



# Contents

## Page

2	Clinical Data
3	2021 at a glance
5	Introduction
6	<b>Ireland South Women &amp; Infants Directorate Management Structures</b>
6	Executive Management Committee
9	Communication and Collaboration
10	Innovating in a crisis: Impact of HSE cyberattack on Ireland South
13	<b>Our Maternity Units</b>
13	Cork University Maternity Hospital
20	Tipperary University Hospital
24	University Hospital Kerry
31	University Hospital Waterford
35	<b>2021 Highlights</b>
54	<b>Neonatology Report</b>
61	<b>Obstetrics Report</b>
69	<b>Gynaecology Report</b>
77	<b>Specialist Perinatal Mental Health Service</b>
81	<b>Pharmacy</b>
84	<b>Staffing across Ireland South Women &amp; Infants Directorate</b>
86	<b>Education, Research and Innovation</b>
99	<b>Appendix</b>



## Clinical Data – List of figures and tables

**Figure 1:** The multidisciplinary membership of the EMC

**Figure 2:** Ireland South EMC major work streams

**Figure 3:** EMC subcommittee structures

**Figure 4:** CUMH regional peer vaccination training programme in collaboration with UCC & CIT

**Figure 5:** Neonatal Unit Cot Occupancy

**Figure 6:** Specialist Perinatal Mental Health Team staffing

**Figure 7:** Research income in the Department of Obstetrics and Gynaecology, 2010-2021

**Figure 8:** The NPEC timeline

### Neonatology Report

**Table 1.0:** Number of infants admitted to the Neonatal Unit

**Table 1.1:** Number of admissions to the Neonatal Unit (includes readmissions)

**Table 1.2:** Admissions to Neonatal Unit

**Table 1.3:** Gestational age categories of primary admissions to neonatal unit

**Table 1.4:** Gestational age (weeks) of primary admissions to neonatal unit

**Table 1.5:** Birthweight profile of primary admissions to neonatal unit

**Table 1.6:** Reason for admission to neonatal unit

### Vermont Oxford Network (VON) infants

**Table 2.0:** Number of infants reported to VON

**Table 2.1:** Clinical characteristics of infants reported to VON 2021

**Table 2.2:** Summary of respiratory support

**Table 2.3:** Survival to discharge by gestation

**Table 2.4:** Survival to discharge by birthweight

**Table 2.5:** Major morbidities amongst infants reported to VON

**Table 2.6:** Summary of infants with neonatal encephalopathy

### Obstetrics Report

**Table 3.0:** Frequency (N) of maternities and births 2014-2021

**Table 3.1:** Distribution of maternal and delivery characteristics

**Table 3.2:** Distribution of maternal and delivery characteristics – Vaginal delivery

**Table 3.3:** Distribution of maternal and delivery characteristics – Instrumental delivery

**Table 3.4:** Induction of labour characteristics

**Table 3.5:** Incidence of caesarean delivery per total mothers delivered, 2021

**Table 3.6:** Distribution of labour epidurals

**Table 3.7:** Distribution of obstetric blood transfusions

**Table 3.8:** Inutero transfers admitted

**Table 3.9:** Inutero transfers sent out

### Perinatal Mortality

**Table 4.0:** Perinatal deaths

**Table 4.1:** Perinatal mortality rates

### Ireland South Case Reviews

**Table 4.2:** CUMH case reviews – Stillbirths

**Table 4.3:** CUMH case reviews – Early neonatal deaths

**Table 4.4:** CUMH case reviews – Late neonatal deaths

**Table 4.5:** TippUH case reviews – Stillbirths

**Table 4.6:** TippUH case reviews – Early neonatal deaths

**Table 4.7:** UHK case reviews – Stillbirths

**Table 4.8:** UHK case reviews – Early neonatal deaths

**Table 4.9:** UHW case reviews – Stillbirths

**Table 4.10:** UHW case reviews – Early neonatal deaths

**Table 4.11:** UHW case reviews – Late neonatal deaths

**Table 5:** Severe maternal morbidity

### Gynaecology Report

**Table 6.0:** CUMH gynaecology service – outpatient attendances 2021

**Table 6.1:** CUMH gynaecology service – inpatient and day case procedures 2021

**Table 6.2:** UHW Gynaecological surgical procedures 2021

**Table 6.3:** Numbers of attendances in gynaecology outpatient clinics at UHK, UHW and TippUH

**Table 6.4:** Numbers of inpatient and day case gynaecology procedures at UHK, UHW and TippUH

**Table 6.5:** Gynaecology waiting lists at UHK, UHW and TippUH

### The National Gestational Trophoblastic Disease Registry, Monitoring and Advisory Centre

**Table 7:** Count of Mole Classification

### Specialist Perinatal Mental Health Services

**Table 8.0:** Complete SPMHS Multidisciplinary Team, Model of Care

**Table 8.1:** Headline numbers/clinical activity January to December 2021

### Staff

**Table 9:** Staffing across Ireland South Women & Infants Directorate

### Appendix

**Table 10:** Ireland South Women & Infants Directorate Grand Rounds 2021

While every effort has been made to ensure the data presented within this report is correct, due to the 2021 cyberattack, discrepancies may appear. This is beyond our control.

