingogram and consideration of canalisation (Table 2.4.2).

Table 2.4.1 Attendances at the fertility hub, 2022

	Attendances	Non-attendances
New first visits (n)	401	78
Return visits (n)	417	103
Total (n)	**818**	**181**

Table 2.4.2 Management in 2022

	Procedures
Follicle tracking scans (n)	954
HyCoSy (n)	360
Tubal patency demonstrated (n)	337
Referred for hysterosalpingogram (n)	23
Clinical nurse specialist pelvic scan (n)	38
Total (n)	**1,712**

2.5 GP Led Long-Acting Reversible Contraception Clinic

Olivia McCarthy

This weekly clinic is run by a dedicated team of GPs who provide care to women suitable for outpatient management of intrauterine contraceptive devices.

In 2022, 405 women attended the clinic for a first visit and 19 women attended for a return visit. These return visits were either for a string check or because the original insertion had been postponed. Four hundred and twenty-four women attended in the clinic in total. Another 98 women did not attend appointments (23.1%). Appointments were rescheduled for 14 of these women.

In 2022, 226 women had insertion of a either a Mirena, a Kyleena or a copper coil. Intrauterine devices were removed in 30 women and exchanged/reinserted in 67 women. Thirty-five women were referred to general gynaecology clinics because the administration of a general anaesthetic was necessary for the insertion of an intrauterine device.

2.6 Outpatient Hysteroscopy Service

Birgit Wilmes and Dr Workineh Tadesse

The Outpatient Hysteroscopy Service was established in mid-2017, to improve access and waiting times for assessment and/or treatment for woman over the age of 40 years who are referred because of abnormal uterine bleeding or postmenopausal bleeding. The service runs four sessions per week seeing five to eight new patients and six return patients at each session, both in person and via telephone consultation.

Patients are assessed using a 'one stop' appointment model of care utilising transvaginal ultrasound, hysteroscopy (if indicated following ultrasound) and endometrial biopsy. In 2022, the number of women who attended the clinic for assessment and/or treatment continued to trend upward (18.8% higher than in 2021). 2022 also saw a lower non-attendance rate (9.1%) compared to that of 2021 (14.8%).

Table 2.6.1 Outpatient Hysteroscopy Service, 2018 to 2022

Appointments	2018*	2019	2020	2021	2022
Total (n)	857	805	1,092	1,127	1,459
Non-attendance (n)	119	118	105	167	133
Non-attendance (%)	13.0	14.0	9.6	14.8	9.1
Histology results	**2018***	**2019**	**2020**	**2021**	**2022**
Complex hyperplasia (n)	5	8	14	8	9
Cancers (n)	13	10	18	16†	13

**includes attendances from mid-July 2017 †includes two ovarian cancers diagnosed incidentally*

In 2022, 96 endometrial polypectomies were performed in the clinic using a Myosure device, compared with 74 in 2021 and 77 in 2020. The majority of the polypectomies were done as a 'see and treat' on the first visit.

2.7 The LEAF Clinic

Dr Mark Hehir

The LEAF Clinic was established in 2019 to replace what was known as the Miscarriage Clinic. The clinic is structured in repeated four-week blocks throughout the year, where two weeks are spent caring for patients with recurrent miscarriage, one where those who have suffered a mid-trimester loss are seen and the final week is a purely virtual clinic for the feedback of results generated from in-person appointments. Women are offered investigation of their loss as recommended by evidence-based guidance. They also receive psychological support from our bereavement midwives in the clinic. Women are given a plan for future pregnancies and offered support in the early gestational period of subsequent pregnancies through counselling or early pregnancy ultrasound.

In 2022, 159 women with recurrent miscarriage and 46 women who had suffered a mid-trimester loss attended the LEAF Clinic. Virtual consultations in order to feedback results were offered to 185 women.

Significant numbers of women attended for counselling, reassurance and early pregnancy ultrasound in subsequent pregnancies and many of these women went on to deliver healthy babies in the months afterward. The LEAF Clinic received multiple instances of positive feedback and gratitude for the care extended to women during 2022.


The Coombe Hospital

The Neonatology Department continues to be very active in research. We run numerous research projects ourselves and participate in other multicentred and international studies.

Section 3

Paediatrics and Newborn Medicine

3.1 Medical Report

Dr Anne Doolan

Admissions to The Coombe Hospital Neonatal Unit

Table 3.1.1 Admissions to The Coombe Hospital Neonatal Unit in 2022

	n*
Total admissions to Neonatal Unit †	881
Admissions > 1,500g birth weight	747
Admissions ≥ 35 weeks' gestation	609

** not including readmissions †Neonatal Unit = Special Care Baby Unit (SCBU) and Neonatal Intensive Care Unit (NICU)*

Very Low Birth Weight (VLBW)Infants (Vermont Oxford Network) Outcome Data

Table 3.2.1 Number of cases reported to the VON in 2022 (n = 96)*

	All cases (n)	Cases excluding congenital anomalies (n)	Survival to discharge† n, (%)	Survival without morbidities† n, (%)
Infants < 401g but ≥ 22 weeks' gestation	1	1	0	0
Infants 401 - 500g	2	2	0	0
Infants 501 - 1,500g	90	84	75	53
Infants > 1,500g but ≤ 29^{+6} weeks' gestation	3	3	3	3
Total	**96**	**90**	**71 (74%)**	**50 (52%)**

**n = 96 represents total number of VON infants managed by The Coombe Hospital. This reflects both inborn and outborn VON infants. There was a total of 6 newborns with VON defined major congenital anomalies, 2 of whom survived to discharge. 5 newborns were inborn and 1 was outborn. The number 96 includes all newborns with any sign of life following delivery.*

†excluding major congenital anomalies

Figure 3.2.1 Number of infants 501 - 1,500g admitted to NICU in The Coombe Hospital (inborn and outborn), 2012 to 2022

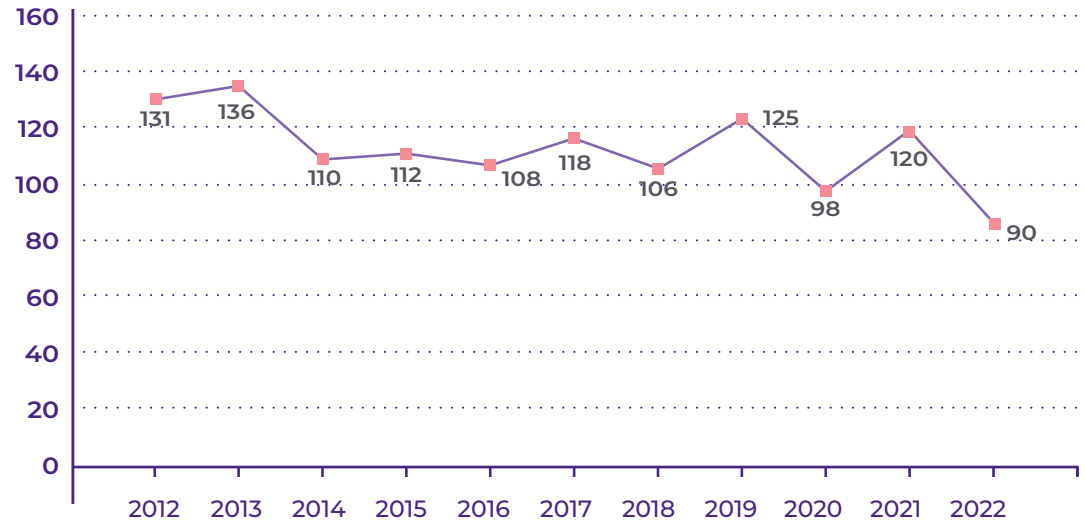


Figure 3.2.2 Total number of VON eligible infants (inborn and outborn) including congenital anomalies in The Coombe Hospital, 2012 to 2022

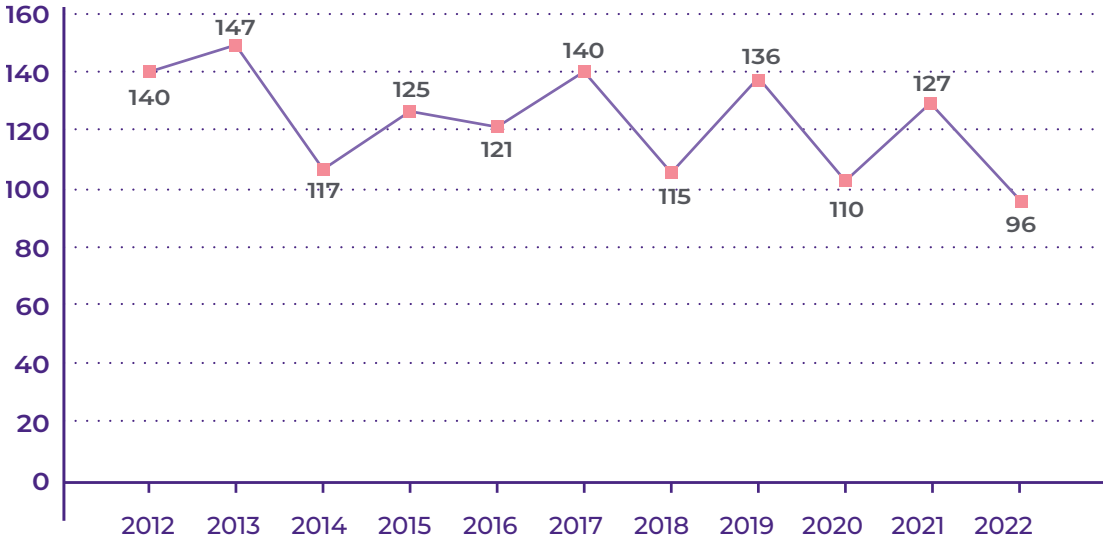


Figure 3.2.3 Survival of VLBW infants in The Coombe Hospital who were admitted to NICU (including congenital anomalies), 2012 to 2022

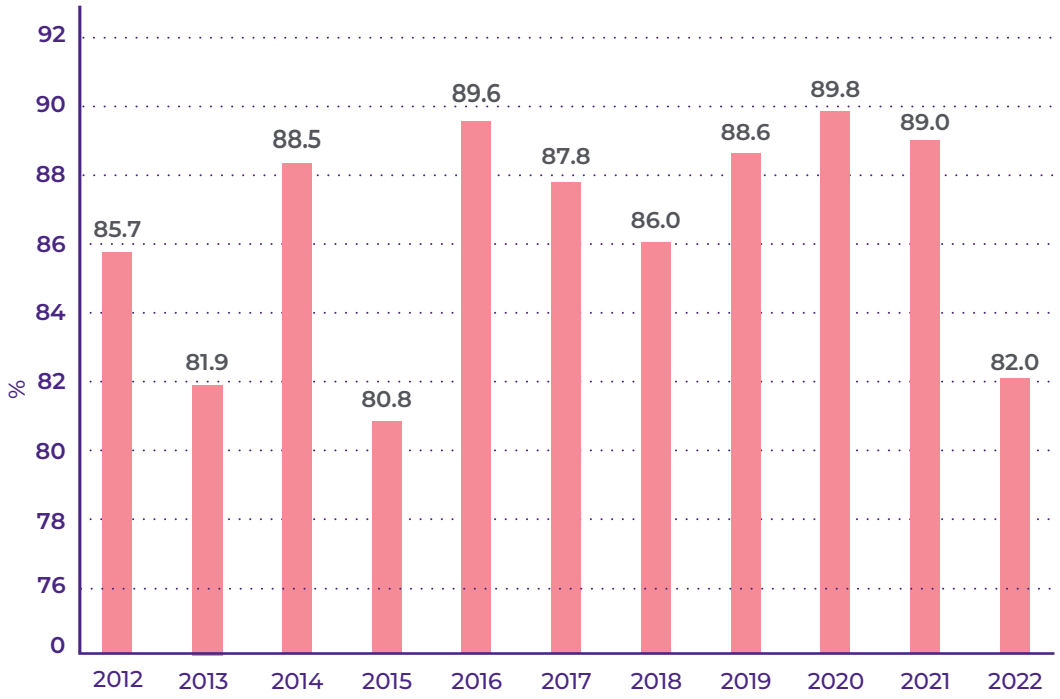


Figure 3.2.4 Survival to discharge without major predefined morbidity of VLBW infants in The Coombe Hospital (VON data including congenital anomalies), 2012 to 2022

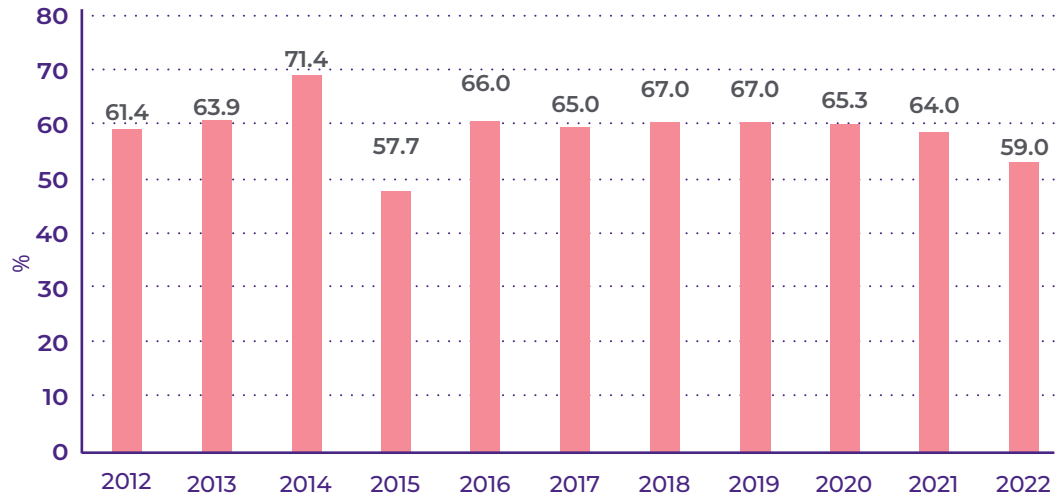


Table 3.2.2 Gestational age breakdown and survival to discharge of all infants reported to the VON (including congenital anomalies) who were resuscitated/stabilised in delivery room (DR) in 2022, (n = 96)*

Gestational age (weeks)	Total (n)	Died in DR (n)	Survival to discharge, n (%)	Survival to discharge
< 24	4	1 (25.0%)	1 (25.0%)	0 (0.0%)
24 - 26	30	1 (3.3%)	20 (69%)	10 (34.5%)
27 - 29	32	1 (3.1%)	30 (93.8%)	23 (71.9%)
30 - 32	21	0 (0.0%)	20 (95.2%)	17 (81.0%)
> 32	9	1 (11.1%)	7 (77.8%)	6 (66.7%)
Total	**96**	**4 (4.2%)**	**78 (81.3%)**	**56 (58.3%)**

** Includes both inborn and outborn newborns and major congenital anomalies. There were six newborns with major congenital anomalies and three of these survived to discharge.*

Four infants born ≥ 22 weeks and/or ≥ 400g were reported to VON in 2022. Three of these infants were stabilised in the DR, two infants survived to discharge from The Coombe Hospital and one infant subsequently died in CHI, Crumlin.

Table 3.2.3 Outcome to discharge of all newborns < 24 weeks gestational age reported to the VON (≥ 22 weeks and/or ≥ 400g) including congenital anomalies, 2012 to 2022 (n = 93)*

Year	Newborns (n)	DR stabilisation (n)	Death in DR (n)	Survival to discharge n, (%)	Survival to discharge if DR stabilisation n, (%)	Survival to discharge without morbidity n, (%)
2012	9	4	6	0 (0%)	0 (0%)	0 (0%)
2013	15	5	12	2 (13%)	2 (40%)	0 (0%)
2014	4	1	3	1 (25%)	1 (100%)	0 (0%
2015	11	6	5	5 (45%)	5 (83%)	1 (9%)
2016	8	3	5	0 (0%)	0 (0%)	0 (0%)
2017	10	3	7	1 (10%)	1 (33%)	0 (0%)
2018	5	2	3	1 (20%)	1 (50%)	0 (0%)
2019	13	7	6	4 (31%)	4 (57%)	0 (0%)
2020	8	4	4	0 (0%)	0 (0%)	0 (0%)
2021	6	6	0	4 (66%)	4 (67%)	0 (0%)
2022	4	3	1	2 (50%)	2 (67%)	0 (0%)
Total	**93**	**44**	**52**	**20 (22%)**	**20 (45%)**	**1 (1%)**

** Includes both inborn and outborn newborns*

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 day three.

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 - 1,500g 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 3.2.4 Morbidity and mortality data for infants with birth weight 501 - 1,500g admitted to NICU in The Coombe Hospital (congenital anomalies included), (n = 90) compared to the Vermont Oxford Network in 2022 and the Republic of Ireland in 2021

Outcome measure	The Coombe Hospital 2022 n, (%), (denominator)	*VON 2022 %	ROI 2021 %
Inborn	87 (96.7%), (90)	86.8	87.7
Antenatal steroids (partial or complete)	74, (82.2%), (90)	84.9	91.4
Caesarean section	74, (82.2%), (90)	75.8	72.3
Antenatal magnesium sulphate	74, (82.2%), (90)	65.1	72.1
Multiple gestation	18, (20%), (90)	24.5	30.5
Any major congenital anomaly	6, (6.7%), (90)	6.6	7.0
Surfactant in delivery room	15, (16.7%), (90)	17.5	25.1
Surfactant at any time	57, (63.3%), (90)	56.2	58.5
Conventional ventilation after initial resuscitation	46, (52.3%), (88)	49.8	57.5
High frequency ventilation after initial resuscitation	11, (12.5%), (88)	21.3	16.2
Ventilation after early CPAP	30, (46.9%), (64)	40.2	40.9
Inhaled nitric oxide	13, (14.8%), (88)	6.1	14.6
Pneumothorax	5, (5.7), (88)	4.1	7.6

Chronic lung disease (at 36 weeks)	10, (16.9%), (59)	26.4	23.3
Steroids for CLD	13, (14.8%), (88)	12.8	13.0
Early bacterial sepsis	2, (2.3%), (88)	1.3	1.5
Late bacterial sepsis	12, (15.2%), (79)	7.7	7.7
CONS Infection	6, (7.6%), (79)	4.8	6.2
Nosocomial bacterial infection	12, (15.2%), (79)	11.4	12.9
Fungal infection	1, (1.3%), (79)	0.9	0.9
Any late infection (bacterial or fungal)	12, (15.2%), (79)	11.9	13.3
NEC (medical)	4, (4.5%), (88)	5.2	5.3
Focal intestinal perforation	5, (5.7%), (88)	1.6	2.9
Surgery for NEC and/or intestinal perforation	5, (5.7%), (88)	3.3	5.7
Severe ROP (≥ Stage 3)	6, (8.7%), (69)	5.6	6.2
Anti-VEGF Drug	4, (4.5%), (88)	2.4	5.1
Surgery for ROP	5, (5.7%), (88)	1.6	3.8
Severe IVH (Grade III-IV)	8, (9.4%), (85)	7.7	9.8
Cystic PVL	1, (1.2%), (86)	2.7	3.1
Paracetamol for PDA	4, (4.5%), (88)	10.3	12.5
Ibuprofen for PDA	0, (0.0%0, (88)	5.8	6.3
PDA Surgery	3, (3.4%), (88)	2.6	2.7
Any human milk enteral feeds at discharge	49, (55.7%), (88)	56.5	55.4
Human milk only enteral deeds at discharge	38, (43.2%), (88)	11.4	18.2
Mortality	14, (15.7%), (89)	12.0	18.9
Mortality excluding early deaths	11, (12.3%), (89)	9.7	14.4
Survival	75, (84.3%), (89)	88.0	81.1
Survival without specified morbidities	53, (59.6%), (89)	58.0	54.4

** ROI and VON outcome data are expressed as percentage values. The ROI data available at the time of publication of this report was for the year 2021. In contrast the VON Network data pertains to the year 2022*

Table 3.2.5 Shrunken standardised mortality and morbidity (SMR) rates

	SMR (95% confidence interval)	SMR (95% confidence interval)
Year	2022	2020 - 2022
Mortality	1.3	1.1
Death or morbidity	1.0	0.9
Chronic lung disease (at 36 weeks)	0.8	0.8
NEC	0.9	0.7
Late bacterial infection	1.2	1.0
Coagulase negative infection	1.4	0.9
Nosocomial Infection	1.2	1.0
Fungal infection	1.2	1.3
Any late infection	1.2	1.0
Severe IVH	1.1	1.1
Pneumothorax	1.2	0.9
Cystic PVL	0.7	0.6
Severe ROP	1.3	1.2

Hypoxic Ischaemic Encephalopathy and Mortality Tables

Table 3.3.1 Hypoxic ischaemic encephalopathy (HIE), 2022

HIE	Inborn (n = 10)	Outborn (n = 5)
HIE Moderate Stage 2	9	5
HIE Severe Stage 3	1	0
Therapeutic hypothermia	Inborn (n = 10)	Outborn (n = 5)
Outcomes for hypothermia		
Death	1	0
Alive and normal to date	7	5
Motor delay	2	0

In 2022, two inborn infants with congenital heart disease died as neonates. One baby was born prematurely and died within seven days of birth while the second baby was born at term and died within 28 days of birth.

Table 3.3.2 Mortality - inborn infants normally formed ≤ 1,500g, 2022 (n = 9, includes 2 infant deaths)

Group classification	Anomaly (leading to death)
Extreme prematurity and aetiology of death otherwise specified	n = 9
	PPHN, n = 2
	Multiorgan failure, n = 1
	Ventilator dependency, prolonged hypoxia and respiratory failure, n = 2
	Sepsis/meningitis, n = 4

In 2022, no deaths occurred of outborn normally formed infants weighing ≤ 1,500g.

Selected Congenital Anomalies in infants born in The Coombe Hospital in 2022

Table 3.4.1 Selected major congenital anomalies (all liveborn)

Type of major congenital anomaly	n
Trisomy 21	15 (2 with duodenal atresia)
Trisomy 18	4
Trisomy 13	2
Robinow syndrome	1
Occulocutaneous albinism	1
Miller Dieker syndrome	1
Gastroschisis	3
Exomphalos	2
Tracheoesophageal atresia	2
Congenital diaphragmatic hernia	4
Imperforate anus	2
Renal agenesis/Potter's sequence	2
Bilateral pyelectasis	1
Posterior urethral valves	1
Indeterminate sex	1
Bilateral ventriculomegaly	1
Lumbar scoliosis	1
Meningomyelocele +/- ventriculomegaly	1
Large occipital encephalocele, double outlet right ventricle, multiple anomalies	1
Polydactyly	3

Intraventricular septum mass with secondary left ventricle obstruction	1
Congenital cystic adenomatoid malformation	1
Laryngomalacia	1
Neck mass	1
Pierre Robin sequence	1

Table 3.4.2 Musculoskeletal anomalies (all liveborn)

Type of musculoskeletal anomaly	n
Developmental dysplasia of the hip (requiring treatment)	54
Pavlik harness	43
Abduction brace only	1
Combined	10

The diagnosis of fetal and neonatal cardiac anomalies is detailed in the Obstetrics and Midwifery Report entitled 'Fetal Cardiology National (All-Ireland) Service'. In 2022, there were 34 liveborn infants in The Coombe Hospital with major congenital cardiac disease. These newborns were jointly managed antenatally with other maternity units in the Republic of Ireland as well as Northern Ireland Obstetrics Services, delivered at The Coombe Hospital and transferred postnatally to CHI Crumlin, Paediatric Cardiology Service.

Table 3.4.3 Major congenital heart disease (all liveborn) (n = 34)

Type of major congenital heart disease	n
Bradyarrhythmia	1
Left ventricular outflow obstruction	1
Supraventricular tachycardia	1
Pulmonary stenosis	1
Atrial flutter	1
Pulmonary atresia with ventricular septal defect	1
Pulmonary atresia, double outlet right ventricle, atrioventricular septal defect, right aortic arch	1
Tetralogy of Fallot	4
Aortic stenosis	2
Transposition of great arteries, single ventricle, tricuspid atresia with hypoplastic right ventricle, atrial septal defect, atrioventricular concordance	1
Transposition of great arteries	11
Hypoplastic left heart syndrome	1
Isometric heart disease	1

Hypoplastic aortic arch with transposition of the great arteries	1
Congenital heart block	2
Atrial septal defect with trisomy 21	2
Hypoplastic right ventricle with pulmonary atresia	1
Double outlet right ventricle	1
Total (n)	**34**

Comparison with Previous Reports

For the year 2022, the Coombe Hospital Neonatal Unit cared for 96 premature infants whose birth weights were between 401 - 1,500g and/or whose gestational ages were between 22^{+0} weeks until 29^{+6} weeks. This included six infants with major congenital anomalies. The 96 premature infants included both inborn and outborn infants who were transferred to 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 was reduced from the year 2021 when we cared for 127 VON eligible infants. Difficulties with staffing and capacity mean that fewer antenatal and postnatal transfers could be accepted.

Figures 3.2.1 and 3.2.2 depict trends of VON infant numbers from 2012 to 2022 in The Coombe Hospital. Survival and morbidity data at the point of discharge or death are known for 95 out of 96 infants. Of these infants, 93 were inborn and three were outborn and are inclusive of infants with major congenital anomalies. Total survival was 82%. This represented a small decrease from 2021, the number of infants was also smaller. In 2022, the survival to discharge of infants without specified major morbidities was 59%. Figures 3.2.3 and 3.2 4 present an analysis of infant survival trends for The Coombe Hospital between 2012 and 2022.

Concerning the VON Shrunken Standardised Morbidity Rate (SMR) for various key performance parameters over the three years 2020 - 2022, The Coombe Hospital remains within the acceptable normative ranges for the VON Network. See Table 3.2.5 for the SMR for The Coombe Hospital over the last three years. This table provides a comparison to the 95% Confidence Intervals for SMR concerning the entire VON Network.

A national change in practice now supports delivery room stabilisation of infants from 23 weeks' gestation, with administration of antenatal steroids and transfer to a tertiary level unit in anticipation of same. The expansion of our 'Project 23' quality improvement programme has led to the availability of additional senior staff to best prepare for the birth and stabilisation of extremely preterm infants.

There was a continued high usage 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 2022, the use of 'any human milk on discharge' was high at 55.7%. The percentage for the entire VON Network was 56.5% for the year 2022. The percentage of infants going home on a diet of human milk only was 43.2% compared to 11.4% for the entire network. The Neonatal Unit benefits from the full-time presence of lactation support specialists Iby Chacko and Lisa Conboy and weekly nutrition rounds supported by our Clinical Specialist Neonatal Dietitian, Dr Roslyn Tarrant.

In 2022, there were a total of 881 admissions to the Neonatal Unit. This number has been stable over the past three years. The presence of the Neonatal Unit liaison nurse facilitates short term admissions to the Neonatal Unit and provides care of babies on the postnatal ward with their mothers. This reduces the number of full admissions to the Neonatal Unit and separation of the newborn from their family.

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 Hospital. I would also like

to thank a number of our colleagues from Children's Health Ireland at Crumlin and Temple Street, who continue to consult both antenatally and postnatally and visit the Neonatal 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 CHI Crumlin 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, Clare Brenner and their CHI colleagues who continue to provide excellent on-site paediatric radiology services in addition to the excellent team of radiographers. We are extremely grateful to our two excellent consultant paediatric ophthalmologists, Mr Donal Brosnahan and Dr Kathryn McCreery who provide regular retinal screening in addition to retinal surgical therapies as required. A thank you to all staff members and my colleagues in the Neonatal Unit for their hard work throughout 2022.

I wish to acknowledge the efforts of all my colleagues for their excellent care of sick newborns and their support to the staff and families of The Coombe Hospital. We were delighted to welcome two new consultant colleagues, Dr Mary O'Dea and Dr Matthew McGovern and are sad to see Dr Francisco Meza go.

Finally thank you to the amazing families that we meet every day. It is an honour to be part of your lives. We feel your joy and your sadness. We are sorry for the loss of your babies that could not stay. Our thoughts are with the families that suffered bereavements during this year.

Research in the Department of Paediatrics and Newborn Medicine

The Neonatology Department continues to be very active in research. We run numerous research projects ourselves and participate in other multicentred and international studies. Four research fellows in neonatology worked with us in 2022; Drs Meredith Kinoshita, Aoife Branagan and Niamh Ó Catháin and Dr Robert McGrath. The main research projects conducted in the Neonatology Department are listed in the Academic Departments' reports.

3.2 Advanced Nurse Practitioner in Neonatology

Anne O'Sullivan

The role of the registered advanced neonatal nurse practitioner (RANP) is to enable consistency in the standard of health care in the Neonatal Unit. This is achieved by having a presence in the clinical area ensuring care is evidenced based and supported by Policies, Procedures, Protocols and Guidelines (PPGs), as well as offering support and guidance to medical and nursing staff at the bedside. The RANP is involved in all key performance indicators, working closely with other members of the MDT to minimise healthcare associated infections and antibiotic use as well as strategies for the prevention and control of multidrug resistant organisms. The RANP works to reduce ventilation days and minimise the incidence of chronic lung disease in very low birth weight infants. Other priorities include the promotion of breastfeeding and ensuring optimal nutritional management.

The RANP participates on undergraduate and postgraduate education programs for neonatal nurses, midwives, public health nurses and NCHDs as well as on the STABLE and Neonatal Resuscitation Programs. Having established a simulation room and equipment over the last few years, a simulated program is now established using lifelike models to provide optimal training of NCHDs and Nurses. This empowers clinical staff with the knowledge and skills to address the multiple competing needs of neonatal infants at delivery and in the Neonatal Unit in a timely fashion.

The RANP promotes and facilitates research and audit activities by participating in research studies as a primary researcher, an investigator or in a support role.

3.3 Midwifery and Nursing Neonatal Report

Mary O'Connor

2022 was another challenging year, dealing with the consequences of the COVID-19 pandemic and the associated staffing issue. Despite this our neonatal team remained resilient, achieving a nursing staff retention rate of 92.8%. On behalf of our department, nursing management and neonatologists I wish to acknowledge our nursing staff's engagement in covering extra shifts thus ensuring the delivery of the tertiary service. At this point I would like to thank all staff across the neonatal department for their continued commitment to providing specialist care to women and newborns and all other staff across the hospital that support us in achieving this care.

Our philosophy of family centred care continued to be interrupted by the pandemic. While both parents were facilitated to visit together, unfortunately, siblings and grandparents' visits were still restricted on the unit due to infrastructural limitations and infection control requirements. Obviously, discretion was paramount where circumstances needed to be considered. Parental and sibling interactions were promoted using video calls. The 'Reading to your Baby' initiative continued to be very popular. A story book is given to parents together with a parent handbook entitled 'Caring for your Baby in the Neonatal Unit'. We look forward to the positive influence on family centred developmental care from the newly appointed Newborn Individualised Developmental Care and Assessment Program (NIDCAP) clinical nurse specialist and the neonatal occupational therapist.

The dedicated NICU clinical midwife/nurse specialist CM/NS in lactation support continues to see significant improvements in the rates of initiation of the expression of breastmilk. The expressed breastmilk (EBM) initiation rate for all mothers with babies less than 32 and 35 weeks' gestation was 92%.

At the time of discharge from NICU, 82% of babies less than 32 weeks' gestation and 78% of babies less than 35 weeks' gestation received any maternal EBM while 75% of babies less than 32 weeks' gestation and 66% of babies less than 35 weeks' gestation were receiving maternal EBM exclusively.

In 2022, lactation support with phone call follow-ups continued post discharge to support transitioning to exclusive breastfeeding. The Blood Bikers service helped to ensure that there was a supply available for these babies.

The NICU lactation CM/NS team were runners-up for their presentation, entitled 'Impact of NICU Dedicated Lactation Specialist on Breastfeeding Outcomes of Preterm Infants - An Audit Review' at the European Lactation Consultants Alliance (ELACTA) Conference in Germany. They secured 2nd prize also in the Trinity College Dublin Conference, Innovations for Successful Breastfeeding. They were the first midwife/nursing team to receive recognition for The Coombe Master's Medal, receiving 2nd prize also.

Our collaborative quality improvement initiative continued, to provide psychological support to parents of babies on the neonatal unit <32 weeks' gestation, entitled Parents' Time Out (PTO). The collaborators included Dr Sabrina Coyle, Perinatal Psychologist; Ms Denise Shelley, (MSW); Ms Sheena Bolger (CNS Discharge Planning) and Ms Mary O'Connor (CNM3) who provided a professionally facilitated safe place for parents to share experiences of having a premature baby in the neonatal unit to explore bonding and attachment and gain strategies to help cope with the additional stresses. Parental feedback on this service was very positive, with parents expressing consolation that their experience was not unique and some regret that they "didn't engage earlier."

The postnatal ward liaison nurse (PNWL) continued to support postnatal ward staff in the care of late preterm babies, in particular with feeding issues, hypoglycaemic issues, transient tachypnoea of the newborn, which traditionally required admission to the Neonatal Unit. But more importantly this role facilitates bonding and attachment by avoiding separation of mother and baby. Feedback from the PNWL is that the postnatal team are embracing and collaborating very well and working together, culminating in a higher standard of care and in keeping mother and baby together.

Staff education programmes continued despite the pandemic although these programmes were modified. Three staff graduated with a Postgraduate Diploma in Neonatal Intensive Care Nursing and two were facilitated from Limerick University Hospital. Three staff commenced the Postgraduate Diploma in Neonatal Intensive Care Nursing. Six staff completed the Foundation Programme on Principles of High Dependency and Special Care. Six staff completed Level II, Neonatal Intensive Care. Sadly, we were unable to facilitate the FINE Level I programme face-to-face for 2022. A number of our nursing staff continue to present in education programmes in Children's Health Ireland (CHI), midwifery programmes in Centre for Midwifery Education (CME) and for PgDIP-Neonatal Intensive Care Nursing with RCSI.

Project 23, an interdisciplinary quality improvement initiative to optimise care and management of babies born between 23 and 27 weeks' gestation will help us to meet most of our key performance indicators. Project 23 continues to be embraced with enthusiasm by all staff.

The National Neonatal Transport Programme (NNTP) team from The Coombe Hospital conducted a total of 190 transports in 2022, accounting for 33% of the total NNTP transports (n = 577). The Coombe Hospital received 35% of the total (n = 101) national referrals for neonatal management that were transported by NNTP.

See Appendix Two for the details of conference abstracts from the NICU lactation CM/NS team.

3.4 Neonatal Transition Home Service

Sheena Bolger

The Neonatal Transition Home Service was provided by Sheena Bolger, CNS. Practical and emotional support to families of premature babies was provided by the service prior to and after discharge home. The service directly supported 74 families (85 babies) who were discharged home from our Neonatal Unit. Phone calls were made and received from parents in the weeks post discharge; topics of calls included general feeding and supplementation progression advice, concerns regarding reflux, bowel patterns, hernias, haemangiomas, stoma and oxygen care, prescription and follow up queries in regards to referrals and appointments. Home oxygen was organised for three babies and stoma supplies for one. Multidisciplinary liaison including; the Baby Clinic, public health nurses, dietician, physiotherapists, medical social workers, stoma nurses, pharmacies, bereavement team, perinatal mental health team and Synagis (palivizumab) community referral team was required for the complex care of these babies.

Parent education was promoted in the Neonatal Unit to empower parents and enhance readiness for discharge. Twice weekly parent education sessions were offered and all parents of babies born less than 34 weeks' gestation are encouraged to attend, staff are also welcome. Topics covered included: choking, resuscitation, safe sleep, car seat safety, immunisations, skin care, management of a sick baby post discharge. In 2022, 145 mothers, 76 fathers and six grandparents attended classes.

The annual Christmas party for premature babies who have been discharged was cancelled again in 2022 due to ongoing concerns surrounding COVID-19.

The 2022-23 respiratory syncytial virus (RSV) prophylaxis programme was managed with palivizumab. Pre-discharge doses were administered to 12 babies and 44 babies were referred to Synasupport®, the home administration service. Online lectures on discharge planning, immunisations and Synagis were updated, and delivered to Neonatal Foundation Course students.

The Pre-operative Anaesthetic Assessment Clinic maintained multidisciplinary collaboration with obstetrics and gynaecology, pharmacy, physiotherapy, parent education and ICT.

Section 4

Perioperative Medicine

4.1 Department of Perioperative Medicine

Dr Sabrina Hoesni

Pre-operative Anaesthetic Assessment Clinic

In 2022, the Pre-operative Anaesthetic Assessment Clinic (PAAC) continued to provide anaesthetic assessment to obstetric and gynaecological patients scheduled for elective surgical procedures, and to obstetric patients with known medical or surgical conditions. The virtual assessment pathway, introduced during the pandemic, continued in 2022 and accounted for 45% of all PAAC patients (Table 4.1.1).

The increase in virtual appointments have reduced the number of in person walk in appointments compared to the previous year. Similar to the previous year, non-attendances for in-person appointments were much higher than for virtual appointments (Table 4.1.2).

Table 4.1.1 Attendances at virtual and in-person appointments, 2022

Type of pathway	Obstetrics	Gynaecology	Total
Virtual (n)	569	905	1,474 (44.5%)
In-person (walk in) (n)	461	206	667 (20.1%)
In-person (appointments) (n)	613	560	1,173 (35.4%)
Total (n)	**1,643**	**1,671**	**3,314 (100.0%)**

Table 4.1.2 Non-attendances at virtual and in-person appointments, 2022

Type of pathway	Obstetrics	Gynaecology	Total
Virtual (n)	2	7	9
In-person (appointments) (n)	101	128	229
Total (n)	**103**	**135**	**238**

The PAAC maintained multidisciplinary collaboration with obstetrics and gynaecology, pharmacy, physiotherapy, parent education and ICT. The PAAC continued to build operational capacity to become a one-stop pre-admission unit. In achieving this goal, future development needs to include digitalisation of the perioperative patient record, implementation of a theatre operating system and the appointment of a clinical nurse specialist in perioperative medicine.

Labour and delivery

Epidural rates have remained relatively stable between 2018 and 2022 (Table 4.1.3). In 2022, 1,604 nulliparous women (57.3%) and 1,127 multiparous women (28.3%) chose an epidural for labour analgesia (Table 4.1.3).

Table 4.1.3 Epidural rates in labour*, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Nulliparous	55.8%	56.8%	57.9%	58.1%	58.9%	59.6%	57.3%
Parous	25.8%	27.9%	28.1%	28.6%	29.7%	29.0%	28.3%
Total	**37.8%**	**39.7%**	**40.6%**	**40.8%**	**41.7%**	**40.0%**	**40.2%**

**denominators – all nulliparous women and all parous women*

In 2022, 79.3% of all CS, 98.4% of elective CS and 53.9% of emergency CS were performed under spinal anaesthesia only (Table 4.1.4 and Table 4.1.5).

Table 4.1.4 Mode of anaesthesia for Caesarean section, 2022

Mode of anaesthesia	Elective CS (n)	Emergency CS (n)	Total CS (n)
General anaesthetic (GA)	12	54	66
GA and other			
GA and spinal	3	5	8
GA and epidural	5	6	11
GA and epidural and spinal	0	2	2
Spinal only	1,376	571	1,947
Spinal and epidural	2	22	24
Spinal and epidural and other			
Epidural only	0	392	392
Epidural and other			
Total (n)	**1,398**	**1,052**	**2,450**

4.1.5 Spinal anaesthesia and Caesarean section, 2016 to 2022

Spinal only	2016	2017	2018	2019	2020	2021	2022
All CS	77.4%	77.1%	74.6%	77.9%	78.9%	78.8%	79.3%
Elective CS	98.3%	98.2%	98.4%	98.4%	98.3%	98.6%	98.4%
Emergency CS	54.5%	54.7%	49.7%	54.6%	54.0%	50.8%	53.9%

The National Cervical Screening Laboratory (NCSL) service was established in its new purpose-built building in 2022.

Section 5

Pathology and Laboratory Medicine

5.1 Pathology and Laboratory Medicine Overview

Professor John O'Leary and Martina Ring

The Pathology and Laboratory Medicine workload by test request from 2016 to 2022 is presented in Table 5.1.1.

Table 5.1.1 Pathology and Laboratory Medicine workload by test result, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Microbiology (n)	41,639	44,387	44,764	43,781	43,781	51,033	52,000
Biochemistry (n)	216,849	207,686	213,994	216,915	196,526	215,209	217,752
Haematology (n)	55,111	54,298	51,418	52,640	46,098	51,864	51,251
Transfusion Medicine (n)	26,328	29,464	29,099	30,088	29,784	30,650	28,185
HPV*/Cytology Screening (n)	26,161	26,185	31,814	33,200	8,172	42,755†	5,398
Histopathology (n)	6,331	6,380	6,796	7,092	6,337	7,887	7,578
Post mortems (n)	33	32	32	35	60	60	58
Phlebotomy (n)	33,812	37,870	38,287	39,554	35,960	39,980	36,646
Total (n)	**372,452**	**406,302**	**416,204**	**339,970**	**330,758**	**439,438**	**398,868**

** HPV primary screening from 2022*

†HPV primary screening introduced

5.2 Clinical Biochemistry, Endocrinology and Point of Care Testing

Ann O'Donnell, Nicola Molloy and Dr Vivion Crowley

The Biochemistry Department provides test results for diagnostic, screening, therapeutic and disease monitoring purposes. The test repertoire includes 38 biochemistry tests and four endocrinology tests. Point of care testing (POCT) throughout The Coombe Hospital includes blood gas analysers, glucose meters, meters for testing for threatened preterm labour and rupture of membranes and Clinitek devices for measuring urine human chorionic gonadotrophin. The Biochemistry Department is accredited to ISO 15189 and 22870 standards by the Irish National Accreditation Board (INAB). The department also participates in research projects with our clinical colleagues in The Coombe Hospital.

Table 5.2.1 Tests performed, 2017 to 2022

Type of test	2017	2018	2019	2020	2021	2022
All biochemistry tests* (n)	207,686	213,994	216,915	196,526	215,209	217,752
Glucose tolerance tests (n)	4,212	4,400	4,458	4,245	4,536	4,007
C-reactive protein (n)	5,392	5,465	6,605	5,656	6,191	7,758
Thyroid function tests (n)	5,165	5,406	5,601	5,440	6,338	6,060
Blood gas requests (n)	17,685	17,438	17,049	16,731	13,414	17,689
Total (n)	**240,140**	**246,703**	**250,628**	**228,678**	**245,688**	**253,266**

**includes referred tests*

The following studies were conducted in the Biochemistry Department in 2022 in conjunction with St James Hospital and the NICU in The Coombe Hospital:

- 'Validation of an allelic discrimination for detection of hereditary ATTR with predominate cardiac phenotype. The development and characterisation of a real-time PCR multiplex assay for diagnosis of hereditary ATTR with predominant cardiac phenotype'.
- 'Blood gas total bilirubin: Using near patient testing as an alternative screening and confirmation method for neonatal hyperbilirubinemia'.
- 'Hypoglycaemia in fasting pregnant women due for elective caesarean sections (AOD-T Tan)'. HemoCue and Ketone meters are validated and maintained by Ann O'Donnell Pentony for this study.

Six Sigma Verification of Abbott assays commenced on a phased basis in 2022.

In POCT, bilirubin measurement was added to the blood gas analysers, which reduces the amount of blood loss for neonates. Training and re-certification of ward staff in POCT and training and re-certification of staff in the department and on-call staff continued.

Continuous professional development was maintained by attendance of meeting, conferences and workshops. Almost all staff have completed their registration of CORU.

Two staff members: Ugochukwu Igwagu and Susan Logue are undertaking the second year of their MSc. in Clinical Chemistry - Biomedical Science with the University of Ulster.

Ann O 'Donnell - Pentony is on the Advisory Body of the Academy of Clinical Science and Laboratory Medicine.
James Kelly is on the Green Labs Initiative.

5.3 Haematology and Transfusion Medicine

Fergus Guilfoyle and Dr Catherine Flynn

In 2022, all antenatal women were offered a full blood count at the 28 weeks visit. Requests in haematology decreased by 1% from 51,864 in 2021 to 51,251 in 2022. Requests in transfusion medicine decreased by 9% from 30,650 in 2021 to 28,185 in 2022 (Table 5.3.1). The turnaround times (TATs) for haematology and transfusion medicine are shown in Tables 5.3.2 and 5.3.3. There was no improvement in TAT performance in transfusion and a substantial deterioration in performance in haematology, reflective of the significant issues in staffing levels in the department, as recruitment and retention of medical scientists remains an ongoing problem.

Table 5.3.1 Haematology and Transfusion Medicine request, 2016 to 2022

Requests	2016	2017	2018	2019	2020	2021	2022
Haematology (n)	55,111	54,298	51,418	52,640	46,098	51,864	51,251
Transfusion Medicine (n)	26,328	29,464	29,099	30,088	29,784	30,650	28,185

Table 5.3.2 Haematology, Turnaround Times (TATs), 2021 and 2022

Test	Full Blood Count		Coagulation Screen	
Year	2022	2021	2022	2021
Target Max TAT (mins)	60	60	120	120
Average TAT achieved (mins)	43	28	52	40
Within target TAT (%)	79	97	94	97

Table 5.3.3 Transfusion Medicine, Turnaround Times (TATs)

Test	Crossmatch		Inpatient Group and Screen	
Year	2022	2021	2022	2021
Target Max TAT (mins)	240	240	240	240
Average TAT achieved (mins)	81	66	158	150
Within target TAT (%)	98	99	90	90

The Haematology Department is accredited to ISO 15189 standards from INAB.