## 2021 at a glance

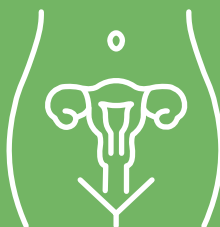


Births:

**11,435**

Women gave birth:

**11,210**



Gynaecology

Outpatients:

**41,226**

Gynaecology

Inpatients:

**4,383**



Only Maternity  
Directorate in Ireland



Total WTE:

**990.25**

Consultant Obstetrician & Gynaecologists: **35**

Consultant Neonatologists: **9**

Midwifery: **710.97**

NCHD: **102**

HSCP: **34.05**

Admin: **99.23**



Academic partner:



**UCC**

University College Cork, Ireland  
Coláiste na hOllscoile Corcaigh

## National specialities/achievements

- Ireland South Women & Infants Directorate funded and organised the training of hundreds of healthcare personnel in Kerry, Cork, Tipperary and Waterford to deliver the COVID-19 vaccine. These vaccinators were crucial to the rollout of vaccinations in our community through hubs in the South and South West of Ireland.
- Innovation Project Lead appointed in 2021. This is the first role of its type in a HSE hospital in Ireland. The role's primary aim is to support the vision of creating an innovative healthcare system that implements new service models, products and technologies to support service delivery and improve outcomes for our patients.
- Professor Eugene Dempsey, Consultant Neonatologist, CUMH appointed to the Horgan Chair in Neonatology – named after UCC alumnus Daragh Horgan and his wife Anne who have generously supported the important ongoing research at the INFANT centre.
- As a neonatal neurocritical care unit, CUMH is the only centre providing therapeutic hypothermia outside Dublin.
- South Tipperary General Hospital has been elevated to University Hospital status. Now known as Tipperary University Hospital (TippUH), the hospital is partnered academically with UCC.





## Introduction

The Ireland South Women & Infants Directorate was established in 2017 as a means of encouraging collaboration and mutual support between the four maternity units in the South/Southwest region. It is still the only one of its kind in Ireland. For the first time, services for women and infants from across Ireland South are under **collective clinical leadership** and governance, with a multidisciplinary team of clinicians and midwives involved at the highest levels.

Ireland South Women and Infants Directorate is now in its fifth year of operation. The formation of our Directorate has changed how we relate to each other in building a collaborative partnership across the four hospitals. We believe our Directorate provides patients with the highest level of safe, sustainable care and support through our teams' shared expertise, innovative spirit and commitment to the women, infants and families in our region.

Early in 2021, with the rollout of the COVID-19 vaccination programme, we had renewed hope on suppressing the virus while continuing to deliver the safest possible care to the women and infants in our region. The cyberattack in May delivered a blow to health services throughout the country, and combined with the COVID-19 pandemic, we have all been challenged in new and different ways. I have never been prouder of our staff than this year. It was truly inspiring to see their personal commitment to making a difference in these unprecedented and challenging times. It has brought out the best in many people—people who have shown compassion and empathy and offered a helping hand to others during this extraordinary time.

In October 2021, An Taoiseach Micheál Martin T.D., visited CUMH to officially open new facilities at the hospital. On the same day, commemorative medals were presented in a socially distanced manner by An Taoiseach to representatives of CUMH staff to pay tribute to them for the dedication and commitment shown in caring for their patients throughout the pandemic. All staff throughout the Directorate have received their hard-earned medal.

In 2021 we delivered 11,435 babies across our four units: University Hospital Waterford (UHW), University Hospital Kerry (UHK), Tipperary University Hospital (TippUH) and Cork University Maternity Hospital (CUMH). We delivered an average of 31 babies a day across the group.