The new flow cytometry analyser for FMH testing was validated and commissioned in 2022. A procurement process for replacement of all other transfusion testing equipment was also completed in 2022, with delivery scheduled for early 2023. An extensive validation process, including revision and update of all processes and procedures in the Transfusion Department will be involved, requiring substantial staff resources.

Continuous professional development and ongoing education continued to be promoted, with a senior medical scientist presenting a case study at the Haematology Association of Ireland Conference and a staff grade medical scientist winning the Master's medal for audit. The department also continues to participate at a national level in committees and advisory boards, being represented by the chief medical scientist as chair of the ACSLM Transfusion and Transplantation Advisory Body, a medical scientist representative on the National Transfusion Advisory Group and a member of INAB's Medical and Scientific Advisory Committee.

5.4 Haemovigilance

Sonia Varadkar

Table 5.4.1 Summary data, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Women who received a transfusion (n)	247	266	295	219	218	231	213
Women who received ≥ 5 RCC (n)	5	12	6	8	13	4	6
Neonates transfused with pedipacks (n)	65	78	59	64	62	66	51
Reports to National Haemovigilance Office (n)	2	2	2	2	4	1	10

In 2022, ISO 15189 accreditation and 100% traceability of blood components and blood products were achieved.

5.5 Histopathology and Morbid Anatomy

Kate Thompson and Professor John O'Leary

The Histopathology Department's workload from 2017 to 2022 is presented in Table 5.5.1. There was a 3.9% decrease in the number of specimens between 2021 and 2022. This was preceded by a 26.7% increase between 2020 and 2021. There was a 34.5% decrease in post mortems between 2021 and 2022. There was a slight decrease in the number of blocks and slides processed in 2022 compared to 2021. The application of immunohistochemistry (IHC) remains consistent. Special stains requests have continued to increase since 2018, increasing by 32.6% between 2021 and 2022.

Table 5.5.1 Histopathology workload, 2017 to 2022

	2017	2018	2019	2020	2021	2022
Specimens (n)	6,355	6,798	7,092	6,227	7,887	7,578
Post mortems (n)	30	32	35	60	58	38
Blocks (n)	19,139	18,436	20,409	17,692	20,842	20,544
H & E (n)	56,363	53,903	51,946	41,781	48,439	47,498
IHC (n)	1,943	2,236	1,883	2,170	1,949	1,876
Special stains (n)	45	45	66	100	181	240
Total (n)	**83,875**	**81,450**	**81,431**	**68,030**	**79,356**	**77,774**

Turnaround times (TATs) remained challenging in 2022 (Tables 5.5.2 and 5.5.3). The December 2021 cyberattack continued to impact the ability of the department to authorise reports electronically until the second quarter of 2022 (Table 5.5.1).

Table 5.5.2 Total TATS, 2017 to 2022

Time period	Cases (n)	Day 3 (%)	Day 5 (%)	Day 7 (%)	Day 10 (%)
2017	6,175	40.73	79.60	89.65	94.88
2018	6,602	22.80	54.27	74.01	91.78
2019	6,857	16.00	46.00	59.87	69.30
2021	7,887	Unknown	Unknown	Unknown	Unknown
2021 (Jan - Nov)*	6,729	20.03	44.61	62.74	76.52
2022	7,578	Unknown	Unknown	Unknown	Unknown
2022 (Apr - Dec)*	5,436	3.35	22.74	42.84	60.30

**Not possible to complete overall 2021 or 2022 TAT report as December 2021 to March 2022 data are not available on the Health Atlas Ireland website due to the December 2021 cyberattack*

Table 5.6.3 Histopathology specimen TAT (January to November 2022)

	Cases	Day 3 (%)	Day 5 (%)	Day 7 (%)	Day 10 (%)	Outliers (n)
Total TAT Histology	5,436	3.35	22.74	42.84	60.3	1,461
Small biopsy TAT	2,043	4.6	29.03	51.15	70.29	387
Non-biopsy - other TAT	3,391	2.3	18.96	37.86	54.32	1,072

Rosana Alves completed her MSc in Biomedical Science with distinction. Eibhlin Gallagher is in the second year of her MSc, and Ellen O'Reilly completed the first year of her MSc. All staff attended MDT meetings throughout the year, and two staff members attended an in-house course on managing difficult situations.

The December 2021 cyberattack continued to affect operations in the histopathology laboratory well into the second quarter of 2022. This created challenges with data entry and reporting. This was successfully managed by the histopathology staff ensuring that the quality of the service provided did not diminish.

The histopathology laboratory also successfully moved to its new home on the ground floor of the NCSL building. Huge work was done by all histopathology staff to re-validate all existing equipment once it was moved to ensure it adheres to ISO15189 standards. In addition, all new equipment i.e., two new microtomes, an embedding centre, four cold plates, water baths, a centrifuge, and microwave were validated to ensure they also met this standard. All relevant documentation required for this move were also completed successfully.

INAB ISO 15189 accreditation for Histopathology was retained in 2022.

5.6 HPV and Cytology Screening

Dr Cillian de Gascun, Dr Louise Hogan and Padma Naik

The National Cervical Screening Laboratory (NCSL) service was established in its new purpose-built building in 2022. The service migrated from the old building to the NCSL. This included the installation of new equipment for HPV testing (Cobas 6800/8800 Instrument Systems, including Cobas Primes and Cytology services).

Extensive validation and training on new platforms were completed by all medical scientists and laboratory aides. These instruments will enable automated processing of cervical samples, thus significantly increasing the capacity of the laboratory, with a view to repatriating National Cervical Screening back to Ireland.

Documentation was prepared for the transition of the service to the NCSL. The profound impact of the December 2021 cyberattack on The Coombe Hospital delayed the resumption of the processing of CervicalCheck samples until December 2022.

Staff attended and presented at various conferences and meetings throughout 2022 on behalf of the service and their continuous professional development bodies.

Table 5.6.1 Specimen throughput, 2018 to 2022

Specimen throughput	2018	2019	2020	2021	2022
HPV not detected	-	-	-	85%	85%
HPV indeterminate	-	-	-	0.8%	-
Total HPV detected	-	-	-	14%	15%
HPV detected low grade cytology	9%	10%	11%	44%	23%
HPV detected high grade cytology	2%	3%	4%	10%	2%
HPV detected negative cytology	86%	75%	67%	42%	65%
HPV detected unsatisfactory cytology	5%	6%	9%	4%	10%

5.7 Microbiology and Infection Prevention and Control

Dr Niamh O'Sullivan, Alma Clancy, Cian Foley and Geraldine Chawke

Microbiology

The Microbiology Department is accredited by the Irish National Accreditation Board to ISO 15189: 2012 Standard. In 2022, the microbiology specimen throughput was as follows:

• specimens, n = 34,960 • susceptibilities, n = 2,534 • referral tests, n = 14,506.

Figure 5.7.1 Microbiology workload, 2016 to 2022

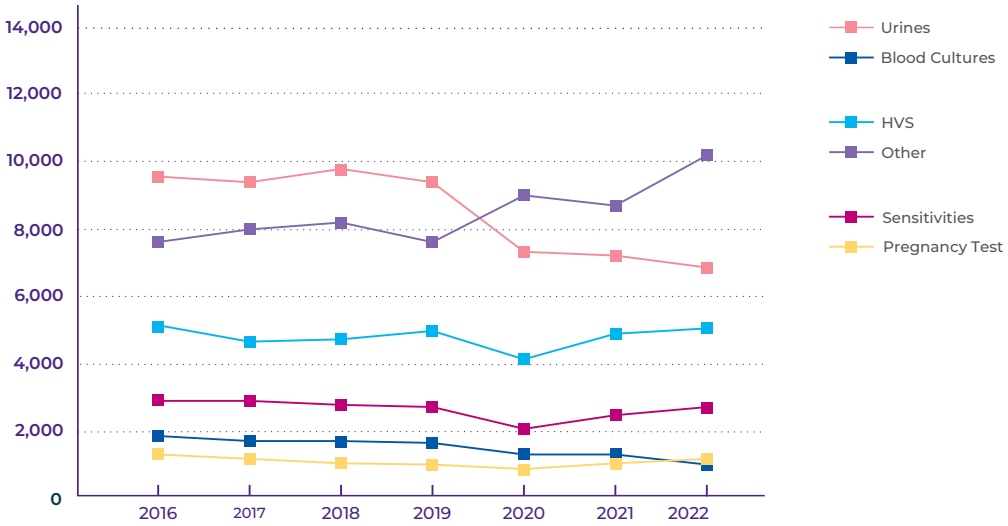


Figure 5.7.2 Send out workload, 2016 to 2022

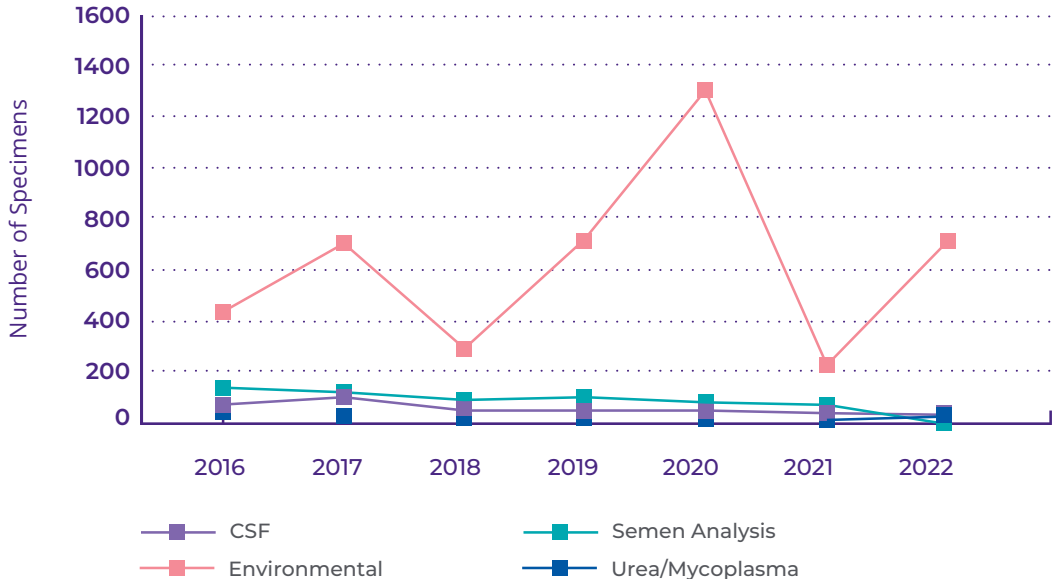
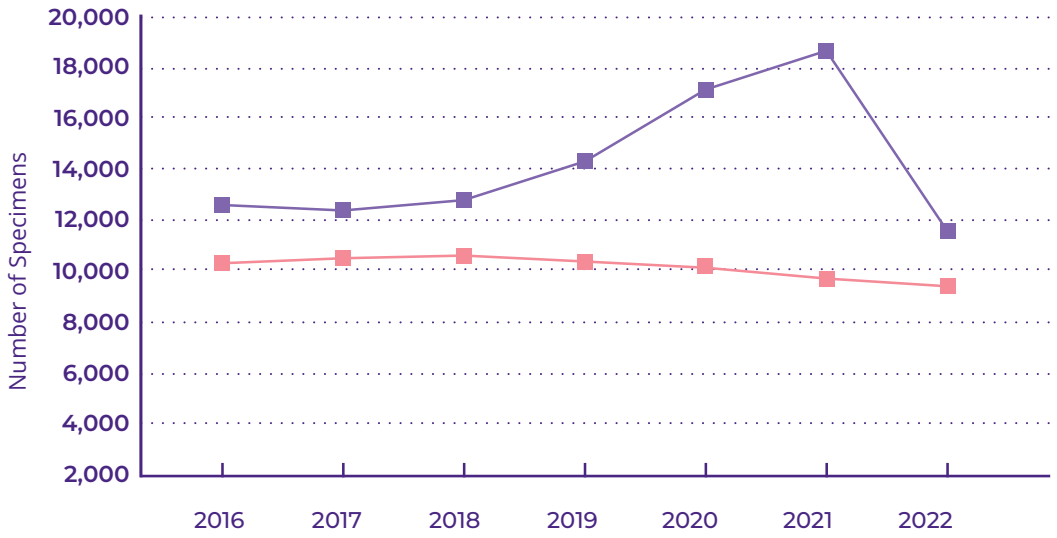


Figure 5.7.3 Send out workload, 2016 to 2022



SARS-CoV-2 testing was introduced in the Microbiology Department in May 2020. Table 5.7.4 details the numbers of tests performed in The Coombe Hospital and in the laboratories that provided this service to The Coombe Hospital.

There was a significant decrease in the total referral tests seen in 2022 compared to 2021. This was largely due to the cessation of the referral service for SARS-CoV-2 testing to CHI Crumlin as seen in the table below. SARS-CoV-2 testing overall decreased significantly in 2022 with the majority of testing taking place in The Coombe Hospital microbiology laboratory.

Table 5.7.4 SARS-CoV-2 testing by laboratory, 2020 to 2022

	2020	2021	2022
The Coombe Hospital (n)	1,680	4,271	5,612
CHI Crumlin (n)	1,400	6,192	902
National Virus Reference Laboratory (n)	54	0	0
Total (n)	**3,134**	**10,463**	**6,514**

Environmental screening was required after building work was completed, prior to reopening.

Turnaround times (TAT) were analysed on 21 occasions in 2022, including blood cultures, urine, microbiology specimens both simple and complex, semen samples, pregnancy tests, external tests, SARS-CoV-2 and cerebrospinal fluid (CSF) microscopy and Gram stains. Fifteen of these were within target TATs.

External Quality Assurance: sixty-seven distributions were analysed in 2022

Schemes included; pregnancy testing, antifungal ID and susceptibility, general bacteriology, antimicrobial susceptibility testing, genital pathogens, MRSA screening, andrology, urinalysis cell count, blood culture Gram stains and SARS-CoV-2, influenza, respiratory syncytial virus (RSV) and sepsis.

Internal Quality Assurance: validation of ongoing tests, kits and reagents, batch acceptance of all products daily, weekly, monthly and quarterly quality control was performed covering all microbiology methods, reagents, media and susceptibility testing.

All microbiology staff attended training in manual handling, chemical safety, fire safety and hand hygiene training.

Infection Prevention and Control

Effective infection prevention and control (IPC) is essential to providing clean, safe and high-quality healthcare for patients, employees and visitors. Processes involved include hand hygiene, environmental and equipment hygiene and maintenance, safe linen and waste management, considered patient placement, safe use of sharps, safety engineered devices, medication vials, reprocessing of reusable medical devices, respiratory hygiene, cough etiquette, aseptic technique and implementation of transmission-based precautions.

Hand hygiene remains the basis for providing safe care for all. It is the single most effective strategy in preventing healthcare associated infection (World Health Organization 2009). It is cheap, effective and easy to do, but is only effective if done at the appropriate times and in accordance with 'The 5 Moments for Hand Hygiene'. A national hand hygiene audit carried out in 2022, based on 'The 5 Moments for Hand Hygiene', achieved the set target of 90%. Clinical staff compliance with hand hygiene training improved in 2022, with compliance of consultants at 51%, nurses and midwives at 71% and NCHDs at 95%. In 2022 1,216 litres of alcohol gel were used in The Coombe Hospital. The IPC team and the IPC Committee actively participate in working towards improving standards to reduce the risk of healthcare associated infection to patients, visitors and staff. This is done through daily communication, either by face to face meetings, phone or email, quarterly meetings of the IPC Committee, input into MDT meetings, contribution to the COVID-19 Executive Team and other meetings as required by the service. Throughout the year, we continuously updated and informed staff and patients on COVID-19 IPC guidance documents.

In September, an external Audit of Compliance with the HSE Procedure for the Prevention of Peripheral and Central Venous Catheter Related Infection (September 2021) was carried out in the hospital by the HSE. The audit findings indicated that the level of assurance that may be provided to management about the adequacy and effectiveness of the governance, risk management and internal control system for the compliance with the guideline was moderate. The IPC team plan to commence a quality improvement project (QIP) based on the feedback in quarter one of 2023.

Surveillance

The microbiology and IPC dashboard is maintained to provide ongoing information on the following KPIs:

- alert organisms
- multidrug resistant organisms
- serious infection rates
- notifiable diseases
- blood borne viral infections
- SARS-CoV-2.
- adult blood stream infection (BSI) 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 Staphylococcus aureus and Clostridium difficile rates per 10,000 BDU reported to the Business Information Unit, HSE
- both the adult BSI rate and the S. aureus HAI rate were the highest since 2019 and above the three-year average of 0.39 and 0.73, respectively
- S. aureus HAI rate almost doubled between 2021 and 2022 (Table 5.7.5) (both rates will be targets for improvement in 2023)
- 86% (n = 6) of S. aureus HAI BSI were in neonates, with 14% (n = 1) in adults
- one case of possible maternal-neonatal transmission of S. aureus BSI occurred in 2022
- paediatric early onset sepsis levelled out in 2022, but still remains high and has increased year on year between 2019 and 2021
- NICU late onset primary sepsis has been trending down since 2020 with a significant decrease in 2022. 2021 and 2022 were below the three-year average of 6.83. The goal in 2023 is to continue this downward trend
- C. difficile HAI rate increased on the 2021 rate (0.00), but remains low, with the highest rate seen in 2020 (0.47) (Table 5.7.5)

- resistance patterns of specific organisms reported to the European Antimicrobial Resistance Surveillance Network (EARS-Net) which allows comparison with similar hospitals in Ireland and national comparison with other European countries
- number of carbapenem-resistant Enterobacteriaceae (CRE) screens performed, which became a national KPI in October 2017.

Table 5.7.5 Infection rates, 2019 to 2022

	2019	2020	2021	2022
Adult BSI rate (%)	0.47	0.44	0.26	0.49
Paediatric NICU late onset BSI rate (%)	6.0	8.5	6.0	2.30
Paediatric early onset BSI rate (%)	0.18	0.70	0.0	1.02
S. aureus HAI rate (%)	0.39	0.94	0.85	1.65
C. difficile HAI rate (%)	0.0	0.47	0.0	0.24

INAB accreditation was achieved for influenza and respiratory syncytial virus molecular testing. INAB accreditation was achieved for sepsis testing on the film array analyser. This testing facilitates rapid organism identification directly from positive blood cultures, thereby improving clinical impact for all patients.

The following activities continued in 2022:

- validation and batch acceptance continued for accreditation
- performance characteristics of examination procedures, including uncertainty of measurement, determined for accreditation purposes
- senior staff regularly attend multidisciplinary meetings including Drugs and Therapeutic Committee, Antimicrobial Stewardship Committee, Infection Prevention and Control Committee and POCT Committee
- microbiology staff, as members of, contribute to national committees and advisory groups
- maintenance of the IPC dashboard
- alert organism and environmental screening
- antibiogram data produced to inform antimicrobial guidelines
- annual surveillance and IPC data produced for the Executive Management Team (annual newsletter and The Coombe Hospital Board Report)
- additional maternal BSI surveillance submitted to EARS-Net
- ongoing data presentations and feedback to MDT obstetric and paediatric meetings
- collaboration with research projects within The Coombe Hospital
- patients with multidrug resistant organisms continue to have alerts added to their records on the integrated Patient Management System (iPMS)
- peripheral vascular care bundle audits continued, the results of which staff could access 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
- use of Q-Pulse for management of pathology non-conformances
- SARS-CoV-2 information required; The Coombe Hospital Testing Database, HSE Daily Tracker, daily reporting to DMHG via the EMT, daily submission of all SARS-COV-2 results to public health, notification of SARS-CoV-2 'detected' results via computerised infectious disease reporting (CIDR) and weekly reporting of test consumables to the HSE.

5.8 Phlebotomy

Art Argenio and Martina Ring

The numbers presented in Table 5.8.1 are patient episodes and do not reflect actual numbers of blood samples taken from each patient. All three phlebotomists work in the Perinatal Centre and the adult OPD thus providing cross cover for both areas.

Table 5.8.1 Phlebotomy service in the adult OPD and Perinatal Centre, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
First visits (n)	7,296	7,237	7,090	6,908	6,342	6,691	6,753
Other visits (n)	17,954	17,369	18,414	18,951	160.33	18,965	16,446
Perinatal Centre (blood tests) (n)	8,562	13,264	12,793	13,695	13,585	14,324	13,447
Total (n)	**33,812**	**37,870**	**38,287**	**39,554**	**35,960**	**39,980**	**36,646**

The phlebotomy workload within the Perinatal Centre continued to be substantial in 2022, with more than a 1,000 patient episodes per month. These numbers reflect the number of women meeting the criteria for screening for gestational diabetes mellitus.

We all bring unique skills and knowledge to The Coombe Hospital and when they are combined, we are at our best.

With the drive for Women's Health at the forefront of the Government's campaign, funding and posts were allocated from The National Women and Infants Health Programme to The Coombe Hospital's Physiotherapy Department.

Section 6

Allied Health Services

6.1 Bereavement Services

Anita Bouderbala and Fiona Mulligan

The team has a holistic approach in bereavement care aligned to the National Standards for Bereavement Care (HSE 2016).

Bereavement support is available for parents who experience early pregnancy loss and perinatal death. This may be at the time of loss, in the weeks and months that follow, and may include care in relation to anxiety in a subsequent pregnancy. The team also provides bereavement support and ongoing care for families who receive a diagnosis of a life limiting condition and who choose to end their pregnancy early in line with the new legislation and care services.

The bereavement team co-ordinates the formal structured follow-up care of bereaved parents who have experienced a perinatal death, following multidisciplinary team discussion at the monthly perinatal mortality meeting. The team advocates for the needs of bereaved parents, and the development of service provision in response to identified needs of bereaved families.

The CMS in bereavement and loss provides weekly bereavement support to couples attending the LEAF Clinic who have experienced recurrent miscarriage and/or unexpected mid-trimester miscarriage. Teresa Lonergan is kindly acknowledged for her clerical support.

The team provides ongoing training and education in bereavement support to staff in The Coombe Hospital. The team inputs on midwifery programmes for staff midwives in the Centre for Midwifery Education (CME), on undergraduate programmes in TCD, on postgraduate neonatal nurse programmes and on staff induction sessions, in addition to providing informal education in the clinical setting. A training programme entitled 'Dealing with Loss in Maternity Settings' was rolled out and facilitated by Anita Bouderbala and Fiona Mulligan in collaboration with the CME. It is planned to host this training programme three time per year in rotation between the three Dublin Maternity Hospitals. The team is a resource for staff and provides informal support to staff impacted by providing care to bereaved families.