2021 continued to bring pain and suffering to many people across Ireland and the globe. Our heartfelt thanks to those women and their families for their ongoing support and understanding. In early 2020, no one could

have anticipated that we would still be feeling the impact of the pandemic throughout 2021. The cyberattack in May was another devastating blow. Decisions to cancel non-urgent clinics and restrict partner and visitor access to our hospitals were in line with public health advice but were implemented by us with heavy hearts.

Gynaecology waiting list management has been a key area of focus for the Directorate in the past few years. At the start of 2021, the outpatient gynaecology waiting list at CUMH stood at 1,033. As a result of clinic cancellations during the year resulting from COVID-19 and the HSE cyberattack, the waiting list climbed to 2,053 by the end of 2021.

In this report we outline our work along with our management and strategic frameworks. We place a strong emphasis on open communication across the Directorate and have included information about how we make our communications work for us and how we adapted meetings and shared information and education with each other, our patients and the wider community in 2021. We also bring you some of our highlights from the year which we regularly share with our staff across the Directorate in our quarterly newsletter, UltraNews.

Sincere thanks to the South/Southwest Hospital Group and the National Women and Infants Health Programme (NWIHP) for the ongoing support and belief in our Directorate.

Finally, thank you to our staff across the Directorate. Collaboration is one of our core values and is the key to our success. Together, we have faced incredibly challenging times, none more so than the COVID-19 pandemic and the cyberattack in 2021. In the face of difficult and extraordinary times, you have risen to the challenge time and again, innovating and collaborating to continue to deliver safe services for our patients. Thank you for your unrelenting commitment to the women, infants and families we serve in Cork, Kerry, South Tipperary and Waterford. It remains an ongoing privilege to work alongside you. Ní neart go cur le chéile.

**John R. Higgins**

UCC Professor of Obstetrics and Gynaecology  
Clinical Director



# Ireland South Women & Infants Directorate Management Structures

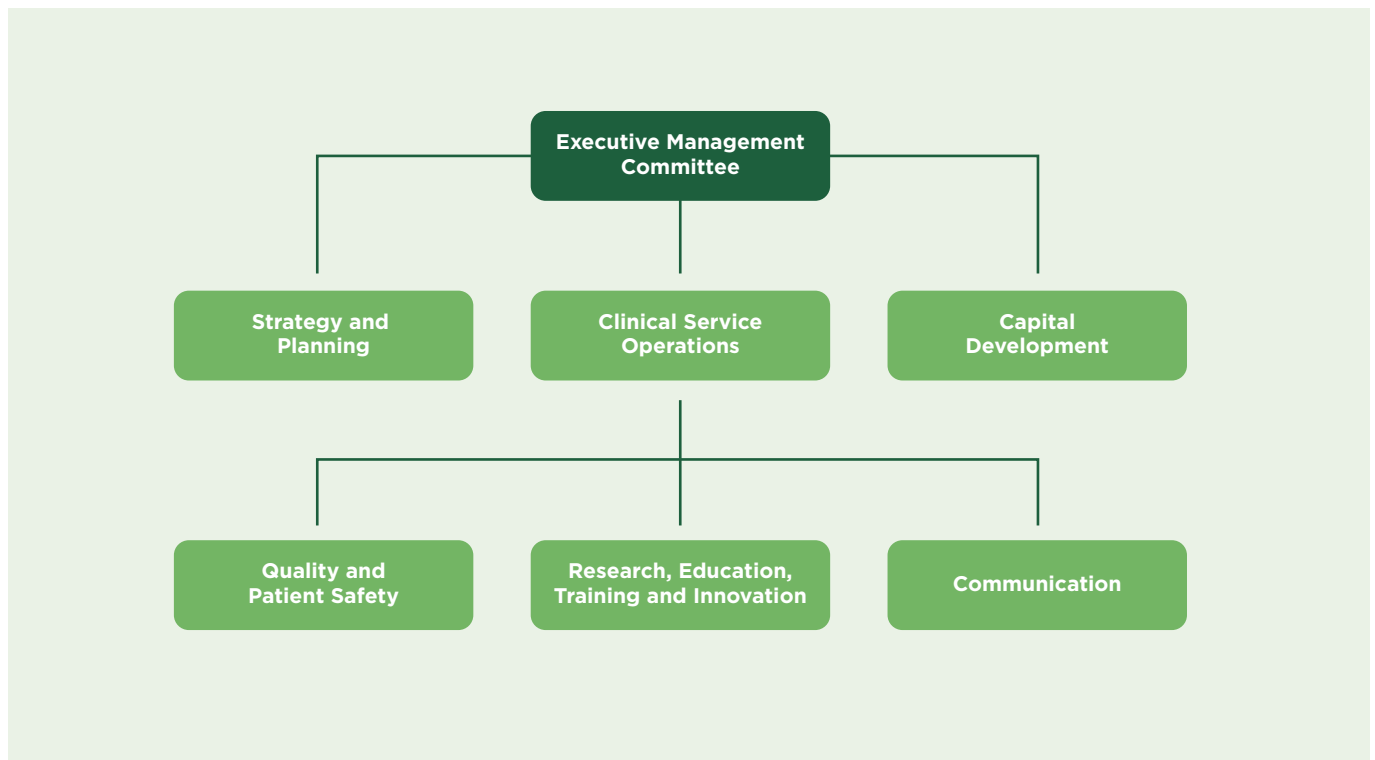
## Executive Management Committee

The Executive Management Committee (EMC) of the Ireland South Women & Infants Directorate supports the Clinical Director in the exercise of management oversight for maternity, neonatology and gynaecological services. It is chaired by the Clinical Director and meets weekly.

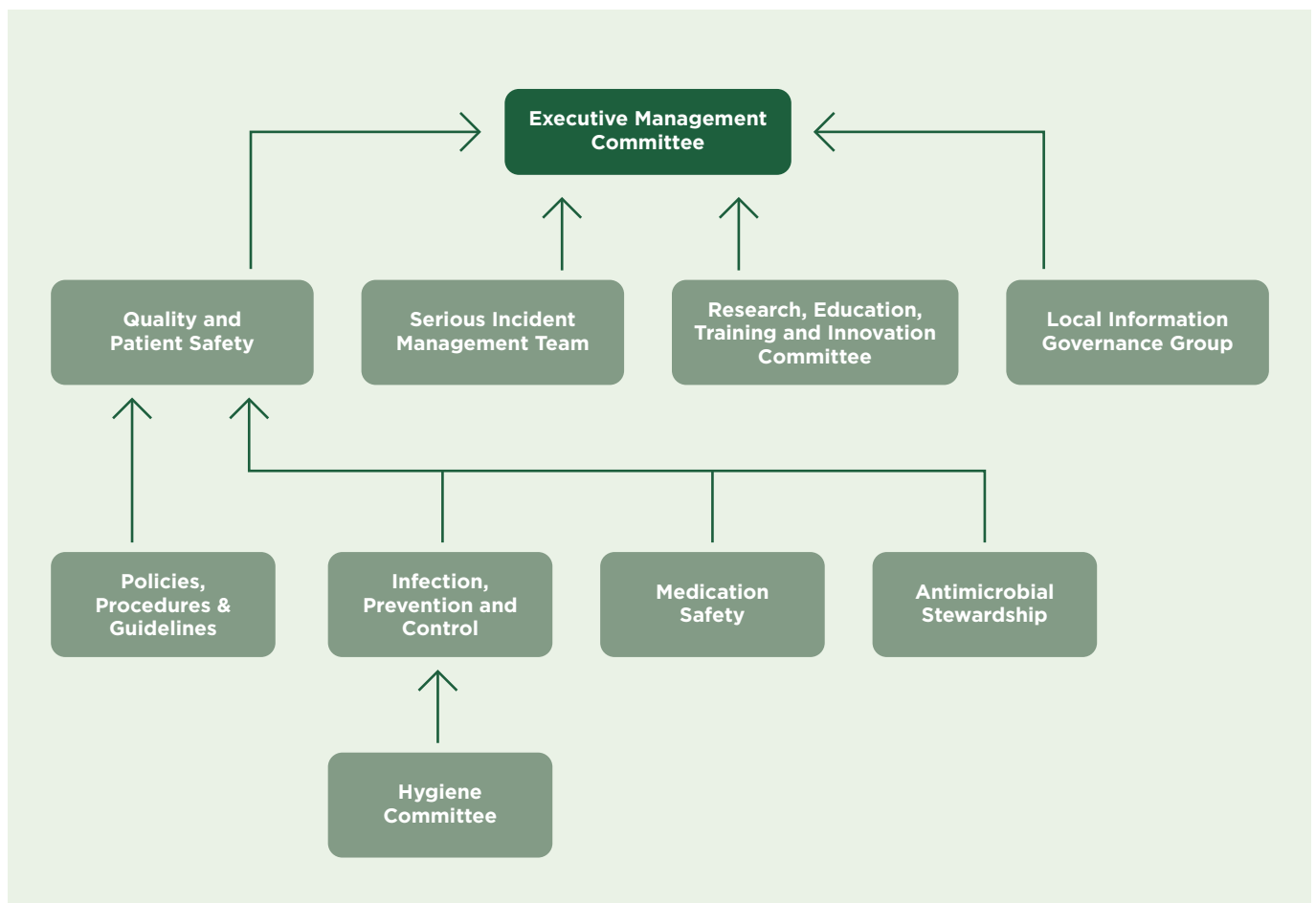
The EMC has a multidisciplinary membership (see Figure 1) and deals directly with the clinical service (operations), strategy and planning, and capital development within the maternity units of Ireland South (see Figure 2). The EMC delegates to standing committees in the areas of quality and patient safety, information governance, education and training, and research and innovation (see Figure 3).