The bereavement team has worked to forge links with the voluntary support agencies that provide care to bereaved families in the community, with recognition of their invaluable support of families. Ongoing support is provided by external groups, specifically, FirstLight, Féileacán, A Little Lifetime Foundation, LauraLynn Children's Hospice, Jack and Jill Foundation, Now I Lay Me Down to Sleep, The Miscarriage Association of Ireland, Ectopic Pregnancy Ireland, Every Life Counts, SOFT Ireland (Support Organisation for T13/18) and many more.

The first in-person Annual Service of Remembrance (since the onset of COVID-19 pandemic), which was very well attended was held in Our Lady of Dolours Church, Dolphins Barn.

The services of 'Now I Lay Me Down to Sleep' were reintroduced following the easing of COVID-19 restrictions.

In August 2022, Anita Bouderbala successfully completed an MSc in Bereavement and Loss with the Irish Hospice Foundation and The Royal College of Surgeons of Ireland.

Two new chaplains, Ann Marie Desmond and Susan Jones were welcomed to the team.

6.2 Clinical Nutrition and Dietetics

Fiona Dunlevy

In 2022, the Clinical Nutrition and Dietetics Department expanded its service to those attending with gynaecological symptoms, in particular, women attending the Enhanced Endometriosis Clinic. The service the department provides to neonatology expanded for both inpatients and outpatients. We maintained a virtual clinic service to meet service users' preferences and 70% of our outpatient consultations remained virtual in keeping with the strategy of the National Health and Social Care Profession Office. In addition to clinical service, the department continued to be actively involved in hospital committees, local and national guideline development, quality improvement initiatives and working groups including the Neonatal Dietitians Ireland, Maternity Dietitians Ireland and Expert Advisory Group. Departmental services were curtailed from August to December 2022 due to staffing issues.

Table 6.2.1 Patient contacts with Clinical Nutrition and Dietetics

Clinical Area	2017	2018	2019	2020	2021	2022
Diabetes mellitus (n)	1,292	1,471	1,217	1,138	1,641	871
Obstetrics and Gynaecology (n)	618	571	469	275	616	374
Neonatal (n)	125	102	254	503	869	747
Total* (n)	**2,035**	**2,144**	**1,940**	**1,916**	**3,126**	**1,992**

**excludes patients seen on ward rounds*

6.3 Medical Social Work

Tanya Franciosa

In 2022, the Medical Social Work (MSW) Department received 1,071 new referrals. In total, 1,183 women received a medical social work service in 2022 (112 of these women were referred in 2021 but gave birth in 2022). There was also a small cohort of women who delivered prior to 2021 who received an ad-hoc service from their allocated medical social worker. Over 63% of referrals were allocated to a specialist medical social worker with advanced knowledge and skills in the specific area of need. Approximately 46% of new referrals required an immediate medical social work intervention for reasons which included child protection and patient safety concerns, which represents a 6% increase compared to 2021. Unfortunately, a waiting list remained necessary in 2022 for non-urgent referrals, however, efforts were made to ensure efficient prioritisation led by patient need and complexity. The waiting list averaged 31 women (range 2 - 61 women). Unfortunately, this is a slight increase on 2021, which is reflective of both, women presenting with increased complexities and staffing shortages.

The MSW Department also provided professional support to Midlands Regional Hospital, Portlaoise (MRHP). An MSW service was provided to women in the maternity and neonatal units in MRHP. This service received 222 new referrals in 2022 which represents a 40% increase in referrals to this service compared to 2021.

The MSW Department provides psychosocial, emotional and practical assessment and support to women, their partners and families. Support is provided for a wide range of issues but the majority of our referrals are covered under eight specialist areas; addiction, bereavement and fetal medicine, domestic violence, inclusion health, mental health, underage pregnancies, options in pregnancy and the Neonatal Unit. Each speciality has a dedicated medical social worker who participates in ongoing training ensuring a high quality of care to our women. Continuity of care is considered important by staff and women so the attachment of the medical social workers to the obstetric teams continued, where possible, for all other referrals.

During 2022, Child Protection and Patient Safety referrals, including domestic violence and abuse continued to take priority. These cases represent a high percentage of the referrals that required an immediate medical social work intervention and early identification by multidisciplinary colleagues is essential. Medical social workers continued to promote the importance of the Children First Act, 2015, supporting other mandated reporters within the hospital. The MSW Department also continued in their role as lead representatives for the hospital in the collaborative Maternity Project with Women's Aid, The Rotunda Hospital, The National Maternity Hospital and Cork University Hospital for which the work remains ongoing.

Homelessness and related situations remained a significant issue for many of the women attending our service in 2022. The number of women who reported uncertainty in their living arrangements increased dramatically. Ireland saw a significant increase in homelessness, including individuals and families from Ukraine seeking temporary protection as well as international protection applicants which created a further strain on the already over-stretched homeless system. Citywest was opened as a transit hub for all temporary protection and international protection applicants, which saw a significant increase in the number of pregnant women and their families seeking support from the MSW Department. In 2022, the Department received over double the number (108% increase) of referrals of homeless women and families compared to 2021. This increase was challenging for the Department, specifically for the inclusion health senior medical social worker. Although the Inclusion Health Service was established towards the end of 2021, the role of the senior medical social worker changed significantly due to the evolving environment. During 2022, the implications of homelessness for women attending our service became even more challenging due to a state-wide shortage of accommodation and the cost of living crisis.

Throughout 2022, the staff in the MSW Department demonstrated an ongoing commitment to their own CPD to the direct benefit of women attending our service. The Department also continued to maintain strong working relationships with third level education providers, with Anna Breen (senior medical social work practitioner) providing a practice placement to a postgraduate social

work student. Gretchen McGuirk (senior medical social worker) also provided third level postgraduate training.

During 2022, Gretchen McGuirk obtained first-class honours in a postgraduate certificate in Equality Studies and completed a multidisciplinary audit entitled 'The medical and social needs of pregnant patients in direct provision' with obstetric colleagues. Permanent funding was secured for the new Inclusion Health Service, allowing this service to be firmly established within the Department. Funding was approved for a new senior medical social worker in fetal medicine to further develop and enhance this service. This is a great addition to the Department given The Coombe Hospital's status as a tertiary referral centre.

There were a number of periods of staffing shortages in the Department during 2022, which created a significant challenge for the staff in the MSW Department. These staffing shortages contributed to increased workloads and longer waiting lists, with a number of specialities remaining vacant for a period of time. With a number of recruitment campaigns completed by the end of 2022, it is hoped that 2023 will see more consistent cover across all specialities.

My sincerest thanks to all staff who work in the MSW Department, including the medical social workers and the receptionists, for their support and hard work throughout 2022. Despite the challenging impacts of staffing shortages and increased work demands, the level of professionalism and maintaining standards of best practice throughout the year demanded a major commitment which is much appreciated. The support of our colleagues in other departments within the hospital was also essential, as was the support of our colleagues, both social work and non-social work, within the community.

The impact of the cost of living crisis had a significant effect on many of the women that engaged with the MSW Department. Many of these women required practical support and assistance. We continue to be indebted to the members of Coombe Care who provide support to women by way of necessary practical help during pregnancy, at the time of a baby's birth, or in the immediate postnatal period. Furthermore, accommodation for parents who live outside of Dublin and whose babies are admitted to the Neonatal Unit remains an ongoing issue for families. Medical social workers along with staff in the Neonatal Unit work tirelessly to facilitate support plans for families. The support from Friends of The Coombe and from Hugh's House is invaluable in this regard and the MSW Department remains grateful for the support provided to parents by these charity organisations.

Finally, during 2022, support from the principal medical social workers in the other maternity hospitals was invaluable. This solid relationship between the MSW Departments contributes to best practice in social work.

6.4 Pastoral Care

Ann Marie Desmond and Susan Jones

The Pastoral Care team saw a complete change of personnel in 2022 with the retirement of Renee Dilworth and Josette Devitt and the appointment of Ann Marie Desmond and Susan Jones. Ann Marie and Susan provide pastoral and spiritual care to patients, families, staff and students of all religious tradition or philosophies in The Coombe Hospital. They are open to each person at the time of engagement, listening to the hopes, dreams, anxieties, grief and as well as the joy-filled events in the person's life. Respecting the dignity and diversity of each person is important to the Chaplains as pastoral care is an integral and necessary part of the holistic healing process.

As a team of new Chaplains within a multidisciplinary team, establishing a positive working relationship with the Specialist Bereavement Midwives has been essential. The Chaplains network across all departments with staff and liaise with many outside organisations including parish, undertakers, cemeteries and crematoriums, as well as support agencies such as Féileacán, and volunteer knitters.

The Chaplains have created a routine of working that enables spiritual and pastoral care to be offered and provided to all inpatient women across all ages. The wards are visited on a daily basis. Priority is given to patients/parents in NICU and SCBU.

Chaplain led services are offered to bereaved families of all faiths and none in The Coombe Hospital. In 2022, the majority of services were Christian, six were Humanist,

five were Muslim and one was Atheist. A total of 152 services were held, as follows:

- 44 hospital burials at graveside
- 18 cremations in the crematorium
- 42 services held in the Butterfly Garden
- 48 private burials with assistance from the Chaplains

In addition, the Chaplains had 808 pastoral conversations with patients, 285 episodes of pastoral support to staff and they conducted 34 baptisms and 15 blessing or naming ceremonies.

The Chaplains have secured the weekly attendance of a local Priest to celebrate Mass.

The Mortuary is a special space which is used extensively for bereaved families and for Chaplain led services for babies before they leave for burial or cremation. The Family Room adjoining the Mortuary is also used and is greatly appreciated by large family groups for refreshments after a service.

The Coombe Hospital's Annual Service of Remembrance was held on the 24th April 2022, with over 200 people in attendance. We thank the Friends of The Coombe charity for supporting this event.

6.5 Pharmacy

Mairead Maguire

The Pharmacy Department continued to provide a comprehensive pharmacy service despite staff shortages, stock availability issues and changes in day to day work practices. Staff adapted continued strategies to prevent the forced self-isolation of the entire department in the event of a possible infection or exposure.

The Pharmacy Department provided a daily review of prioritised patient drug charts on adult wards, medicines reconciliation at admission and review of medication charts for potential interactions and safety in pregnancy.

A daily clinical service in the Neonatal Intensive Care Unit (NICU) was provided (including attendance at ward rounds when permissible) which included a review of all neonatal medication charts; and continued facilitation and support around prescribing of individualised and standard concentration parenteral nutrition.

The team conducted multidisciplinary acute pain rounds and team-patient education regarding the appropriate use of analgesia. The team also conducted reviews of medication charts.

The team provide medical information and advice regarding the safety of medicines pre-conception, during pregnancy and breastfeeding and safe prescribing for women with complex medical conditions in the high-risk pregnancy medical clinic and the infectious diseases clinic. The team also participated and engaged in multidisciplinary team meetings.

The team expanded its role in the facilitation of clinical trials in The Coombe Hospital with the Early Targeted Treatment of Patent Ductus Arteriosus with Paracetamol in Extremely Low Birth Weight Infants (ETAPA), Gel for Early Hypoglycaemia Prevention in Preterm Infants (GEHPPI) and Investigating the Role of Early Low-dose Aspirin iN pre-existing Diabetes (IRELAND) trials continuing, and the commencement of the PROTECT trial examining the effect of pentoxifylline on long term outcomes in preterm infants with late onset neonatal sepsis or necrotising enterocolitis.

Daily antimicrobial stewardship rounds and medication reconciliation for preoperative anaesthetic clinics were expanded and improved as part of an ongoing quality improvement initiative.

The Coombe Hospital's prescribing app continues to be updated and expanded by the Pharmacy Department as per the requirements of The Coombe Hospital.

The Pharmacy Department continued to expand its collaboration with the quality and patient safety team through the medication safety committee and in the provision of data on medication safety to the DMHG.

The antimicrobial pharmacist continues to be an active member of the infection prevention and control team (IPCT) and various hospital committees as well as carrying out regular clinical ward rounds alongside the IPCT and consultant microbiologist.

The results available from the HPSC show a 5% decrease in antimicrobial consumption in 2022 compared with 2021. The costs reported by the HPSC have decreased by 8%. The antimicrobial pharmacist participated in the National Antimicrobial Point Prevalence Survey in September 2022 and also continued to submit data on a monthly basis to the HPSC regarding antibiotic consumption.

Monitoring of compliance with The Coombe Hospital's prescribing and microbiology guidelines for obstetrics and gynaecology continued in 2022, with documentation of interventions relating to antimicrobial prescribing and clinical ward rounds.

The pharmacy technician-led medication top-up service continued to all clinical areas in The Coombe Hospital.

The service was expanded to some outpatient areas and to include unloading stock orders on the wards to save valuable time for ward staff.

The Department issued stock to wards, outpatients, staff and babies discharged from SCBU on 35,000 occasions, equating to approximately 140 dispensing transactions per day, despite the challenges in the first quarter caused by the cyberattack late in 2021.

Peter Duddy continued his teaching collaborations with the School of Pharmacy in University College Cork, and was appointed as Adjunct Clinical Lecturer in September 2022. His work as executive member of the Irish Medication Safety Network continued. Two staff members continued working towards their masters in clinical pharmacy.

6.6 Physiotherapy

Clare Daly and Anne Graham

In 2022, the Physiotherapy Department continued a model of hybrid working with classes remaining online and the department welcomed a full return to in person outpatient treatments. A total of 3,817 adult appointments were accessed in 2022. This was an increase of 1,194 appointments compared to the previous year.

With the drive for Women's Health at the forefront of the Government's campaign, funding and posts were allocated from the NWHIP to The Coombe Hospital's Physiotherapy Department. Mary Wrixon was appointed Clinical Specialist for the Ambulatory Urogynaecology Service and Tara Murtagh was appointed as the Clinical Specialist for the Endometriosis Service.

Classes remain an integral part of the physiotherapy service however, the cyberattack impacted the ability to perform such classes. In 2022, 600 women attended the online Pelvic Girdle Pain Class, 866 the antenatal physiotherapy class and 294 mothers the postnatal class.

The Department received 1,328 referrals for women and babies on the wards. Following a review of how gynaecological patients were seen on the ward, the 'Fit for Surgery Class' was introduced. The women booked for major gynaecological surgery receive the MDT gynaecological 'Fit for Surgery Booklet' and the invitation to attend an online pre-recorded education and exercise class in advance of surgery. A quality initiative project saw benefits in patients' post-operative DUKE score when they engaged in prehabilitation. Time savings were achieved both at ward and at physiotherapy department level, and this added to the efficiency of the service.

The Coombe Hospital's NICU remains the only maternity hospital in Ireland without a dedicated Neonatal Paediatric Clinical Specialist Physiotherapist post and there is no physiotherapy service provided on the NICU. The outpatient baby clinic saw 1,382 appointments offered for babies. The Cerebral Palsy Foundation approached The Coombe Hospital and invited the team to be part of a study 'Early detection of Cerebral Palsy'.

Clare Daly is the physiotherapy representative for the Expert Advisory Group for the Maternity and Gynaecology Clinical Guideline Development Programme. She also took over the role from Cinny Cusack and is the physiotherapy representative on the National Antenatal Education Standards Programme.

Anne Graham is the physiotherapy representative for the Diabetes Model of Care.

The physiotherapy team continue to partake in MDT meetings with the urogynaecology team and attend the paediatric divisional meetings.

Amanda Drummond Martins and Áine Kelly are representatives on the CPWHC committee of the ISCP.

Mary Wrixon completed a Master of Public Health and was awarded First Class Honours. Mary presented her project at the Master's Medal Research Evening and the ISCP conference. The title of her project is 'A Pilot Urogynaecology Triage: a Qualitative Review from a Healthcare Provider Prospective'. This was completed in association with the school of public health UCC.

Áine Kelly and Clare Daly presented their 'Fit For Surgery' QIP at the ISCP conference, and Áine also presented this project at the Master's Medal Research Evening.

Amanda Drummond Martins presented a poster at the ISCP conference reflecting her work on following referrals received from mothers experiencing stress urinary incontinence and pelvic organ prolapse on the ward. From this Amanda has devised a pathway of care for these women.

Áine Kelly completed a Quality Improvement Project with Dr Petar Popivanov, Anaesthetic Consultant on Optimum Humidification of Oxygen Therapy in The Coombe Hospital. This has resulted in cost-saving for the hospital and the results of this project were presented at the Master's Medal Research Evening.

6.7 Psychosexual Therapy

Donal Gaynor

The number and types of dysfunctions between 2016 and 2022 are presented in Table 6.7.1.
In 2022, return visits comprised 88.4% of all consultations and 87.2% of consultations were public consultations.

Table 6.7.1 Consultations, 2016 to 2022

Type of consultation	2016	2017	2018	2019	2020	2021	2022
New (n)	21	25	23	16	19	12	19
Return (n)	235	235	172	220	167	185	145
Total (n)	**256**	**260**	**195**	**236**	**186**	**197**	**164**

The principal dysfunctions treated were:

- vaginismus (22%)
- dyspareunia (34%)
- female inhibited sexual desire (14%)
- female anorgasmia (12%)
- male anorgasmia (14%)
- sexual trauma (4%).

Successful treatment was achieved for deep-seated vaginismus (primary) with very high level of anxiety and the partner experiencing consequential male anorgasmia (situational).

It's hard to believe that it is 17 years since I had my first consultation as Psychosexual Psychotherapist. My immediate thoughts on reflection are how complex and challenging some cases have been and also how friendly and helpful were all of the staff I met.

The recent experience of the COVID-19 pandemic required a level of strong and careful management which was clearly evidenced, together with the disciplined and empathic approach by all. I have no doubt that this was appreciated by our patients.

Besides treating individuals and couples experiencing sexual dysfunctions, I had the pleasure and privilege of giving two presentations to the Physiotherapy team to explain the work I did and which I believe was helpful to them in making referrals to me. I can say the same about being invited to present to the gynaecological oncology team in St James's Hospital to help them dialogue with patients whose treatments affected their relationship and sexual life.

The treatment of patients or couples who had a disability, e.g., blind, deaf, MS, etc., as well as a sexual dysfunction, presented challenges and opportunities both for them and for me. However, it was most rewarding to travel with them on their journey as they are enabled to celebrate their love in a sexual satisfying manner, resulting in improved emotional intimacy in their relationship.

After over 4,000 hours of providing therapy, I retire with understandable sadness and with great gratitude for the opportunity given to me by The Coombe Hospital and the wonderful staff.

The Department of Quality, Risk and Patient Safety continues to strive to improve quality and safety for all women and newborns.

Section 7

Quality, Risk and Patient Safety

7.1 Department of Quality Risk and Patient Safety

Anna Deasy

The Department of Quality, Risk and Patient Safety continues to strive to improve quality and safety for all women and newborns accessing our services by reviewing clinical risks, incidents, patient feedback, implementing quality improvement initiatives, clinical audit and ensuring compliance with best national and international guidance and practice.

Clinical incident reporting and reviews

The clinical risk managers continued to work in collaboration with staff across all departments to identify, review, manage and prevent clinical risks and incidences within The Coombe Hospital. Timely reporting of investigations and clinical reviews to extrapolate any findings and any subsequent recommendations is a primary activity within the department, and guided by the HSE Incident Management Framework (2020) and The Coombe Incident Management Policy.

Almost 2,000 incidents were reported in 2022. Each incident underwent a preliminary review, was triaged and underwent a level of review and investigation in accordance with the level of severity of the incident. All incidents were uploaded onto the National Incident Management System (NIMS), the reporting system of the Clinical Indemnity Scheme within the State Claims Agency.

The levels of severity are categorised as:

- dangerous occurrence: incidents related to failure of equipment, security, resources etc
- negligible: incident where no intervention was required e.g., medication error
- minor: delay in treatment with no impact on care
- moderate: intervention was required e.g., medication for PPH
- major/extreme: intrauterine death/stillbirth with birth weight > 500g (including those with congenital or chromosomal anomaly).

Figure 7.1.1 Clinical incidents by category, 2022

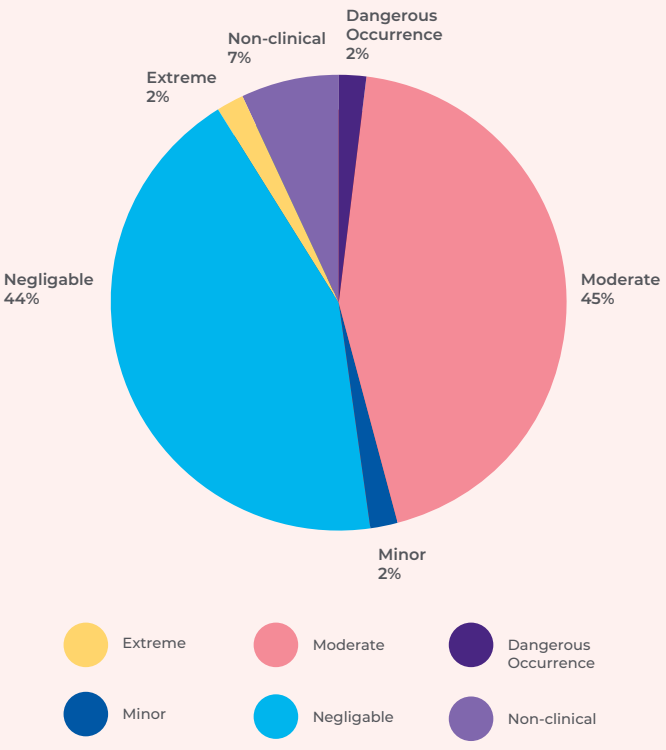


Figure 7.1.1 presents clinical incidents in 2022 by category. The minor/negligible and some of the moderate incidents usually only require a chart review and liaison with the appropriate clinician or departmental managers. For the moderate, major and extreme incidents the clinical risk managers prepare a concise desktop review report including an in-depth chronology of each case and any subsequent investigation undertaken at the time and following the event. These case reports are then presented at the various level of multidisciplinary team reviews in The Coombe Hospital, in line with the predefined inclusion criteria for each team.

The Concise Review Team chaired by Dr Mark Hehir met fortnightly, and included members of the multidisciplinary team (MDT) including obstetrics, gynaecology, paediatrics, anaesthetics, midwifery and nursing, haemovigilance and other specialities attended as required depending on the cases under review. A total of 98 moderate and major/extreme cases were reviewed by this team in 2022. As per the HSE Incident Management Framework (2020) the major/extreme incidents and any concerns that were identified were then presented to The Coombe Hospital Senior Incident Management Team and the Dublin Midlands Hospital Group Women and Infants Senior Incident Management Forum.

Both of these committees continued to meet monthly throughout 2022. Due to the timely identification, preparation, presentation and review of these incidents at the various levels of MDT committee, 99% of all incident reviews were closed within the 125 days, well above the KPI of 70% set by the HSE. Multidisciplinary learnings sessions for all clinical staff were also held throughout the year, where the key findings and recommendations from the incident reviews were shared for discussion and educational, quality improvement and patient safety purposes.