**Figure 1: The multidisciplinary membership of the EMC**



**Figure 2: Ireland South EMC major work streams**



**Figure 3: EMC subcommittee structures**



## Executive Management Committee



**Professor John R. Higgins**  
Clinical Director



**Dr Brendan Murphy**  
Clinical Lead Neonatology



**Miriam Lyons**  
Head of Operations, Ireland South Women & Infants Directorate



**Katie Bourke**  
Director of Midwifery, CUMH



**Dr Paul Hughes**  
Clinical Lead UHK



**Dr Eddie O'Donnell**  
Clinical Lead UHW



**Dr Vijayashree Hiremath**  
Clinical Lead TippUH



**Paula Curtin**  
Director of Midwifery, UHW



**Sandra O'Connor**  
Director of Midwifery, UHK



**Sinéad Heaney**  
Director of Midwifery, TippUH



**Dr Mairead O'Riordan**  
Clinical Lead Quality & Patient Safety, Ireland South Women & Infants Directorate



**Claire Everard**  
Quality and Patient Safety Manager, Ireland South Women & Infants Directorate



**Professor Richard Greene**  
Chair, Local Information Governance Group



**Maria Leahy**  
Health and Social Care Professions Representative



**Ms Orfhlaith O'Sullivan**  
Clinical Lead Gynaecology, Ireland South Women & Infants Directorate



**Stephen O'Connor**  
Finance Manager, Ireland South Women & Infants Directorate



**Grainne Moloney**  
Business Manager, CUMH



**Louise Riordan**  
Administrative Coordinator



**Donna Burtchaell**  
Communications Project Manager

## Communication and Collaboration

### Daily Teleconference ‘Hub Call’

The four directors of midwifery (DoMs) and Head of Operations (or nominated representatives) communicate via a succinct teleconference, termed the ‘hub call,’ each weekday morning. This allows for clinical updates to be shared across the four units and any issues of concern to be managed and supported.

### Maternity Services Working Group for Midwifery

The Maternity Services Working Group for Midwifery meets monthly to discuss the necessary support to enhance and continuously improve evidence-based midwifery care in Ireland South Women & Infants Directorate. This group is chaired by Bridie O’Sullivan, SSWHG Chief Director of Nursing and Midwifery and its membership includes the DoMs from each maternity site.

### Consultant Forum

Consultant obstetricians/gynaecologists and consultant neonatologists across the Ireland South Women & Infants Directorate attend this forum every four weeks (or as otherwise advised) in person or by video conference. The purpose of the forum is to communicate updates to all consultants in the region and is chaired by the Clinical Director.

### Neonatology Network

The Neonatology Network facilitates important collaboration between neonatologists in the tertiary centre in CUMH and paediatricians in the maternity units who do not have the services of consultant neonatologists on site. When necessary, a referral from TippUH and UHK to UHW (rather than to CUMH) can be considered depending on the level of care required.

### National Women and Infants Health Programme

The National Women and Infants Health Programme was established in January 2017, to oversee the management, organisation and delivery of maternity, gynaecology and neonatal services in Ireland, across the 19 maternity units/hospitals. Ireland South Women & Infants Directorate management meets with NWIHP on a quarterly basis to ensure the consistent delivery of high-quality care and provide updates on the development of our maternity network.

### UltraNews Staff Newsletter

A quarterly newsletter is distributed to all staff in the Ireland South Women & Infants Directorate covering interesting news stories from all four maternity hospitals/units, as well as the latest offerings under education and research, both fundamental elements of an academic healthcare system. This newsletter curates’ content from staff and is published in both digital and printed formats.

Since its launch in 2018, the UltraNews newsletter has been successful in building a sense of community by bringing to life the benefits of being part of a women and infants directorate.

### SSWHG Maternity Directorate Steering Group

The purpose of this Steering Group is to provide:

- Control and direction to the project to establish the ‘Maternity Directorate’ (now Ireland South Women & Infants Directorate) in the SSWHG.
- A conduit for the resolution of risks and issues escalated by project team members delivering on the body of work; and
- The leadership, direction, approval and critical analysis of all aspects pertaining to the establishment of the directorate.

The scope of the Steering Group is not to oversee or intervene in the day-to-day operational management and delivery of maternity/neonatology/gynaecology services on any site within the SSWHG. Operational management will continue to be driven through governance mechanisms in place at site and group level. The project Steering Group’s sole focus is overseeing the delivery of the Directorate as a functioning entity.



# Innovating in a crisis: Impact of HSE cyberattack on Ireland South Women & Infants Directorate



With healthcare services still reeling from the effects of COVID-19, the unthinkable happened. On 14 May 2021, a cyberattack brought, in the words of HSE CEO Paul Reid, “unimaginable strain, duress and extreme high risk” to the country’s health system. The HSE responded by shutting down more than 85,000 computers nationwide to contain the attack, causing significant disruptions to services.

Across Ireland South Women & Infants Directorate, staff went into overdrive to ensure continuity of care. Ironically enough, Cork University Maternity Hospital (CUMH) and University Hospital Kerry (UHK) were impacted hardest due to being more digitally advanced, as electronic healthcare records for patients are managed via the Maternal and Newborn Clinical Management System (MN-CMS).

While contingency plans were already in place, no contingency plan foresaw weeks of an outage without tools to support care. CUMH and UHK had to switch to a paper-based system overnight so care and services could continue for women coming in to have their babies and for patients having surgery.

Staff in all hospitals worked late nights and weekends to get on top of things, get workarounds in place, rotas created, and workflows created. These were mammoth tasks in extraordinarily short timeframes. Professor John R. Higgins, Clinical Director, Ireland South Women & Infants Directorate noted: “Our staff have shown amazing resilience in dealing with the HSE

cyberattack while simultaneously dealing with the COVID-19 pandemic. They have demonstrated great creativity, developing many innovative workarounds to continue delivering the safest possible care in extraordinarily difficult circumstances. The increased stress and workload on staff has been significant and the return to a functioning IT system will bring additional stresses and risk before it brings a return to relative normality.” Dr Brendan Murphy, Clinical Lead Neonatology, Ireland South Women & Infants Directorate, highlighted the huge multidisciplinary effort that has been required to keep things going: “The willingness of staff right across the board to pull together and get systems in place to ensure continuity of patient care has been outstanding. Administration teams have been working around the clock, porters have been run ragged, and clinical teams have been stretched as they continue to provide care while carrying great anxiety about risk areas outside of their control. It’s a truly heroic effort by all.”





Here is a snapshot of how our maternity units and hospitals across Ireland South have been impacted by the cyberattack and how our multidisciplinary teams have managed the situation.

## Impact on Emergency Departments

Right across Ireland South Women & Infants Directorate, emergency departments remained open for all obstetric and gynaecological emergencies, but delays continued, as IT systems in the labs and radiology departments were effectively shut down.

## Impact on COVID-19 vaccines for pregnant women

Luckily, CUMH had access to pre-existing lists of pregnant women based on gestation, as these had been put together and printed in advance of the cyberattack. These lists were used to contact thousands of expectant mothers individually and discuss the vaccine, with those in later gestations and high-risk groups prioritised. Approximately 400 calls were logged by CUMH staff daily.

UHK was able to access the medical dictation system, T-PRO to generate lists. T-PRO is a newly adapted system that enables efficient dictation of letters and is used to support clinics, based on a cloud system. As names and numbers of pregnant women were available in this system, contact lists could be created for the vaccine. UHK also contacted local GPs to ensure they let pregnant women know they would be contacted and offered the vaccine.

In TippUH and UHW, teams were put in place to go through patient records manually and contact women one by one in order of priority – a time-consuming but necessary exercise. Lists were then sent to the relevant vaccination centres each week, for follow-up. In general, uptake of the COVID-19 vaccine for pregnant women is estimated at between 40–50%, which was lower than expected.