Patient safety and HSE internal audit

A total of three internal HSE audits were conducted in The Coombe Hospital in 2022, with information requested to outline compliance with recommendations for several additional internal audits conducted elsewhere also requested by the Internal Audit Department within the HSE.

The audits conducted in relation to The Coombe Hospital were:

- audit of implementation of recommendations of the overview report of HIQA's monitoring programme against the National Standards for Safer Better Maternity Services, with a focus on obstetric emergencies (12 February 2020)
- compliance with National Clinical Guideline No. 4 - Irish Maternity Early Warning System (2019)
- audit of compliance with the HSE's procedure for the prevention of peripheral and central venous catheter related infection (September 2021).

Positive feedback was received following each audit conducted, with some recommendations and suggestions to support and increase compliance. The HSE Dublin Midlands Hospital Group was then provided with a monthly update on the implementation of these recommendations as part of The Coombe Hospital's performance review.

AQuA - Audit and Quality Advisory Committee

The work of the Audit and Quality Advisory (AQuA) Committee recommenced following a pause due to the COVID-19 pandemic and staff turnover. The committee provided structure, governance, assistance and approval to those pursuing audits and initiating new quality improvement programmes/projects (QIPs) at The Coombe Hospital. Following recommencement in December 2022, the AQuA Committee assessed and approved a total of 19 applications.

Medico-legal

The management of medico-legal and Coroner's cases remained very busy throughout 2022. A substantial number of claims progressed to various levels of mediation or settlement and closure. There was one Coroner's Inquest held in 2022 due to court closures with the ongoing COVID-19 pandemic.

Patient liaison

In 2022, 4,523 compliments were received. Feedback received from women and families was positive 96% of the time. Two hundred and forty new complaints were received, 59.6% of which were written. The most frequent themes of our complaints in 2022 were; communication and information, access, and safe and effective care. In 2022, 99% of all written complaints were acknowledged within five working days and 83% of all written complaints were resolved within 30 working days of acknowledgement of the complaint. While there is no national target, most hospitals and hospital groups have a target of 70 - 75%. As a direct result of our patient liaison manager's completion of patient complaints advocacy service training, the number of patient advocacy support interventions continue to increase, with 146 advocacy/support interventions in 2022.

The People and Culture Pillar was created to enable and nurture staff though development of leadership skills and lifelong learning initiatives.

Section 8

Administration

8.1 Human Resources Department

AnneMarie Waldron

The Human Resources (HR) Department was significantly affected in 2022 by the cyberattack of December 2021. This resulted in no access to emails, HR drives or the time and attendance system. This created a significant challenge with the NCHD rotation in January 2022. Many thanks to the solutions offered by staff in the HR Department.

Following the cyberattack of December 2021, the HR staff supported the ICT Department with the logging of calls and the Patient Services Department to ensure that patients and their appointments were not affected. The COVID-19 pandemic continued to impact the department in 2022.

In 2022, there were on average, 1,066 whole time equivalent (WTE) staff. The average absence rate due to sick leave was 3.79% and due to COVID-19 leave was 1.56%. Staff turnover was 19.30%.

Staff recruitment

The HR Department ran 158 competitions on Irishjobs.ie for all staff groups and recruited 206 staff in the following categories:

- 63 midwifery and nursing (including Bachelor of Science and Higher Diploma Students)
- 104 NCHDs (on rotation)
- 16 administration/support
- 12 consultants
- 9 health and social care professionals
- 2 chaplains

Gender pay gap

In December 2022, The Coombe Hospital, in line with the Gender Pay Gap Information Act 2021 published its first gender pay gap report. This report was published on The Coombe Hospital website in December 2022 and results were as follows:

- total staff, n = 1,107
- female 86.27%
- male 13.73%
- mean gender pay gap 17.66%
- median gender pay gap 1.76%.

The Coombe Hospital values and branding

The rollout of The Coombe Hospital's reimagined values took place in the first half of 2022. All staff were invited to become values' champions and we are very pleased that a number of HR staff took up this role.

The reimagined values and refreshed branding were launched in October 2022 at the Annual Guinness Lecture.

The Coombe Hospital Strategic Plan

Our five-year strategic plan was launched in October 2022 at the Annual Guinness Lecture. The People and Culture Pillar is a critical pillar not only to our

department but to the overall success of the hospital, as without staff the organisation cannot fulfil its purpose, i.e., providing specialist care for women and newborns. This pillar places a strong focus on enabling and nurturing staff at The Coombe Hospital through a diverse range of initiatives from leadership development to lifelong learning as well as health, wellbeing and flexible workforce models.

A People and Culture Committee with multidisciplinary staff representation was formed in 2022.

Health and wellbeing

Staff health and wellbeing initiatives in 2022 included the following:

- steps to health challenge
- national workplace wellbeing day
- bicycle clinics
- staff BBQ in August 2022
- ice cream was available for all staff on duty, July 2022
- onsite QUIT sessions to support staff in giving up smoking
- Master's Coombe Camino, September 2022
- weekly wisdom quotations
- Christmas event in the staff canteen with music provided by the RAMS
- The Occupational Health Department ran a health promotion day and a positive mental health and wellbeing programme.

The following training programmes were run in 2022:

- retirement planning
- dealing with challenging situations
- interviewee skills
- interviewer skills
- support for women in the workplace – menopause
- conducting investigations – Ibec
- leadership development programme
- resilience and positive mental health
- staff engagement for line managers
- dealing with loss in maternity settings.

I wish to acknowledge and thank the staff in the HR department for their continued dedication and commitment despite all the challenges that 2022 brought.

In 2022, 4,523 compliments were received. Feedback received from women and families was positive 96% of the time.

Section 9

Support Services

9.1 Central Services Sterilisation Department

Vivienne Gillen

The Central Services Sterilisation Department (CCSD) continued to operate successfully as a Class 8 facility.

In 2022, new washers/disinfectors were installed with minimal downtime. A back-up service was successfully provided by CHI Crumlin. Two new compressors for autoclaves were installed successfully as was a new reverse osmosis unit.

Audits continued to be carried out twice monthly. Key performance indicators included the performance of washers and autoclaves on each cycle. Non-conformances with key performance indicators are recorded and followed up and rectified.

9.2 Hygiene Services

Vivienne Gillen

Hygiene audits were carried out by ward managers, household supervisors and the executive management team (EMT). An electronic auditing system was embedded throughout The Coombe Hospital. In 2022, 94% compliance was achieved in environmental auditing whilst 95% compliance was achieved overall.

Table 9.2.1 presents the waste generated in The Coombe Hospital from 2016 to 2022. The highest total waste was produced in 2016 and the lowest in 2022. Healthcare risk waste generation increased from 105.09 in 2020 to 121.26 in 2021 and by another 10.63 tonnes in 2022. This increase can be explained by the quantity of healthcare risk waste classified as infectious due to COVID-19. A total of 419 tonnes of waste was generated by The Coombe Hospital in 2022, 71 tonnes less than in 2021 (Table 9.2.1).

Table 9.2.1 Waste generated, 2016 to 2022

Type of waste (tonnes)	2016	2017	2018	2019	2020	2021	2022
Healthcare risk waste	-	-	-	-	105.09	121.26	131.89
Total waste	**490.57**	**489.97**	**455.94**	**489.72**	**452.62**	**490.15**	**419.00**

The rate of recycling in The Coombe Hospital increased from 31% in 2010 to 70% in 2015. It has remained between 70% and 76% since then. This rate was 76% in 2022.

Staff training continued in 2022. Cleaning equipment within the Central Services Sterilisation Department (CSSD) was upgraded. Deep cleaning throughout The Coombe Hospital increased significantly during 2022 due to ongoing internal refurbishments. Work on upgrading hand hygiene sinks continued in 2022. Cleaning services were provided throughout The Coombe Hospital despite the high rate of staff absence due to COVID-19.

9.3 Information Communications Technology

Bryan Smyth

2022 began with the task of recovery from the devasting cyber attack experienced in late 2021. The recovery of servers and services was the priority with the clear objective of reducing clinical risk and returning all departments to business as usual. This process involved every aspect of ICT throughout each department in the hospital. Seventy servers were restored in early January and 680 end users' devices were wiped and rebuilt over a period of three weeks. A temporary replacement firewall was acquired, configured and put in place as we began the process of creating a new clean network environment for restored servers and reimaged user devices. Through these efforts the HSE deemed the site safe to reconnect to the national health network (NHN) and we began reconnecting departments and users to essential services.

While this process was labour intensive and tedious we took the opportunity to improve overall security. During and after the recovery process critical services were security assessed and improvements were made. Email services were migrated in January 2022 from an old insecure and unsupported mail system to a modern Office 365 platform. This allowed us to improve security through measures such as multi factor authentication and data loss prevention while also expanding the accessibility and features. As a layered approach to our email security, we have also employed a third-party company through which all of our emails are filtered. About 25% of all emails sent to us are quarantined by either our spam setting or due to security filtering. The same company provide a DMARC service for us which relates to the reputation of the emails we send out and we have the highest possible score on that, meaning the emails we send out are much less likely to be quarantined. Emergency access to critical email boxes is also facilitated through this company.

The VPN service which allows users to connect remotely was upgraded and replaced with a more secure model which also provides greater auditing and usage statistics to inform ICT. Perimeter security was enhanced through the implementation of upgraded firewalls and the deployment of multi factor authentication. Vendors and third-party support are no longer accessing our site through the staff VPN but on a dedicated privileged remote access service (Beyond Trust) which also records all remote vendor sessions and is also protected with multi factor authentication. All laptops are now fully encrypted before users receive them and are configured to alert ICT should this encryption be disabled. The removal of outdated operating systems began and currently we only have a very small number of machines still on Windows 7 with the remaining user devices all running Windows 10. The existing endpoint security software was deemed no longer fit for purpose and we moved to a next generation solution which has the ability to isolate potential threats to reduce the risk of spread, with enhancements to auditing and visibility of issues. USB devices which can store information have been blocked as these devices pose a risk to data theft as well as potentially carrying malicious software. A new password policy has been enforced which has introduced stronger user passwords which must be changed regularly. These are just some of the measures introduced to improve overall organisational security.
In September 2022, The Coombe Hospital was the first hospital to receive a full green status after a security audit conducted by Deloitte on behalf of the HSE office of the Chief Information Officer.

The cyberattack itself combined with the impact of COVID-19 on manufacturing and equipment availability also had an impact on ongoing projects, most notably our network upgrade, some of the components required had no availability for months. Nevertheless, we continued to address the project work and at the end of December 2022, all components were in place with just testing remaining to complete before signoff on the largest ICT project ever completed by The Coombe Hospital, introducing a new high speed, highly redundant network with site-wide Wi-Fi, suitable for hosting modern services such as the Maternal and Newborn Clinical Management System (MN-CMS) and giving users the ability to leverage this technology to improve services throughout the campus.

2022 also saw the completion of the NCSL building and we have successfully added this unit to The Coombe Hospital's ICT network and have facilitated the addition

of the new ICT based equipment and VoIP (Voice over Internet Protocol) telephony services. In December 2022, we began the Disaster Recovery Project which is critical in the documentation of actions to be taken and directions and priorities in the event of scenarios which impact access to The Coombe Hospital's ICT resources. These scenarios range from partial power outages to cyberattacks and natural disasters. This project is set for completion in early 2023.

Cyber awareness for all staff of The Coombe Hospital has been agreed through a competition process. Staff cyber awareness and education programmes are due to commence in February 2023 in conjunction with MetaCompliance.

The emergency out of hours ICT service introduced in January 2022 has been a great success and while calls received on this are infrequent, it has been used as required with only positive feedback received. As we move towards a more secure and resilient ICT infrastructure, the importance of key roles within the department have been addressed for cover, knowledge dispersion and availability and in 2023 we will be reinforcing those key areas with additional skilled staff. This will help with the increased work load, on call service and staff morale.

Section 10

Postgraduate Education and Training

10.1 Advanced Midwife Practitioner (AMP) for the Supported Care Pathway and the Community Midwifery Service

Nora Vallejo

The Advanced Midwife Practitioner (AMP) role includes supporting and strengthening our DOMINO Service; The Coombe Hospital's own Supported Care Pathway for women considered normal risk. Whilst committed to developing a service that facilitates choice for women within a multidisciplinary framework, the AMP role endeavours to optimise women and infant's health outcomes, in tandem with nurturing and supporting midwifery.

One of our objectives for 2022 included sharing an overview of the current service with our consultant colleagues, alongside plans for its development. The Master and consultant body were supportive of the efforts to develop the pathway, including the strengthening of links between The Coombe Hospital and our community.

In September, attendance at the International Normal Labour and Birth Conference in Aarhus, Denmark was generously facilitated for Nora Vallejo, Claire Browne, Neassa O'Malley and Mariapia Dado. Mariapia presented the findings of her study 'Women's experiences of water immersion during labour and childbirth in a hospital setting in Ireland'. The experience highlighted the value of midwifery research and the contribution of Irish midwifery to its evidence base.

10.2 Centre for Midwifery Education

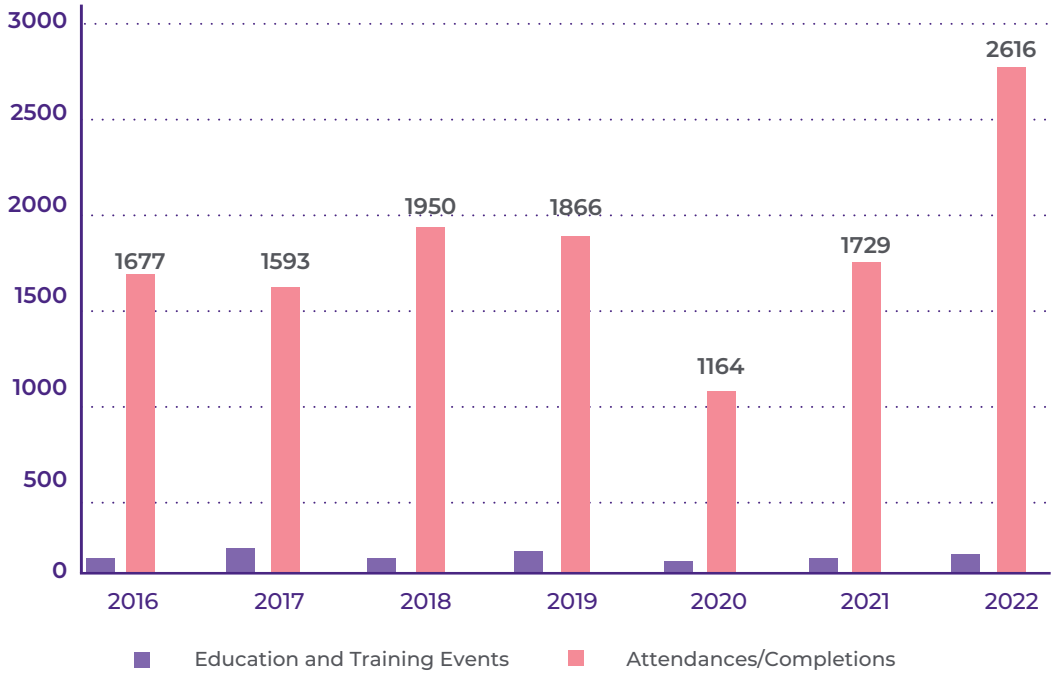
Triona Cowman

In the first quarter of 2022, the COVID-19 pandemic continued to present challenges within the Centre for Midwifery Education (CME). The provision of education and training for the purpose of continuing professional development temporarily ceased and members of the CME team were redeployed to assist with COVID-19 helplines.

In 2022, the CME provided 116 education and training events. These events were delivered face to face in a classroom setting, virtually or by e-learning and ranged in duration from one hour to nine months. The total recorded attendances and completions for the year was 2,616 (Table 10.2.1).

In response to service needs, eight new programmes of education and training were developed/delivered.

Table 10.2.1 CME activity, 2016 to 2022



A significant development is the CME's collaboration with centres for nursing and midwifery education nationally to develop a consortium of centres for nursing and midwifery education (CCNME). This will enable submission of programmes to QQI for approval at Level 5 - 8.

Members of the CME continue to represent midwifery and neonatal education on over twenty-six local/regional and national groups.

The CME is actively engaged in research projects.

Finally, the CME were delighted to welcome Arathi Noronha to the CME team as a Midwife Tutor.

Publications

See Appendix Two for a list of peer reviewed publications from the Centre for Midwifery Education.

10.3 Department of Pathology

Professor John O'Leary and Dr Helen Keegan

Specialist Registrar in Histopathology

The Coombe Hospital hosts one specialist registrar (SpR) every six months in histopathology, cytopathology, morbid anatomy and molecular pathology. Trainees gain wide experience in all the above areas of pathology and are encouraged to carry out basis scientific research and audit.

Training in Pathology (in association with the Faculty of Pathology and CervicalCheck)

The Cellular and Molecular Cytopathology Training School (CMCTS) is led by Professor John O'Leary and Dr Helen Keegan (lecturer and molecular biologist) in collaboration with the Department of Cytology/Cervical Screening, the Department of Histopathology and TCD CERVIVA Molecular Pathology Research Laboratory.

Each year, under the Laboratory Director, Professor John O'Leary, the CMCTS provides a variety of cytopathology, histopathology and molecular pathology training courses, events and research supervision to healthcare professionals (SpRs in pathology, biomedical scientists, colposcopy SpRs, colposcopy specialist nurses and pathologists), undergraduate students (TU Dublin and TCD) and postgraduate students (TU Dublin and TCD) in the areas of cervical cancer and cervical screening. From April 2017 to December 2022, the CMCTS at The Coombe Hospital has trained in excess of 125 individuals (excluding large lectures and attendance at multiple events).

In 2022, three cytology biomedical scientists completed the CPD Certificate in Molecular Cytopathology in collaboration with TU Dublin and CervicalCheck (QQI Level 9).

10.4 Department of Perioperative Medicine

Dr Stephen Smith

The Department of Perioperative Medicine continued to develop and expand upon our multi-faceted approaches to teaching and training in 2022.

In total there were 17 trainees in the department in 2022. Ten specialist trainees from the College of Anaesthesiologists of Ireland rotated through the department in 2022, fulfilling their training requirements for obstetric anaesthesia.

Four foundation year trainees in anaesthesia commenced with the Department in July 2022 on a one-year placement. Our strong record of success continued, with these trainees being selected onto the national anaesthesiology training scheme.

We had one post-CST fellow with a one year post divided between The Coombe Hospital and the Rotunda Hospital.

Practical training workshops in advanced airway, lumbar ultrasound and transthoracic echocardiography were facilitated in addition to our regular interactive lectures, simulation and patient quality and safety meetings.

Trainees from the College of Anaesthesiologists of Ireland were facilitated to gain the knowledge, skills and competencies necessary to obtain certification of specialist training (CST). Trainees were prepared for college membership and fellowship examinations. They were also supported with academic projects during their rotation and gave multiple presentations at national and international academic meetings.

The maintenance of a safe and adequately staffed trainee roster in the context of a mandated maximum on-call frequency of 1 in 6 reduced manpower availability in 2022.

10.5 Laparoscopic Simulation Training

Dr Hugh D O'Connor

With the adoption of the European Working Time Directive compliant rotas, it has become increasingly more challenging for trainees to accrue good surgical skills.

In 2022 The Coombe Hospital continued to deliver a laparoscopic simulation programme to gynaecology trainees. This significantly enhanced the surgical training experience at The Coombe Hospital by allowing trainees to objectively assess their ability when performing standard laparoscopic tasks in a simulated environment. Furthermore, trainees have the ability to track and record their progress. Importantly this leads to greater confidence amongst trainees when participating in surgery.

10.6 Midwifery and Nursing Practice Development Department

Helen Castelino

The Midwifery and Nursing Practice Development Department (PDD) facilitates the development and maintenance of the clinical learning environment for Bachelor of Science in Midwifery (BScM) and Higher Diploma in Midwifery (HDipM) students and Bachelor of Science in Nursing (BScN) students undertaking clinical placements at The Coombe Hospital.

The PDD collaborates with affiliated higher education institutes such as TCD and RCSI in relation to the education and learning needs of midwifery and nursing students at The Coombe Hospital. It liaises with the Centre of Midwifery Education (CME) in the provision of continuing educational programmes based on needs analysis to ensure continuing professional development (CPD) of midwifery and nursing staff. It deals with 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.

The PDD supports and develops midwives and nurses through formal orientation and induction programmes at the commencement of employment at The Coombe Hospital and as the need arises.

The department also provides quality assurance in midwifery and nursing practice, including facilitating and performing regular clinical audits, promoting and supporting research, evidence-based practice guidelines and continuous professional development (CPD) among staff.

Despite the challenges of the COVID-19 pandemic, the PDD still managed to provide quality service, keeping students, colleagues and service users very much to the forefront of their minds. Examples of same were:

- facilitation of optimum clinical experience for the BScM, HDipM and the BScN students balancing safety with their learning needs
- 11 BScM interns and 22 HDipM students successfully completed the programme and qualified as registered midwives
- facilitation of clinical placements for international midwifery students on the Erasmus Programme
- facilitation of structured clinical skills sessions and reflection sessions in The Coombe Hospital on a weekly basis for midwifery and nursing students to bridge the theory practice gap
- support and guidance of clinical staff in order to provide an optimal learning environment for midwifery and nursing students

- involvement in the successful recruitment, induction and continued support of midwives and nurses from Ireland and abroad
- involvement in a career planning open day at the RDS for transition year students which was organised by the Nursing and Midwifery Board of Ireland (NMBI) in collaboration with RTE
- encouragement of staff to embrace quality initiates and evidence-based care, supporting the ethos of research throughout The Coombe Hospital
- facilitation of a Midwives Clinic by Paula Barry and Nora Vallejo
- celebration of midwifery and nursing on the occasion of International Day of the Midwife, 5th May and International Day of the Nurse, 12th May 2022.

A clinical site audit, that occurs every five years, was conducted by the Nursing and Midwifery Board of Ireland (NMBI). The Coombe Hospital reached the standard required and was deemed an optimum clinical learning environment for midwifery and nursing students as well as for the candidate midwives undertaking the Adaption Programme.

Four staff members continued on further education in third level (Level 9) programmes.

Paula Barry, Practice Development Co-ordinator (ADoMN), was a guest speaker at The National Midwifery Conference (Women and Infants Health Programme/ Office of the Nursing and Midwifery Services Director) held in Dublin in May 2022. Her presentation was entitled 'Water birth in Ireland – turning the tide'. Tracey Armstrong, a woman who used the Water Immersion Service at The Coombe Hospital also spoke about her experience.

See Appendix Two for details of a peer reviewed publication and a conference abstract from the Midwifery and Nursing Practice Development Department.