## Impact on patient records

The iPIMS (Integrated Patient Information Management System) ceased to work for all hospitals on 14 May 2021. This impacted access to patient demographic details including their MRN (Medical Record Number) and date of birth, as well as access to appointment schedules and patient pathways. Therefore, all admissions, discharges and transfer details had to be manually recorded.

Due to the volume of patients in CUMH, it was particularly challenging to create an accurate Excel template to capture patient details for backloading purposes, as well as having a census check on patients currently in the hospital to hand. Having a census check is important for emergency evacuation situations.

New patients and babies had to have contingency MRNs created. The iPIMS system started to come back online in all our maternity hospitals/units in early June, starting with designated PCs. While all maternity hospitals/units in Ireland South were impacted by iPIMS, CUMH and UHK were impacted the most by the shutdown of MN-CMS, leading to a lack of access to patient electronic healthcare records, including clinical histories.

The MN-CMS initially shut down on 14 May, moving to read-only access at the end of May thanks to immense efforts by support staff both locally and nationally. While the digital patient records were inaccessible, CUMH and UHK had to transfer overnight to a paper-based system – an incredibly complex task given staff familiarity with digital systems. Women were asked to bring any medical documents they might have to appointments, helping staff add to the paper charts being created. As TippUH and UHW did not have MN-CMS in place and were operating on a paper-based system, these charts were accessible.

Delays were experienced due to the slow return of lab results and reduced visibility of radiology reports.

## Impact on Gynaecology Outpatients

Due to reliance on electronic healthcare records in CUMH and UHK, patients experienced significant disruption as all non-urgent and routine gynaecology outpatient appointments were cancelled for the remainder of May and early June. It was particularly distressing for patients who were awaiting investigations, to see what may be wrong.

In UHW and TippUH, despite initial delays, clinics could resume after approximately a week of cancellations, due to the existence of paper-based patient records.

## Impact on other clinics

All other outpatient appointments continued in Ireland South including antenatal and neonatology outpatient appointments, despite the lack of knowledge of patient appointments. Innovative measures were employed. In the CUMH Neonatal unit, staff initially relied on the medical dictation system T-PRO to generate lists for clinics. They were also able to contact patients based on the available information and ask them questions regarding their medical histories to prepare for the appointments in advance. They also asked patients to share their GP details so that they could be contacted for additional clinical history data that was no longer accessible when MN-CMS was down.

In TippUH, as all clinics are based away from where paper patient charts are kept, a 'runner system' was put in place. Administration and maternity staff took it in turns to 'run' from the clinics to retrieve patient records as the patients turned up for their

appointments – a manual but effective system that also increased steps and fitness levels!

Across the board, clinical processes had to slow down to accommodate the time-consuming workarounds that had to take place.

## Impact on risk to patients

In the absence of the usual IT systems, including no access to laboratory records, impaired access to timely diagnostic tests and in the case of CUMH and UHK, no access to clinical histories for several weeks – clinical risk significantly increased to patients. The risk of harm increased through the potential for inadvertent clinical error, delayed diagnosis and delayed treatment.

A paper-led system over a computer system posed additional risks to patient safety. For example, handwritten labels on blood samples add potential risk to care. For hospitals that relied on MN-CMS, the paper return also brought additional concerns. For example, writing prescriptions became a concern for pharmacists who had to take extra care to manually calculate the correct medication doses for infants. The possibility of human error creeping in was a constant worry, so extra care needed to be taken to double and triple-check everything to mitigate this risk. Thankfully, no adverse outcomes were reported during the cyberattack.

## Impact on staff

The HSE cyberattack has not only had an enormous impact on the provision of healthcare to the public, but it has also had an enormous impact on staff. The shutdown of important IT systems brought significant additional workload and stress to a normal working day. As one midwife put it – “We’ve gone from COVID-19 weary to cyber weary!” CUMH and UHK hospitals had to introduce additional rigour to check for women’s prior treatment in the absence of historical clinical data and to ensure workflows were in place for routine follow-ups. Extra time was taken to ask questions to get as accurate a history as possible. Where possible, GPs were contacted so data could be shared. Nevertheless, it was a real worry for staff to know that clinical error is greatly enhanced due to a lack of access to clinical notes and results.