10.7 Obstetrics and Gynaecology

Professor Nadine Farah

I would like to acknowledge Dr Eimer O'Malley and Dr Eimear McSharry in coordinating rosters during the period from January to July 2022 and Dr Aoife McTiernan and Dr Eimear McSharry in coordinating rosters during the period from July to December 2022.

All doctors in training are assigned to a team and a named trainer.

January to July we had eight full time SPRs, two flexible training SPRs, four registrars, four junior registrars and ten SHOs.

July to December we had eight full time SPRs, five registrars, five junior registrars and nine SHOs.

We also have within our NCHD staff complement, the Bernard Stuart Research Fellow, lecturers with RCSI, TCD and UCD, a Clinical Fellow in Early Pregnancy Scanning and a Subspecialty Training Fellow in Reproductive Medicine.

All doctors in training (basic specialist training; (BST level)) are prospectively allocated to a two-year BST rotation with at least one year in The Coombe Hospital and all BST rotations spend at least eight months at The Coombe Hospital.

The maximisation of training opportunities in the context of reduced rostering time to comply with the European Working Time Directive remained a challenge in 2022.


The Coombe
Hospital

Education allows us to build a continuous resource of medical staff who are focused on our model of excellence in healthcare.

Section 11

Academic

11.1 Master's Office Biological Resource Bank

Ruth Harley

The maternal and fetal bloods that are in the Biological Resource Bank (BRB) are there to support scientific knowledge which aims to improve the health of women and babies. Ethical approval was granted to Dr Neil O'Gorman, Consultant Obstetrician and Gynaecologist, in The Coombe Hospital to conduct a study using preterm and pre-eclampsia maternal bloods with maternal control bloods from the BRB. This study is entitled 'Artificial Intelligence to Prevent preterm birth due to preeclampsia while protecting Mothers' lives (AI PREMie).'

Relevant data pertaining to the studies were collected and recorded. All relevant blood samples were organised, stored and sent to UCD for analysis. The study obtained 300 maternal control bloods, 89 full term maternal PET (pre-eclampsia toxaemia) bloods and 30 maternal preterm PET bloods.

Anonymising data of all bloods collected and stored is an important aspect of the BRB. GDPR guidelines and procedures that protect and respect patient confidentiality are strictly adhered to. The freezers are closely monitored by a continuous automated temperature monitoring system, provided by Rees Scientific, to ensure they are monitored 24 hours per day to keep the bloods at the optimum level of minus 80 degrees Celsius.

11.2 Master's Office Research Report

Professor Stephen Lindow

The year 2022 was a difficult one for the Coombe Hospital as we dealt with the Omicron variant of COVID-19. However, this provided research opportunities as we responded to the new challenge. The results of a study on pregnancy outcomes associated with the Omicron variant were published in 2022.

External computer and data attacks have hampered the ability of researchers to collaborate, however two projects have been successfully submitted to leading journals on the subject of litigation in obstetrics and gynaecology.

Internally, the formation of the Audit and Quality Advisory (AQuA) Committee to advise and facilitate audit and quality improvement projects is a substantial development to assist all doctors working at The Coombe Hospital. It will work together with the Ethics Committee to provide the framework for clinicians and scientists to work collaboratively and ethically.

Research links have been strengthened with Qatar (Hamad Medical Corporation and Sidra Medicine), India (Banaras Hindu University), South Africa (University Cape Town) and the UK (Hull University Teaching Hospitals).

Collaborative output for 2022 has resulted in a total of 11 publications with doctors in The Coombe Hospital as first author on seven of them. See Appendix Two for a list of these peer reviewed publications.

The philosophy remains the same in that it is expected that all junior doctors will contribute to, or take the lead on a project during their time at The Coombe Hospital.

The release of restrictions on international travel will have a positive effect on future research output.

11.3 Royal College of Surgeons in Ireland Department of Neonatology

Associate RCSI Professor Martin White

Royal College of Surgeons in Ireland (RCSI) undergraduate teaching in The Coombe Hospital is coordinated with Professor Naomi McCallion, Head of Neonatology RCSI, using simulation resources both on-site in The Rotunda, The Coombe Hospital and in RCSI York Street. Students are part of the Paediatrics Senior Cycle. In 2022, due to the COVID-19 pandemic, a hybrid model of clinical and virtual teaching was used successfully. There was also close liaison with other colleges.

With approval from the Master and the Coombe Board of Guardians and Directors, undergraduate education was reconfigured in The Coombe Hospital in 2018 with a commitment by RSCI to providing an undergraduate tutor on-site throughout the academic year. The tutors appointed since (Dr Saira Tabassum; 2018 to 2020), have conducted research in Neonatology towards a postgraduate research degree.

Tutors

2020 - 2022	Dr Meredith Kinoshita
2022 - 2024	Dr Rob McGrath

Postgraduate Research Degrees

MD: Dr Saira Tabassum. Relationship between maternal diet, macronutrient content of preterm expressed breast milk, infant growth and infant body composition. Supervisors: Dr Anne Doolan and Professor Martin White.

MD: Dr Meredith Kinoshita. Methods of assessing breastmilk intake in preterm infants. Supervisors: Professor Martin White and Dr Anne Doolan.

MD: Dr Robert McGrath. An observational study of regional cerebral oxygen saturation in neonates with a haemodynamically significant patent ductus arteriosus: A prospective study within the ETAPA Trial (Early Targeted Treatment of Patent Ductus Arteriosus with Paracetamol in Preterm Infants). Supervisors: Professor Jan Miletin and Professor Martin White.

In 2022, Dr Tabassum and Dr Kinoshita completed and submitted their MD Theses to RCSI while recruitment to Dr McGrath's research project was ongoing in 2022.

11.4 Royal College of Surgeons in Ireland Department of Obstetrics and Gynaecology

Dr Bridgette Byrne and Dr Carmen Regan

Heads of Department

Dr Bridgette Byrne, Senior Lecturer, Consultant in Obstetrics and Gynaecology

Dr Carmen Regan, Senior Lecturer, Consultant in Obstetrics and Gynaecology

Lecturer

Dr Emmanuel Hakem

Secretarial Support

Ms Laura Bowes

Consultants Providing Clinical Teaching

Dr Mark Hehir, Clinical Senior Lecturer, Consultant in Obstetrics and Gynaecology

Dr Tara Rigney, Consultant in Obstetrics and Gynaecology

Professor Tom D'Arcy, Consultant in Obstetrics and Gynaecology

Professor Nadine Farah, Consultant in Obstetrics and Gynaecology

Dr Workineh Tadesse, Consultant in Obstetrics and Gynaecology

Dr Hugh O' Connor, Consultant in Obstetrics and Gynaecology

Dr Clare O'Connor, Consultant in Obstetrics and Gynaecology

Dr Neil O'Gorman, Clinical Senior Lecturer, Consultant in Obstetrics and Gynaecology

Dr Anabela Serranito, Consultant in Obstetrics and Gynaecology

Teaching

In 2021/2022 we again welcomed two further rotations of RCSI medical students to The Coombe Hospital. The objective review of student feedback was excellent, and we were delighted to note that the RCSI medal in Obstetrics and Gynaecology was awarded to a Coombe Hospital student. Both are indicators which confirm the success of this teaching program.

Grant Held in 2022

Science Foundation Ireland. The impact of e-cigarettes on childhood health outcomes (ECHO) study. Co-principal investigator: Dr Carmen Regan. €478,956.00.

Research

Dr Byrne has been invited to be part of a multicentre prospective study of Charcot Marie Tooth disease in pregnancy by an NIH funded inherited neuropathy consortium.

Dr Byrne is the lead site investigator for the Highlow Study – Low molecular weight heparin to prevent recurrent venous thromboembolism in pregnancy; a randomised trial of two doses. HRB Definitive Interventions and Feasibility Awards (DIFA) 2017 (DIFA-2017-040). This study was completed and published in October 2022.

Publications

See Appendix Two for a list of peer reviewed publications and published conference abstracts from the Royal College of Surgeons in Ireland Department of Obstetrics and Gynaecology.

11.5 Trinity College Dublin Academic Department of Obstetrics and Gynaecology

Professor Richard Deane and Professor Deirdre J Murphy

Heads of Department

Professor Deirdre Murphy (to September 2022)

Professor Richard Deane (from September 2022)

Secretarial Support

Ms Aisling Moloney, Executive Officer

Academic Staff

Professor Deirdre Murphy, Professor and Consultant in Obstetrics (Chair)

Professor Richard Deane, Associate Professor and Consultant in Obstetrics and Gynaecology

Dr Yulia Shahabuddin, Lecturer and Registrar in Obstetrics and Gynaecology

Ms Clare Dunney, Tutor in Obstetrics and Midwife

Dr Sahr Yambasu, Research Fellow in Obstetrics and Gynaecology

Professor Patricia Crowley, Professor Emeritus in Obstetrics and Gynaecology

Professor Andrew Curtain, Professor Emeritus in Obstetrics and Gynaecology

Consultant Staff Providing Clinical Teaching

Professor Tom D'Arcy	Dr Nedaa Obeidi
Dr Joanne Fenton	Dr Hugh D O'Connor
Dr Jennifer Hogan	Dr Hugh O'Connor
Dr Waseem Kamran	Dr Aoife O'Neill
Dr Niamh Maher	Dr Workineh Tadesse
Dr Aoife Mullally	Dr Terry Tan
Dr Cliona Murphy	Dr Gunther Von Bunau
Dr Niamh Murphy	

Facilities

The TCD Department of Obstetrics and Gynaecology at The Coombe Hospital is based within the Education Centre at The Coombe Hospital housing senior academic staff, lecturers and administrative staff. There is a dedicated TCD tutorial room, which is used to provide simulated teaching and small group tutorials. TCD are working with The Coombe Hospital to link the Education Centre to the TCD wireless network, which will provide an enhanced learning experience for TCD students and better staff connectivity across the TCD hospital and academic network. Further discussions regarding network installation took place in 2022 with a plan to complete in 2023.

Teaching

As part of their Obstetrics and Gynaecology rotation, all TCD medical students attend placement at The Coombe Hospital for five weeks of their eight-week rotation, which runs throughout the academic year (September to May). The programme is blended combining technology enhanced learning activities with focused, supervised and self-directed patient based clinical sessions. In 2022, 236 TCD medical students attended for clinical tutorials and workplace-based clinical sessions at The Coombe Hospital. Students indicated a high level of satisfaction with 93% rating their experience of in-person clinical activities as good or excellent. The success of the programme is a testament to the enormous support and commitment of staff at The Coombe Hospital in welcoming students into the clinical environment and is greatly appreciated.

Research

Professor Deirdre Murphy leads a research programme focussed on intrapartum care. The current projects are designed to evaluate second-line tests of fetal wellbeing in labour with a Cochrane Systematic Review, a cohort study and a multicentre randomised controlled trial funded by the Health Research Board of Ireland (FIRSST). The research team are also involved in developing the National Guidelines for Assisted Vaginal Birth and Fetal Monitoring which will increase the impact of the group's research.

Professor Richard Deane leads the discipline's medical education research with a current focus on student assessment methods.

Professor Deane continued as a member of the Joint St. James's Hospital / Tallaght University Hospital Research Ethics Committee following completion of his three years as Chairperson and completed the introduction of Ireland's first completely electronic research ethics administration software package in a healthcare setting.

Grants held in 2022

HRB, Definitive Intervention Award. The FIRSST multi-centre randomised controlled trial. Principal investigator: Professor Deirdre J Murphy. €1.1 million.

Visiting Dignitaries

Medical Council Accreditation Team Visit

In February 2022 TCD underwent a Medical Council accreditation review of its undergraduate course in Medicine. As part of this review, the Medical Council accreditation team visited The Coombe Hospital. The visit involved presentations from academic staff members and a round table discussion with academic and clinical staff members and medical students. The accreditation team visited the clinical teaching areas within the hospital and observed live teaching at small group

tutorials. The official report was highly complementary of the teaching programme being delivered at The Coombe Hospital for TCD students.

Trinity Provost Visit

A particular highlight was the visit by Professor Linda Doyle, TCD Provost, to The Coombe Hospital in December 2022. The Provost met with the Master/CEO, members of the Executive Management Team (EMT), and academic, clinical and administrative staff. An informative discussion took place regarding TCD academic work at The Coombe Hospital and how TCD and The Coombe Hospital can work together to support research and education. The Provost also toured the teaching and office facilities. TCD is looking forward to building on the opportunities arising from the visit.

The participation and support of the executive management team and the staff of The Coombe Hospital in the success of these visits is acknowledged and appreciated.

Publications

See Appendix Two for a list of peer reviewed publications from Trinity College Dublin Academic Department of Obstetrics and Gynaecology.

11.6 Trinity College Dublin Department of Paediatrics and Child Health

Co-located at The Coombe Hospital and Children's Health Ireland

Head of Department

Professor Eleanor Molloy

Senior Academics

Professor Edna Roche

Dr Judith Meehan

Secretarial Support

Ms Sandra Archbold-Kenny

Ms Anan Lambe

Ms Nuala Bermingham

Lecturer and Registrars

Dr Aoife Branagan

Dr Niamh Ó Catháin (Neonates)

Dr Eman Isweisi (Paediatrics)

Dr John Allen (Paediatrics)

Dr Philip Stewart (Paediatrics)

Consultant Providing Clinical Teaching

Dr Anne Doolan

Dr Jana Semberova

Teaching

Structured teaching in neonatology is part of the overall course on the medicine and surgery of childhood based in the hospitals in Children's Health Ireland. This incorporates over 30 specialty areas in child health as well as communication modules and an evidence-based project. The latter is presented nationally and internationally and there have been on average five peer-reviewed papers published by the students annually.

Postgraduate Research Degrees

Professor Eleanor Molloy: Research Supervision

Postgraduate research degrees awarded in 2022

Primary supervision

PhD: Dr John Allen. SERENITY project. TCD 2018 - 2021. Co-supervisor: Professor Denise McDonald.

PhD: Dr Tim Hurley: CRADLE: Circadian Rhythm Alterations anD outcome in neonatal Encepahlopathy.

PhD: Dr Matthew McGovern: GENIE project: GEnder and Neonatal Inflammation in prEterm outcomes.

Postgraduate research degrees ongoing in 2022

Primary supervision

PhD: Dr Eman Iwesi: FIREFLY: Followup of Inflammatory Responses and multiorgan outcomes Following neonatal brain injury.

PhD: Dr Aoife Brannigan: PUFfIN: Point of care Ultrasound For multiorgan evaluation in Neonatal encephalopathy.

PhD: Dr Saima Aslam. Persistent systemic inflammation in Neonatal Encephalopathy. 2013 - ongoing.

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

MD: Dr Niamh Lagan: DREAM project: Down syndRome, nEurodevelopment And Multiorgan outcomes: TCD 2017 - 2023.

MD: Dr Danielle McCollum: POLARIS: TCD 2019 - 2023.

MD: Dr Gergana Semova: PLATYPUS: Preterm InfLAmmatory hyperreactiviTY and response to Pentoxyfylline to Understand necrotising enterocolitis and Sepsis.

PhD: Dr Philip Stewart: STARFISH: Sustained inflammaTion in preterm infAnts and multioRgan dysFunctIon correlateS witH long term outcomes. 2022 - 2025.

Secondary supervision

PhD: Megan Ní Bhróin. BRAIN: Brain Injury in Neonates. Primary supervisor Professor Arun Bokde.

PhD: Dr Nawal Taher: PHOENIx: PHenOtyping T cElls in Neonatal brain Injury and followup in childhood. Co-supervisor: Professor Derek Doherty.

PhD: Fiona Quirke. COHESION Develop a Core outcome set for use in clinical trials and other studies in the prevention and treatment of Neonatal Encephalopathy. Supervisor: Professor Declan Devane. Co-supervisor: Dr Patricia Healy.

PhD: Megan Dibble. NEON: Investigate the functional brain changes in neonatal encephalopathy and the associated behavioural and cognitive consequences. Primary supervisor: Professor Arun Bokde: Co-supervisors: Professors Elizabeth Nixon and Declan Devane.

PhD: Chelo Del Rosario: PANDA: Psychological And Neurodevelopmental assessment of Neonatal Encephalopathy. Co-supervisors: Professors Elizabeth Nixon and Jean Quigley.

PhD: Desiree Grafton-Clark: DIAMOND project: 'Dyadic Interaction and Neurodevelopmental outcomes in Down Syndrome.' Supervisors: Professors Elizabeth Nixon and Jean Quigley.

PhD: Dr Graham King: Neonatal functional MRI and early development of cognition. Principal investigator: Professor Rhodri Cusack. https://www.cusacklab.org/research.html

PhD: Sarah Kift: Development of a Complex Occupational Therapy intervention for Neonatal Units in Ireland: INCOT: Irish Neonatal Care Occupation Therapy Study. Principal investigator: Professor Michelle Spiritos.

Post-doctoral researchers

Dr Lynne Kelly: 2015 - ongoing: NIMBUS project and now GEMINI.

Dr Johana Isaza-Correa 2020-2023: FIREFLY project.

Grants held in 2022

Professor Eleanor Molloy: Lead applicant

PROTECT: Pentoxyfylline to improve long-term outcomes in preterm in preterm infants with late-onset sepsis or necrotising enterocolitis: Ireland, RCSI: Lead in Ireland: Eleanor Molloy €73,024.00. Overall: Eleanor Molloy €272,621.62 (Aus $401,386.36).

HRB Irish Network for Children's Clinical Trials (in4kids) CTN-2021-007. Co-lead: Professor Geraldine Boylan. €995,536.00.

Health Research Board HRA Grant 2019 - 2022: FIREFLY: Followup of Inflammatory Responses and multiorgan outcomes FoLlowing neonatal brain injurY. €369,891.00.

Health Research Board Collaborative Doctoral Award. Irish Neonatal Brain Injury Consortium. 2018 - 2023. €1.47 million.

National Children's Research Centre: GEMINI: GEnder and inflaMmatIoN In neonatal encephalopathy. Paediatric research project grant. 2019 - 2022. €282,553.00.

Professor Eleanor Molloy: Co-applicant/collaborator

ERC Advanced Grant: FOUNDCOG: Curiosity and the Development of the Hidden Foundation of Cognition. Principal investigator: Professor Rhodri Cusack. 2018 - 2023: €3,030,538.00.

HRB Paediatric Clinical Research Centre Children's Health Ireland (CHI). €3.5 million.

HRB: Analysing the therapeutic potential of anti-inflammatory drugs in brain development, neuronal activity and long-term outcomes after birth asphyxia ILP-POR-2022-029: Principal investigator: Dr Eva Jimenez-Matoes. €368,783.40.

National Children's Hospital Foundation Ref: 1716. BRAIN: Brain Injury in Neonates: MRI Networks. Principal investigator: Professor Arun Bokde. €144,487.00.

National Children's Hospital Foundation Ref: 1719; Investigating the immune evasion mechanisms of respiratory syncytial virus in paediatric patients attending NCH: towards the development of novel curative therapeutics. Principal investigator: Dr Nigel Stephenson. €50,000.00.

National Children's Hospital Foundation Comprehensive and Effective Laboratory Test Reference Intervals for Irish Children: the Celtic Ranges Project (Phase 1 study) Ref: 1713: Principal investigator: Professor Gerard Boran. €148,311.00.

Provosts Award TCD: PETIT study of developmental followup in Preterm infants. Principal investigators: Professors Elizabeth Nixon and Jean Quigley. €69,264.00.

Publications

See Appendix Two for a list of peer reviewed publications from Trinity College Dublin Department of Paediatrics and Child Health.

Presentations

Professor Eleanor Molloy - invited speaker

Gender and immune function in preterm infants. Grand rounds, Washington DC, Children's National Hospital.

Persistent inflammation in newborns extending to childhood. Newborn Brain Society.

Targeting Persistent Inflammation to decrease Brain injury in Children. Trinity Translational Medicine Institute.

Characterisation of immune responses in Multisystem Inflammatory Syndrome in Children (MIS-C). Pediatric Academic Societies, Denver, USA, April 2022.

Publication Pearls: workshop: Pediatric Academic Societies, Denver, USA, April 2022.

GEnder and Neonatal Inflammation in preterm outcomE: GENIE project. International Perinatal Collegium, Iceland, August 2022.

Publishing in the COVID era. European Academy of Paediatric Societies, Barcelona, October 2022.

Emerging viral threats in the next decade. European Academy of Paediatric Societies, Barcelona, October 2022.

Multisystem Inflammatory Disorder of Childhood: inflammatory responses. European Academy of Paediatric Societies, Barcelona, October 2022.

11.7 University College Dublin Centre for Human Reproduction

Professor Michael Turner

Staff Members

Professor Michael Turner, Professor of Obstetrics and Gynaecology (Head of Department)

Professor Mairead Kennelly, Consultant in Obstetrics and Gynaecology

Mr Daniel Gillan, Administrator

Dr Syeda Farah Nazir, Clinical Lecturer (From February 2022)

Dr Sadhbh Lee, Clinical Lecturer (From July 2021 - January 2022)

Dr Zulfiya Mamaeva, Clinical Lecturer (From August 2022 - October 2022)

Dr Lyndsay Creswell, Bernard Stuart Fellow (From July 2022)

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 Anaesthesiologist

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, Consultant in Obstetrics and Gynaecology

Professor Anthony Dempsey, Visiting Consultant in Obstetrics and Gynaecology

Dr Terry Tan, Consultant Anaesthesiologist

Dr Ali Raba, MD Candidate, Neonatology

Dr Niamh Ó Catháin, MD Candidate, Neonatology

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 Professor Brendan Egan, Professor Chris Fitzpatrick, Professor Mairead Kennelly, Professor Richard Layte, Professor Aisling Martin, Professor Jan Miletin, Professor Ann Molloy and Professor 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 2010-20, 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.

In 2022, staff in the Centre continued to publish papers in peer-reviewed journals, to supervise research fellows undertaking MDs, Masters and PhDs and to contribute to the development of national and international policies and guidelines. Research outputs from modifiable risk factors in pregnancy and maternity services quality improvement projects were maintained and translated into national healthcare policies and guidelines. The staff also delivered a flexible undergraduate teaching programme in response to the COVID-19 pandemic.

Research

Dr Karen Power and Professor Turner concluded their collaboration with colleagues in other disciplines in developing NCEC Guidelines for the maternity services. The 2016 National Maternity Strategy Report recommended that pregnant women presenting for antenatal care should be stratified into low, moderate and high risk. This guideline was published by the Department of Health in 2020 and its implementation is ongoing in maternity hospitals nationally. I am pleased to report that Dr Power has taken up a senior post with the Clinical Indemnity Scheme of the State Claims Agency where I believe her personal skills and professional expertise will prove invaluable.

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 all 19 hospitals nationally who participate actively in the regular workshops. Dr McMahon is to be congratulated on the successful implementation of a timely, relevant, comprehensive and multidisciplinary national audit which compares favourably by international comparisons.

Professor Turner concluded his contribution as a Member of the HSE National Guideline on smoking cessation which was commissioned by the National Clinical Effectiveness Committee (NCEC) and led by Dr Paul Kavanagh. The guideline was published by the Department of Health in 2022. It is particularly gratifying to see that a number of papers from Dr Ciara Reynolds' recent PhD have been cited in the guideline. This is a good example of translational research in action. Professor Turner also continued to serve as Member of the HIQA Special Purpose Maternity Advisory Group.

Dr Sadhbh Lee completed an observational study to investigate medical students' knowledge of the healthcare needs of transgender patients before and after a newly implemented teaching session on transgender healthcare. This is an example of implementing UCD's policy on Diversity, Inclusion and Equality. The study has been accepted for publication. Dr Lee also continued her research on the associations between women's health and the environment.

Professor Jan Miletin continues to lead an active neonatology research programme with a number of multicentre ongoing programmes which have already resulted in numerous publications in international journals.

Professor Anne Doolan continues to provide strong leadership in promoting breastfeeding and is undertaking a research programme with a medical device company that will measure the volume and flow rate of milk in women who are breastfeeding postpartum.

Dr Ali Raba received his MD for The Value of Transcutaneous Bilirubinometry in Prediction of the Need for Phototherapy and Accuracy before and During Phototherapy in Preterm Infants.

Dr Niamh Ó Catháin, continued to conduct research for her MD, Thesis Title: Randomised Placebo-controlled trial of Early Targeted Treatment of Patent Ductus Arteriosus with Paracetamol in Extremely Low birth Weight Patients.

Dr Syeda Farah Nazir, as part of her MD programme, commenced an observational study to examine the relationship between blood glucose levels in early pregnancy and maternal outcomes.

Professor Turner completed his second term as a Member of the Hospital Board.

We thank the Master and the executive management team for their support of the UCD Centre's research and teaching activities. We thank our colleagues in the other healthcare disciplines for their support with our research and, in particular, our midwifery colleagues Ms Muireann Ní Mhurchú and Ms Ruth Harley who supervise the organisation of the Hospital Biobank. We thank our consultant colleagues for their ongoing support with the teaching programme and with our undergraduate examinations.

This is my last report as Professional of Obstetrics and Gynaecology and as Director of the UCD Centre for Human Reproduction. I am pleased to report that the last decade has been the most enjoyable of my career in medicine. I have been fortunate to collaborate academically with great colleagues in a spirit of fun and friendship. Apart from the various Masters, MDs and PhDs, I am pleased to report that to date ten of our researchers have been appointed as consultants in obstetrics and gynaecology (nine in Dublin, one in Kurdistan). Dr Ciara Reynolds has been appointed as Research Fellow to Public Health Ireland and Dr Rachel Kennedy has recently been appointed permanently as a Dietitian to the Rotunda Hospital.

I am also pleased to report that the research output from the Centre for Human Reproduction has resulted in over 150 publications which have already been translated into national guidelines and policies, publications from professional bodies and the National Maternity Strategy. The researchers in the Centre have received over 20 national and international awards for their work since its establishment.

Finally, I thank Ms Laura Bowes and Professor Mairead Kennelly for their personal support and hard work during my tenure as Professor. Laura's administrative skills have been the cornerstone of the Centre. Her problem solving was delivered with constant good humour and a strong sense of teamwork. Mairead's academic contributions were a key part of our teaching programme which was highly respectful of both students and teachers. Her performance in maintaining the quality of teaching during the pandemic was stellar.

I take this opportunity of congratulating Professor Amy O'Higgins my successor as Professor and Director. Professor O'Higgins first worked in the Centre as the Lecturer and was awarded her MD for a thesis on gestational weight gain which resulted in numerous publications. It has been heart warming to observe her career progress and I am confident she will be a great success in providing clinical and academic leadership in both the hospital and university.

Grants held in 2022

SFI/Frontiers for Future Project 2021 (21/FFP-P/10103). Individualised mask for infants requiring nasal Continuous Positive Airway Pressure - tailored Mask (tMASK) feasibility study. Principal investigator: Professor Jan Miletin. Co-investigator: Dr Jana Semberova. 2022 - 2024. €374,911.00.

HRB/Definitive Intervention and Feasibility Awards 2020 (DIFA 2020-016). Randomised Placebo-Controlled Trial of Early Targeted Treatment of Patent Ductus Arteriosus with Paracetamol in Extremely Low Birth Weight Infants (ETAPA). Principal investigator: Professor Jan Miletin. Co-investigator: Dr Jana Semberova. 2021 - 2024. €718,576.47.

HRB/Definitive Intervention and Feasibility Awards 2020 (DIFA 2020-013). Safeguarding the Brain Of Our Smallest Children – an open-label phase-III randomised trial of cerebral oximetry combined with a treatment guideline versus treatment as usual in premature infants. Co-applicant: Professor Jan Miletin. 2021 - 2025. €982,646.88.

Portion of European Union Horizon 2020 Research and Innovation Program. Use of nipple shield to measure breastmilk flow rates in term and preterm infants. Principal investigator: Dr Anne Doolan. Co-investigators: Professor Martin White, Dr Meredith Kinoshita. 2020 ongoing. €288,363.00.

Friends of the Coombe. Gel for Early Hypoglycaemia Prevention in Preterm Infants (GEHPPI). Principal investigator: Dr John Kelleher. Co-investigators: Dr Joythsna Brabec, Dr Margaret Moran, Christine McDermott, Professor Jan Melitin, Anne O'Sullivan, Peter Duddy, Julie Sloan, Dr Graham King. Ongoing pilot multicentre international RCT. Recruitment commenced in 2020. €10,000.00.

Publications

See Appendix Two for a list of peer reviewed publications and published conference abstracts from University College Dublin Centre for Human Reproduction.

Other publications

Anglim B. (2022) 'Evaluation and Treatment of Lower Urinary Tract Disorders. Overactive Bladder and Urgency Incontinence' in Ostergard's Textbook of Urogynecology: Female Pelvic Medicine and Reconstructive Surgery 7th Edition. Wolters Kluwer.

Doolan A. National Standards for Infant Feeding in Maternity Services. HSE Baby Friendly Initiative (co-author) 2022.

During 2022, thanks to the generosity of our supporters we were able to continue to provide accommodation for parents whose babies were cared for in the Neonatal Unit.

Section 12

Friends of The Coombe

12.1 Friends of the Coombe

Liz Burke

2022 saw the return of in-person fundraising enabling our supporters to once again hold fundraising events in support of Friends of the Coombe.

We were honoured to partner with members of the Irish Defence Forces involved in the once-off Marching for the Maternities initiative which saw 235 soldiers in full uniform and packs march 10km for two charities, one of which was Friends of the Coombe. Thirty-five members of the Defence Forces wore full uniform and carried gear along the 10km Great Limerick Run route with an additional 200 soldiers based in Lebanon marching the same distance in solidarity with their comrades back home.

Friends of the Coombe was also chosen by Olympic athlete and broadcaster David Gillick as his charity when taking part in RTÉ's Ultimate Hell Week - The Professionals, helping us to not just raise funds, but to raise the awareness of a national audience of our work putting women and newborns at the heart of everything we do in The Coombe Hospital.

After a two-year delay, The Master's Coombe Camino Challenge team finally departed for St Jean Pied de Port, France on the first of five trips to walk the 780km Camino Frances. It was a gruelling but rewarding start to the challenge which saw the team cross the Pyrenees Mountains as they completed the first 163km in seven days. Closer to home, The Coombe Camino once again took place with staff and their family members walking a 5km looped route marking the history of The Coombe Hospital and the local area.

During 2022, thanks to the generosity of our supporters we were able to continue to provide accommodation for parents whose babies were cared for in the Neonatal Unit having been transferred from other hospitals in Ireland and to provide ongoing support for the palliative care and bereavement services.


permanent tsb
22/06/2022
Friends of the Coombe
Twenty Thousand
Euros Only
€20,000
Marching for the Maternities
REGENERON
GREAT LIMERICK RUN
MARCHING FOR THE MATERNITIES
Ospidéil OL
UL Hospitals
FRIENDS of the COOMBE

Section 13

Appendices

13. Appendices

Appendix One

Clinical summaries, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Women attending (n)							
Women who gave birth to babies ≥ 500 grams	8,233	7,975	8,154	7,746	7,405	7,594	6,786
Women who gave birth to babies < 500 grams (including miscarriages*)	589	586	578	559	504	437	490
Gestational trophoblastic disease	6	24	16	15	7	14	7
Ectopic pregnancies	113	104	79	114	104	134	124
Total (n)	8,941	8,689	8,827	8,434	8,020	8,179	7,407
Maternal deaths † (n)	0	0	1	0	0	0	0
Births ≥ 500g (n)							
Singletons	8,048	7,786	7,978	7,568	7,244	7,474	6,657
Twins‡	350	365	344	345	318	230	254
Triplets	23	15	8	12	0	12	3
Quadruplets	0	0	0	4	4	0	0
Total (n)	8,421	8,166	8,330	7,929	7,566	7,716	6,914
Obstetric outcomes (%)							
Induction of labour	33.9	34.8	37.0	38.2	38.9	40.8	42.0
Episiotomy	15.5	17.9	17.9	17.2	18.2	18.7	18.9
Forceps	5.3	5.3	4.8	4.3	3.5	3.5	3.7
Vacuum	9.1	9.6	9.8	7.8	10.2	8.5	8.8
Caesarean section	31.3	31.8	33.8	33.8	32.8	35.5	36.1

Perinatal deaths (n)							
Stillbirths	21	27	20	33	22	22	21
Early neonatal deaths	18	22	16	11	13	9	14
Late neonatal deaths	6	11	5	8	12	5	5
Total (n)	**45**	**60**	**41**	**52**	**47**	**36**	**40**

**does not include all spontaneous miscarriages*

† deaths of women while pregnant or within 42 days of the end of the pregnancy

‡ excludes 2 babies weighing < 500g

Robson Ten Group Classification System - Caesarean section rates, 2018 to 2022

Group	2018	2019	2020	2021	2022
1	156/1295 (12.0%)	118/1121 (9.6%)	101/1049 (9.6%)	88/895 (9.8%)	103/818 (12.6%)
2	751/1698 (44.2%)	673/1644 (40.9%)	633/1601 (39.5%)	683/1705 (40.1%)	664/1635 (40.6%)
2a	551/1498 (36.8%)	468/1439 (32.5%)	419/1387 (30.2%)	473/1494 (31.7%)	441/1412 (31.2%)
2b	200/200 (100.0%)	205/205 (100.0%)	214/214 (100.0%)	211/211 (100.0%)	223/223 (100.0%)
3	29/1618 (1.8%)	31/1449 (2.1%)	10/1376 (0.7%)	30/1327 (2.3%)	25/1105 (2.3%)
4	211/1443 (14.6%)	198/1476 (13.4%)	167/1427 (19.3%)	221/1576 (20.8%)	163/1355 (12.0%)
4a	76/1308 (5.8%)	65/1343 (4.8%)	41/1301 (3.2%)	64/1419 (4.5%)	55/1247 (4.4%)
4b	135/135 (100.0%)	133/133 (100.0%)	126/126 (100.0%)	157/157 (100.0%)	108/108 (100.0%)
5	980/1201 (81.6%)	960/1141 (84.1%)	947/1144 (82.8%)	1066/1237 (86.2%)	929/1091 (85.2%)
6	181/186 (97.3%)	173/184 (94.0%)	155/159 (97.5%)	178/188 (94.7%)	136/144 (95.1%)
7	148/160 (92.5%)	162/175 (92.6%)	148/160 (92.5%)	166/177 (93.8%)	151/159 (95.0%)
8	115/175 (65.7%)	130/178 (73.0%)	104/161 (64.4%)	80/120 (66.7%)	91/129 (70.5%)
9	12/12 (100.0%)	8/8 (100.0%)	14/14 (100.0%)	7/7 (100.0%)	6/6 (100.0%)
10	171/363 (47.1%)	175/363 (48.2%)	153/309 (49.6%)	178/362 (49.2%)	181/344 (52.5%)
Uncoded	0/3	0/7	0/5	-	-
CS rate (total)	2,754/8,154 (33.8%)	2,618/7,746 (33.8%)	2,432/7,405 (32.8%)	2,697/7,594 (35.5%)	2,450/6,786 (36.1%)

Robson Ten Group Classification System - size of groups, 2018 to 2022

Group	2018	2019	2020	2021	2022
1	1295 (15.9%)	1121 (14.5%)	1049 (14.2%)	895 (11.8%)	818 (12.1%)
2	1698 (20.8%)	1644 (21.2%)	1601 (21.6%)	1705 (22.5%)	1635 (24.1%)
2a	1498 (18.4%)	1439 (18.6%)	1387 (18.7%)	1494 (19.7%)	1412 (20.8%)
2b	200 (2.5%)	205 (2.6%)	214 (2.9%)	211 (2.8%)	223 (3.3%)
3	1618 (19.8%)	1449 (18.7%)	1376 (18.6%)	1327 (17.5%)	1105 (16.3%)
4	1443 (17.7%)	1476 (19.0%)	1427 (19.3%)	1576 (20.8%)	1355 (20.0%)
4a	1308 (16.0%)	1343 (17.3%)	1301 (17.6%)	1419 (18.7%)	1355 (18.4%)
4b	135 (1.7%)	133 (1.7%)	126 (1.7%)	157 (2.1%)	108 (1.6%)
5	1201 (14.7%)	1141 (14.7%)	1144 (15.4%)	1237 (16.3%)	1091 (16.1%)
6	186 (2.3%)	184 (2.4%)	159 (2.1%)	188 (2.5%)	144 (2.1%)
7	160 (2.0%)	175 (2.3%)	160 (2.2%)	177 (2.3%)	159 (2.3%)
8	175 (2.1%)	187 (2.3%)	161 (2.2%)	120 (1.6%)	129 (1.9%)
9	12 (0.1%)	8 (0.1%)	14 (0.2%)	7 (0.1%)	6 (0.1%)
10	363 (4.5%)	363 (4.7%)	309 (4.2%)	362 (4.8%)	344 (5.1%)
Uncoded	3 (0.04%)	7 (0.09%)	5 (0.07%)	-	-
Total, n (%)	**8,154 (100.0%)**	**7,746 (100.0%)**	**7,405 (100.0%)**	**7,594 (100.0%)**	**6,796 (100.0%)**

Hypoxic ischaemic encephalopathy (inborn)*, 2016 to 2022

Grades II and III	2016	2017	2018	2019	2020	2021	2022
n	6	10	8	10	8	6	10
Livebirths (n)	8,400	8,139	8,310	7,796	7,542	7,687	6,889
Per 1,000 livebirths	0.71	1.22	0.96	1.28	1.06	0.78	1.45

**rates per 100 livebirths were reported between 2016 and 2021*

Perinatal mortality rates (PMR), 2016 to 2022

PMR per 1,000 total births	2016	2017	2018	2019	2020	2021	2022
Overall perinatal mortality rate	4.5	6.0	4.3	5.5	4.6	4.0	5.1
Perinatal mortality rate corrected for lethal congenital anomalies	2.6	3.0	2.7	3.9	3.0	3.2	3.8
Perinatal mortality rate including late neonatal deaths	5.2	7.2	4.9	6.6	6.2	4.7	5.8
Perinatal mortality rate excluding women unbooked	3.9	4.5	4.2	5.2	4.4	3.4	4.9
Corrected perinatal mortality rate excluding women unbooked	2.0	2.6	2.5	3.5	2.8	2.9	3.6
Corrected perinatal mortality rate excluding women initially booked elsewhere	-	-	1.6	3.3	2.8	3.0	3.6

Adjusted perinatal mortality rates of normally formed babies ≥ 34 weeks' gestation and ≥ 2.5kg, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Perinatal deaths (normally formed babies ≥ 34 weeks' and ≥ 2.5kg) (n)	8	6	2	10	9	5	11
All babies ≥ 34 weeks and ≥ 2.5kg (n)	7,790	7,559	7,704	7,322	7,035	7,189	6,385
Adjusted PMR per 1,000	1.0	0.8	0.3	1.4	1.3	0.7	1.7

Perinatal mortality rates per 1,000 total babies weighing ≥ 500 grams, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022		PMR
Total births (n)	8,421	8,166	8,330	7,929	7,566	7,716		6,914	
Total perinatal deaths (n)	39	49	36	44	35	31	35		5.1
PMR by parity									
Para 0	5.3	7.7	4.8	4.9	3.2	3.3	16	2,854	5.6
Para 1	4.1	4.0	2.1	3.6	6.2	2.5	9	2,456	3.7
Para 2 - 4	4.0	5.9	6.5	9.1	3.0	7.3	9	1,516	5.9
Para 5+	0.0	19.0	9.8	24.1	38.9	10.6	1	88	11.4
PMR by age at delivery (years)									
< 20	5.7	22.7	17.5	15.4	9.2	0.0	1	92	10.9
20 - 24	7.0	16.0	1.4	8.1	0.0	5.2	3	542	5.5
25 - 29	2.6	4.1	2.7	3.7	3.2	0.8	8	1,127	7.1
30 - 34	4.2	5.2	5.9	5.5	5.7	6.2	13	2,329	5.6
35 - 39	5.0	5.4	3.5	5.3	5.9	3.7	6	2,188	2.7
≥ 40	5.3	3.7	5.0	6.2	1.7	1.5	4	636	6.3
PMR by birth weight (grams)									
500 - 999	240.0	203.7	300.0	298.2	166.7	258.6	8	50	160.0
1,000 - 1,499	74.1	162.5	187.5	82.2	72.7	76.9	5	49	102.0
1,500 - 1,999	32.0	86.2	44.6	39.6	86.5	21.0	3	106	28.3
2,000 - 2,499	11.8	14.2	7.6	16.6	15.5	6.7	5	321	15.6
2,500 - 2,999	1.7	4.8	0.0	5.3	5.1	1.8	5	1,002	5.0

3,000 - 3,499	3.2	0.0	0.4	1.2	0.8	1.5	4	2,399	1.7
3,500 - 3,999	0.7	1.8	0.7	0.4	1.2	0.0	3	2,241	1.3
4,000 - 4,499	1.1	0.0	0.0	1.2	0.0	0.0	2	657	3.0
4,500 - 4,999	0.0	0.0	0.0	0.0	0.0	9.7	0	87	0.0
≥ 5,000	0.0	0.0	0.0	0.0	0.0	0.0	0	2	0.0
PMR by gestational age (weeks)									
< 26^{+0}	416.7	360.0	388.9	483.9	238.1	269.2	5	23	217.4
26^{+0} - 29^{+6}	66.7	160.0	176.5	73.5	137.9	194.0	4	50	80.0
30^{+0} - 33^{+6}	38.1	94.4	57.1	43.5	57.7	8.8	7	106	66.0
34^{+0} - 36^{+6}	19.4	31.5	14.7	8.2	9.4	4.6	5	404	12.4
37^{+0} - 41^{+6}	1.8	1.4	0.5	2.0	1.6	1.1	14	6,291	2.2
≥ 42^{+0}	0.0	0.0	0.0	0.0	21.7	0.0	0	40	0.0
Uncoded			*	*	*				

**PMR by gestational age not calculated as gestation was uncoded*

Maternal demographics, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Category - nulliparous	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Public	78.3	77.5	78.9	77.9	78.5	76.0	74.4
Semi-private	9.4	9.8	8.7	8.9	9.1	9.8	9.7
Private	12.3	12.7	12.4	13.2	12.4	14.2	15.9
Category - parous	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Public	76.8	78.1	78.8	79.3	78.3	78.6	79.6
Semi-private	9.4	7.9	7.8	7.9	7.8	7.3	7.3
Private	13.8	14.0	13.4	12.8	13.9	14.1	13.1

Country of birth	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Republic of Ireland	70.3	70.4	70.2	70.3	70.3	71.3	69.5
EU	17.0	16.3	15.6	14.6	11.4	12.9	9.1
Britain	-	-	-	-	2.7	3.1	2.7
Non-EU	12.6	13.2	14.0	15.1	15.6	12.7	18.6
Uncoded	0.1	0.1	0.2	0.0	0.0	0.04	0.1
Age at delivery in years	(%)	(%)	(%)	(%)	(%)	(%)	(%)
< 20	2.1	1.7	1.4	1.7	1.5	1.2	1.3
20 - 24	8.6	8.6	8.5	7.8	7.3	7.5	7.9
25 - 29	18.5	18.5	18.1	17.1	16.9	16.1	16.4
30 - 34	36.4	34.0	34.3	34.4	35.2	35.4	33.6
35 - 39	27.8	30.4	30.7	31.0	31.3	31.2	31.6
≥ 40	6.6	6.8	7.0	8.0	7.8	8.5	9.2
Parity	(%)	(%)	(%)	(%)	(%)	(%)	(%)
P 0	40.0	40.9	42.1	41.4	40.8	39.4	41.3
P 1 - 3	57.0	56.3	55.2	55.9	56.5	58.1	55.6
P 4+	3.0	2.8	2.7	2.7	2.7	2.5	3.1

Infant characteristics, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
n	8,421	8,166	8,330	7,929	7,566	7,716	6,914
Birth weight in grams	(%)	(%)	(%)	(%)	(%)	(%)	(%)
500 - 999	0.6	0.7	0.6	0.7	0.6	0.8	0.7
1,000 - 1,499	0.6	1.0	0.6	0.9	0.7	0.8	0.7
1,500 - 1,999	1.5	1.4	1.5	1.3	1.4	1.2	1.6

2,000 - 2,499	4.0	4.3	4.8	4.6	4.3	3.9	4.6
2,500 - 2,999	13.9	12.8	13.5	14.4	12.9	14.4	14.5
3,000 - 3,499	33.9	33.5	32.9	32.6	33.6	34.1	34.7
3,500 - 3,999	33.0	34.0	33.1	33.9	33.3	33.1	32.4
4,000 - 4,499	10.8	10.7	11.7	10.4	11.6	10.4	9.5
≥ 4,500	1.5	1.5	1.3	1.2	1.6	1.3	1.3
Uncoded	0.2	0.1	0.0	0.1	0.0	-	-
Gestation in weeks	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**
< 28	0.5	0.5	0.5	0.7	0.5	0.7	0.8
28 - 36^{+6}	6.0	6.5	6.4	6.7	6.2	6.5	7.7
37 - 41^{+6}	92.9	92.2	92.4	91.9	92.6	92.2	90.9
≥ 42	0.6	0.7	0.6	0.6	0.6	0.6	0.6
Uncoded	0.0	0.1	0.0	0.1	0.1	-	-

Attendances, 2016 to 2022

	2016	2017	2018	2019	2020	2021	2022
Outpatient attendances (n)							
Obstetrics*	98,324	103,700	103,271	99,919	100,168	104,780	99,336
Gynaecology†	13,000	14,283	14,671	17,105	12,856	17,518	17,048
Neonatal	6,572	5,545	6,393	4,845	4,428	4,026	3,817
Total (n)	117,896	123,528	124,335	121,869	117,452	126,324	120,201
Other attendances (n)							
Adult emergency room	9,026	9,351	9,163	9,606	7,663	8,269	8,730
Early pregnancy assessment unit	4,460	4,213	4,178	5,063	4,481	4,383	4,401
Perinatal ultrasound department‡	28,913	28,858	29,620	29,658	27,783	25,490	23,545
Total (n)	**42,399**	**42,422**	**42,961**	**44.327**	**39,927**	**38,142**	**36,676**

** excludes perinatal day centre*

† includes Colposcopy Clinic

‡ refers only to scans performed in the Perinatal Ultrasound Department

Admissions, 2016 to 2022

Type of admission (n)	2016	2017	2018	2019	2020	2021	2022
Day case							
Obstetrics	12,841	13,160	13,540	12,476	9,332	10,344	13,721
Gynaecology	8,495	8,185	7,885	8,313	6,685	7,449	7,510
Total (n)	**21,336**	**21,345**	**21,425**	**20,789**	**16,017**	**17,793**	**21,231**
Inpatient*							
Obstetrics	17,006	16,514	16,709	16,479	14,615	15,117	14,175
Gynaecology	943	812	737	759	605	588	604
Neonatal	1,424	1,105	1,128	1,040	948	1,007	1,001
Total (n)	**19,373**	**18,431**	**18,574**	**18,278**	**16,168**	**16,712**	**15,780**

** numbers based on discharges*

Surgical procedures, 2016 to 2022

Category of surgical procedure	2016	2017	2018	2019	2020	2021	2022
Obstetrics (n)	3,663	3,544	3,748	3,609	3,358	3,582	3,598
Gynaecology (n)	5,255	5,012	5,071	5,135	5,424	5,783	6,176
Total	**8,918**	**8,556**	**8,819**	**8,744**	**8,782**	**9,365**	**9,774**

Appendix Two

Publications and Presentations

Publications: The Master's Office

Babarinsa IA, Al Hyassat SA, Abu Yacoub SM, Lindow SW. The Histological Spectrum Reported on Evacuated Endometrial Tissue From Patients With Secondary Postpartum Hemorrhage: A Pilot Study. Cureus. 2022 Aug 23;14(8):e28308. doi: 10.7759/cureus.28308. PMID: 36168333; PMCID: PMC9506465.

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Chacko I, Conboy L. Impact of NICU a dedicated lactation specialist on breastfeeding outcomes of preterm infants – an audit review. 12th European Lactation Consultants Alliance (ELACTA) Conference, Bremen, Germany, May 2022.

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Appendix Three

Members of the Board of Guardians and Directors (Charity Trustees)

Ms Mary Donovan
Chairperson

Professor Michael Carey
Deputy Chairperson until February 2022

Ms Bernadette Byrne
Deputy Chairperson from February 2022

Mr John Gleeson
Retired from Board February 2022

Professor Michael Turner
Retired from Board March 2022

Dr Eimear Mallon
Retired from Board December 2022

Mr Ger Prendergast

Ms Anne-Marie Curran

Professor Robbie Gilligan

Ms Theresa Daly

Ms Rosemary Grant

Dr Michael O'Hare

Ms Catherine Keane

Mr Richard Woulfe

Professor Terry Tan
Joined March 2022

Professor Nadine Farah
Joined March 2022

Ex-Officio Members

The Master/CEO
Professor Michael O'Connell

The Lord Mayor of Dublin
Ms Alison Gilliland
Ms Caroline Conroy

Appendix Four

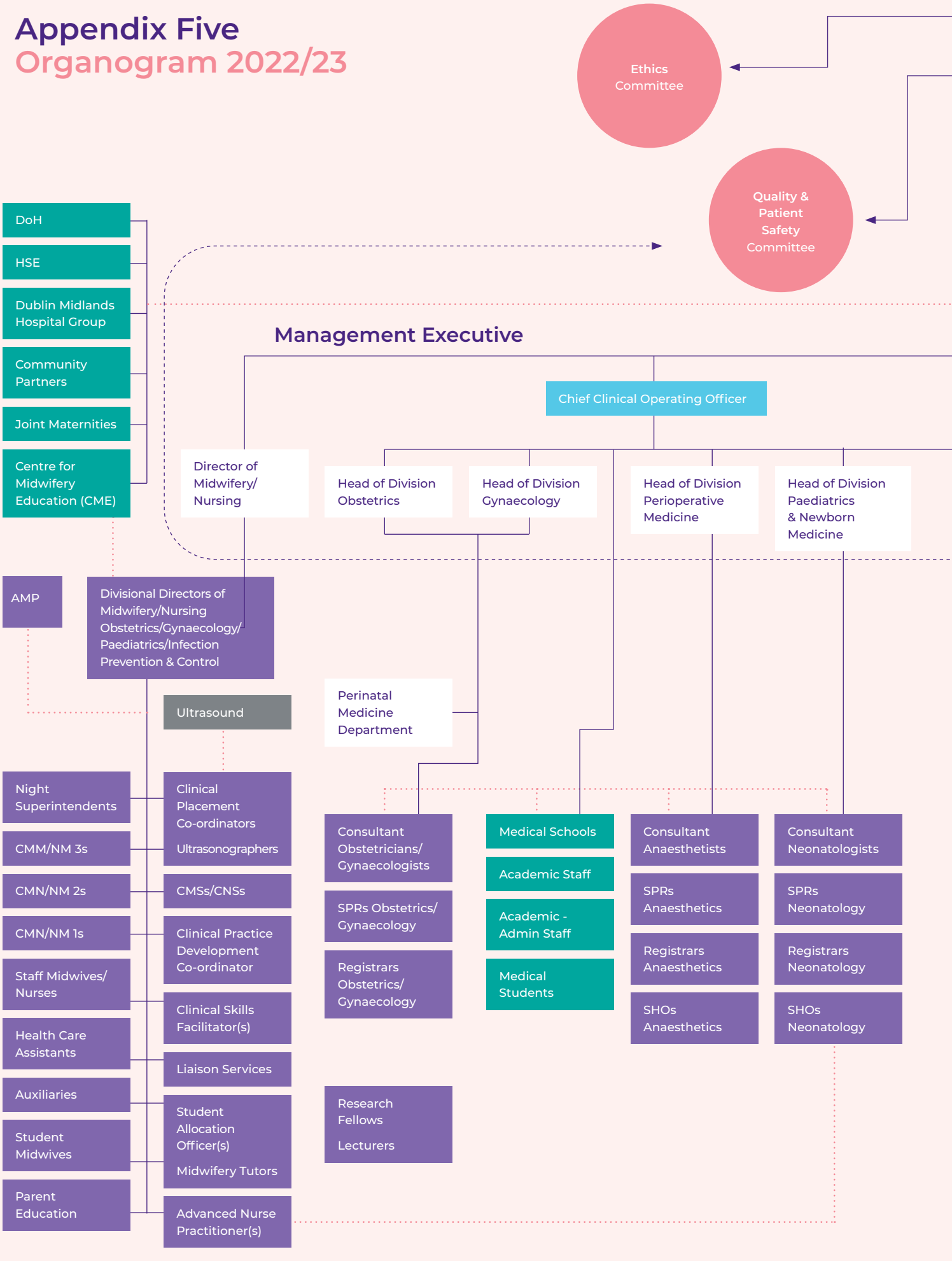
Financial Summary at 31st December 2022*

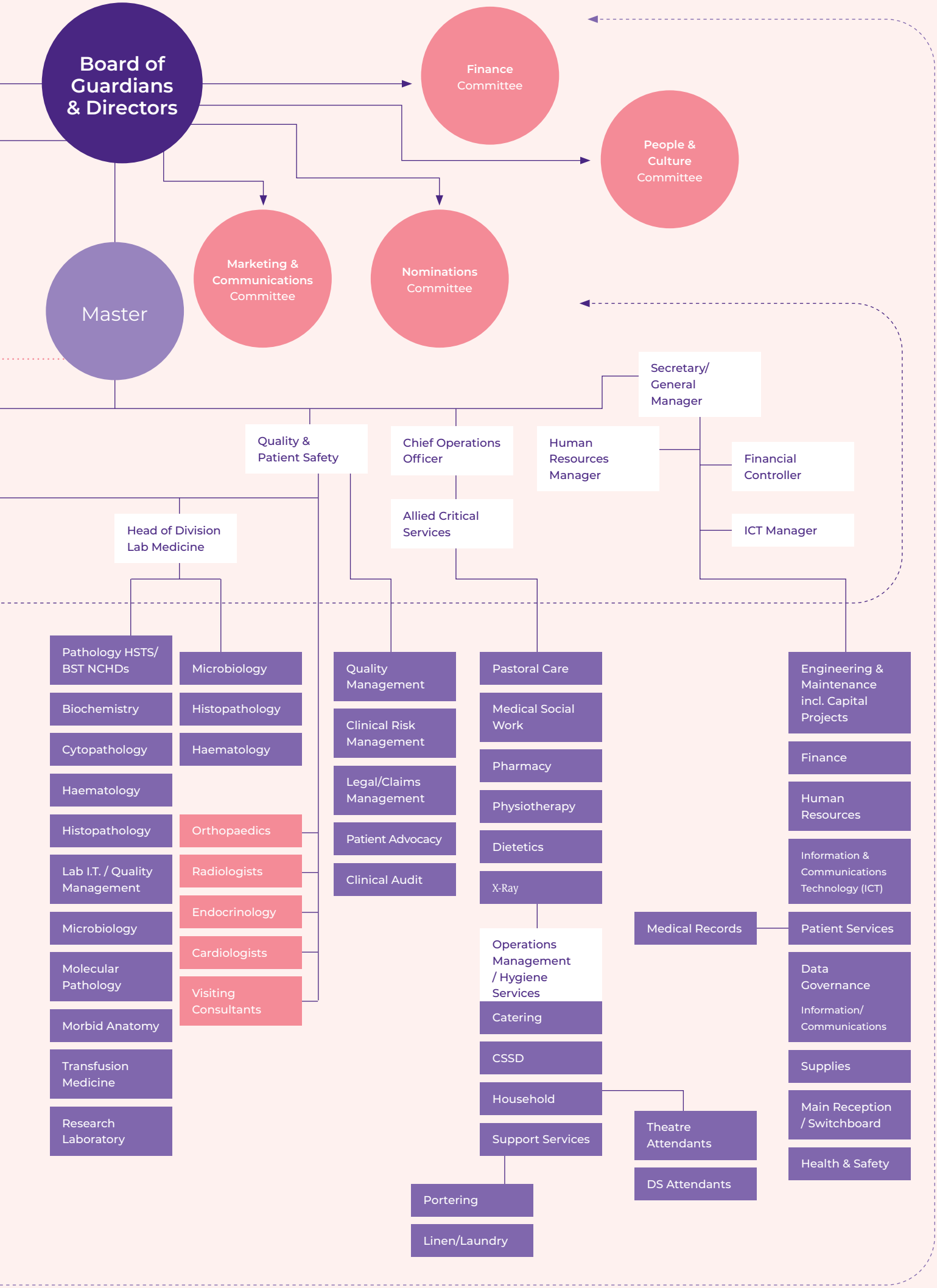
Income	€,000	€,000
Department of Health Allocation 2022	92,789	
Patient Income	8,293	
Other	3,688	
		104,770
Expenditure	**€,000**	**€,000**
Pay		
Medical	15,662	
Nursing	27,771	
Other	40,148	
		83,581
Non-pay		
Drugs and medicines	2,472	
Medical and surgical appliances	8,774	
Insurances	154	
Laboratory	1,334	
Other	9,301	
		22,035
Net deficit		846
Taxes paid to Revenue Commissioners†	**€,000**	**€,000**
PAYE and USC		15,053
PRSI EE		2,415
PRSI ER		6,507
Withholding tax		174

**does not include any deficit balances carried forward from previous years*

† year ending 31st December 2022

Appendix Five
Organogram 2022/23




Board of Guardians & Directors
Finance Committee
People & Culture Committee
Marketing & Communications Committee
Nominations Committee
Master
Secretary/ General Manager
Quality & Patient Safety
Chief Operations Officer
Human Resources Manager
Financial Controller
ICT Manager
Allied Critical Services
Head of Division Lab Medicine
Pathology HSTS/ BST NCHDs
Biochemistry
Cytopathology
Haematology
Histopathology
Lab I.T. / Quality Management
Microbiology
Molecular Pathology
Morbid Anatomy
Transfusion Medicine
Research Laboratory
Microbiology
Histopathology
Haematology
Orthopaedics
Radiologists
Endocrinology
Cardiologists
Visiting Consultants
Quality Management
Clinical Risk Management
Legal/Claims Management
Patient Advocacy
Clinical Audit
Pastoral Care
Medical Social Work
Pharmacy
Physiotherapy
Dietetics
X-Ray
Operations Management / Hygiene Services
Catering
CSSD
Household
Support Services
Portering
Linen/Laundry
Theatre Attendants
DS Attendants
Engineering & Maintenance incl. Capital Projects
Finance
Human Resources
Information & Communications Technology (ICT)
Medical Records
Patient Services
Data Governance
Information/ Communications
Supplies
Main Reception / Switchboard
Health & Safety

Appendix Six

Masters of The Coombe Lying-In Hospital / Coombe Women's Hospital / CWIUH / The Coombe 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
Michael P. O'Connell, 2020 - present

Appendix Seven

Matrons of The Coombe Lying-In Hospital / Coombe Women's Hospital / CWIUH / The Coombe Hospital

Over a period of 155 years since the granting of the Royal Charter of Incorporation to the Coombe Lying-In Hospital in 1867, there have been sixteen Matrons or Directors of Midwifery and Nursing (DoMN).

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, DoMN 1982 - 2005
Mary O'Donoghue, DoMN - Acting 2005 - 2006
Patricia Hughes, DoMN 2007 - 2016
Ann MacIntyre, DoMN 2016 - present

Appendix Eight

Guinness Lectures

1969 The Changing Face of Obstetrics. Prof. T.N.A. Jeffcoate, University of Liverpool

1970 British Perinatal Survey. Prof. N. Butler, University of Bristol

1971 How Many Children? Sir Dougald Baird, University of Aberdeen

1972 The Immunological Relationship between Mother and Fetus. Prof. C.S. Janeway, Boston

1973 Not One but Two. Prof. F. Geldenhuys, University of Pretoria

1978 The Obstetrician/Gynaecologist and Diseases of the Breast. Prof. 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? Prof. 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. Prof. G.V.P. Chamberlain, St. George's Hospital Medical School, London

1984 Ethics of Assisted Reproduction. Prof. M. C. McNaughton, President, Royal College of Obstetricians and Gynaecologists

1985 Magnetic Resonance Imaging in Obstetrics and Gynaecology. Prof. 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 and 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. Prof. Stuart Campbell, Kings College School of Medicine and Dentistry, London

1990 Uterine Haemostasis. Prof. Brian Sheppard, Department of Obstetrics and Gynaecology, Trinity College, Dublin

1991 Aspects of Caesarean Section and Modern Obstetric Care. Prof. Ingemar Ingemarsson, University of Lund

1992 Perinatal Trials and Tribulations. Prof. Richard Lilford, University of Leeds

1993 Diabetes Mellitus in Pregnancy. Prof. 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. Prof. 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. Prof. Eric J Thomas, University of Southampton.

1998 A Flux of the Reds - Placenta Prevail Then and Now. Prof. Thomas Basket, Nova Scotia

1999 Lessons Learned from First Trimester Prenatal Diagnosis. Prof. Ronald J Wagner, Jefferson Medical College, Philadelphia

2000 The Timing of Fetal Brain Damage: The Role of Fetal Heart Rate Monitoring. Prof. Jeffrey P Phelan, Childbirth Injury Prevention Foundation, Pasadena, California

2001 The Decline and Fall of Evidence Based Medicine. Dr. John M Grant, Editor of the British Journal of Obstetrics and Gynaecology

2002 Caesarean Section: A Report of the U.K. Audit and its Implications. Prof. J.J Walker, St James's Hospital, Leeds

2003 The 20th Century Plague: It's Effect on Obstetric Practice. Prof. Mary-Jo O'Sullivan University of Miami School of Medicine, Florida

2004 Connolly, Shaw and Skrabanek - Irish Influences on an English Gynaecologist. Prof. Patrick Walker, Royal Free Hospital, London

2005 Careers and Babies: Which Should Come First? Dr. Susan Bewley, Clinical Director for Women's Health, Guys and St Thomas NHS Trust, London

2006 Retinopathy of Prematurity from the Intensive Care Nursery to the Laboratory and Back. Prof. Neil McIntosh, Professor of Child Life and Health, Edinburgh, Vice President Science, Research and Clinical Effectiveness, RCPCH, London

2007 Schools, Skills and Synapses. Prof. James J. Heckman, Nobel Laureate in Economic Sciences. Henry Schultz Distinguished Service Professor of Economics, University of Chicago, Professor of Science and Society, University College Dublin

2008 Cervical Length Screening For Prevention of Preterm Birth Prof. Vincenzo Berghella, MD, Director of Maternal-Fetal Medicine, Thomas Jefferson University, Philadelphia

2009 Advanced Laparoscopic Surgery: The Simple Truth. Prof. Harry Reich, Wilkes Barre Hospital, Pennsylvania; Past President of the International Society of Gynaecologic Endoscopy (ISGE)

2010 Magnesium – The Once and Future Ion. Prof. Mike James, Prof. and Head of Anaesthesia, The Groote Schuur Hospital, University of Capetown

2011 Pre-eclampsia: Pathogenesis of a Complex Disease. Prof. 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 Prof. 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. Consultant Obstetrician and 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 and Revolution – the Epiphany of a Photograph. Prof. Chris Fitzpatrick, Consultant Obstetrician and Gynaecologist CWIUH, Clinical Professor UCD School of Medicine

2017 'Women; the journey is far from over'. Prof. James Dornan. Chair Health and Life Sciences University of Ulster. Emeritus Chair Fetal Medicine Queen's University Belfast

2018 'Domestic Violence and the Obstetrician'. Prof. Stephen Lindow, Division Chief of Obstetrics at Sidra Medical and Research Centre, Qatar

2019 'From Queen Victoria to the Duchess of Cambridge'. Prof. Rob Dyer, University of Cape Town, New Groote Schuur Hospital

2020 Deferred due to the COVID-19 pandemic

2021 Deferred due to the COVID-19 pandemic

2022 Umbilical cord management at birth: Getting the timing right. Professor Eugene Dempsey, Consultant Neonatologist, Cork University Maternity Hospital

14. Definitions, terms and abbreviations

Booking: A woman who has attended an antenatal clinic or a consultant for antenatal care in consulting rooms has booked.

Corrected perinatal mortality rate: The sum of stillbirths and early neonatal deaths excluding those associated with or due to a major congenital anomaly per 1,000 total births.

DOMINO and early transfer home services: The DOMINO (domiciliary care in and out of hospital) and early transfer home services are available to healthy pregnant women attending the CWIUH who live in specified areas. The team of midwives look after a woman from the booking visit, throughout the pregnancy, during the labour and for the first week after the birth of the baby.

Early neonatal death: Death within seven days of a liveborn infant who weighed 500 grams or more at birth.

Fourth degree tear: An injury to the perineum that involves the anal sphincter complex and the anorectal mucosa.

Infant feeding: Includes breastfeeding and formula feeding.

Late maternal death: The death of a woman from direct or indirect obstetric causes, more than 42 days, but less than one year after the end of the pregnancy.

Late neonatal death: Death between seven and 28 days of a liveborn baby who weighed 500 grams or more at birth.

Nulliparous: A woman who has not previously given birth to an infant, either liveborn or stillborn, weighing greater than or equal to 500 grams.

Obstetric anal sphincter injuries: Encompass both third degree and fourth degree perineal tears.

Major obstetric haemorrhage: Occurs if one of the following criteria are met; estimated blood loss of at least 2,500ml; transfusion of five or more units of blood; and, receiving treatment for coagulopathy.

Maternal death: The death of a of woman while pregnant or within 42 days of the end of the pregnancy irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Parous: A woman who has previously given birth to at least one infant, either liveborn or stillborn, weighing greater than or equal to 500 grams.

Perinatal mortality rate: The sum of stillbirths and early neonatal deaths per 1,000 total births.

Primary postpartum haemorrhage: The loss of 500ml or more of blood from the genital tract within 24 hours of the birth of a baby.

QUiPP app: A clinical decision-making tool that can help clinicians determine the risk of preterm birth in women with symptoms of threatened preterm labour as well as in asymptomatic women who are at high-risk of preterm birth.

Severe maternal morbidity: A pregnant or recently pregnant woman (up to 42 days following the end of the pregnancy) who experienced any of the following: major obstetric haemorrhage, uterine rupture, eclampsia, renal or liver dysfunction, pulmonary oedema, acute respiratory dysfunction, pulmonary embolism, cardiac arrest, coma, cerebrovascular event, status epilepticus, septic shock, anaesthetic complications and peripartum hysterectomy.

Stillbirth: A baby weighing 500 grams or more, who shows no sign of life at delivery.

Third degree tear: An injury to the perineum that involves the anal sphincter complex.

The following abbreviations are used but not explained in the Annual Report:

Anti-VEGF drug Anti-vascular endothelial growth factor drug

AVSD Atrioventricular septal defect

BMI Body mass index (kg/m^2)

CGIN Cervical glandular intra-epithelial neoplasia

CIN Cervical intra-epithelial neoplasia

CPAP Continuous positive airway pressure

CSCST Certification of satisfactory completion of training

EMT Executive management team

ECMO Extracorporeal membrane oxygenation

GP General practitioner

H & E Haematoxylin and eosin stain

HDU High dependency unit

HELLP Syndrome haemolysis, elevated liver enzymes and thrombocytopenia syndrome

IUGR Intrauterine growth restriction

IVH Intraventricular haemorrhage

LEEP Loop electrical excision procedure

MgS04 Magnesium sulphate

NPEC National Perinatal Epidemiology Centre

NEC Necrotising enterocolitis

NETZ Needle excision of the transformation zone

NCHD Non-consultant hospital doctor

PDA Patent ductus arteriosus

PPHN Persistent pulmonary hypertension of the newborn

PVL Periventricular leukomalacia

ROP Retinopathy of prematurity

STABLE Sugar, temperature, airway, blood pressure, lab work and emotional support

SWETZ Straight wire excision of the transformation zone

TGA Transposition of the great arteries

TVT Tension free vaginal tape

TVTO Tension free obturator tape

TOT Transobturator tape

TRAADP Targeted routine antenatal anti-D prophylaxis programme

VAIN Vaginal intra-epithelial neoplasia

VSD Ventricular septal defect

WPW Wolff-Parkinson White.

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