With many staff already working in stressful environments, the cyberattack meant that they had to make decisions without the usual support such as access to lab results and radiology imaging. This is particularly noteworthy in our neonatal units, where staff care for the most vulnerable – premature babies. Staff felt very exposed due to the increased risk posed by working in a critical care environment without the usual important information to hand. Staff were also exhausted from the impact of the COVID-19 pandemic. The additional stresses placed on an already stretched workforce, where significant deficits exist, was an ongoing concern.

## Impact of lack of access to lab results and imaging

Again, hospitals with modern systems in place were the ones hardest hit by the cyberattack. Labs in Cork and Kerry faced unprecedented pressure from all clinical areas. Access to blood results was severely restricted until the start of June and access to imaging was limited. In CUMH, a system of ‘runners’ was employed to bring results from the lab in CUH to CUMH to be sorted and clinically assessed.

In UHK, staff had a limited view of ultrasound scans for the previous six months and also had limited access to lab results. UHW and TippUH did not experience as big an impact on access to lab results. Both maternity units could access historical results through the legacy APEX system, which acted as a localised backup and duplicated records while not interfacing with HSE servers. As a result, UHW and TippUH were able to get access to lab results within a week of the cyberattack.

## Impact on theatre

In the first week following the cyberattack, CUMH continued with elective and urgent procedures, however, due to capacity and issues with access to the pathology lab, this was reviewed. In the last week of May in CUMH, routine gynaecology cases were cancelled apart from urgent cases such as cancer and post-menopausal bleeding (PMB) cases. Up until early June, elective Caesarean sections and procedures relating to complications of miscarriage continued.

The impact of the cyberattack on our hospitals/units, patients and staff cannot be underestimated. Coupled with the ongoing COVID-19 pandemic, 2021 posed ongoing, tough challenges. During these difficult times, our teams continued to work creatively and collaboratively to supply maternity and gynaecology services to the women and infants of our region. Thank you to every staff member for your input and hard work. Thank you to our patients and infants, their families and the wider community for your understanding and compassion throughout 2021.



# Our Maternity Units



## Cork University Maternity Hospital

**Professor John R. Higgins**, Clinical Director  
**Katie Bourke**, Director of Midwifery  
**Miriam Lyons**, General Manager/Head of Operations

Cork University Maternity Hospital (CUMH) opened in 2007 and involved the amalgamation of maternity services from Erinville Hospital, St. Finbarr's Maternity Hospital, Bon Secours Maternity Unit and gynaecology services from Cork University Hospital. In 2021, CUMH delivered 7,438 babies.

CUMH maternity and gynaecology services comprise:

- An 11 bedded delivery suite with an alongside 3-room induction suite.
- 110 inpatient antenatal and postnatal beds with a dedicated area for high-risk patients.
- A 31-bedded gynaecology ward (23 gynaecology and 8 dedicated pregnancy loss beds).
- A 7 bedded gynaecology surgical suite and ambulatory unit.
- A stand-alone outpatient ultra-sound department and fetal assessment unit.
- A dedicated early pregnancy assessment unit.
- A newly developed outpatient gynaecology suite for urogynaecology and fertility services (located offsite at the Lee Clinic).
- Outreach clinics for maternity and gynaecology services in St Mary's Health Campus, and Mallow, Mitchelstown, Carrigaline and Carrigtwohill primary care centres providing supportive care as outlined in the 2016 - 2026 National Maternity Strategy.

The Neonatal Intensive Care Unit at CUMH has 25 special care cots, 6 high dependency cots and 6 intensive care unit cots. CUMH accepts babies from TippUH, UHW and UHK for specialised treatments

such as ventilation and therapeutic hypothermia. CUMH also accept babies requiring therapeutic hypothermia from University Hospital Limerick, and from other areas when an emergency neonatal unit bed is required.

During 2021, three staff members at CUMH commenced on the advanced practice route, two in nursing and one in midwifery. Clinical midwife specialist posts exist in bereavement and loss, ultrasonography and diabetes. Additional roles include lactation, haemovigilance, clinical skills, smoking cessation, and a perinatal mental health team.

The DOMINO (Domiciliary Care Inside and Outside of Hospital) model of care has been in place since 2014. DOMINO facilitates low-risk women towards a natural birth in line with the supported care model in the 2016-2026 National Maternity Strategy.

Services at CUMH support the education of undergraduate nursing and midwifery students from University College Cork (UCC). Medical students from UCC also gain clinical experience as part of their placement and this leads to an interdisciplinary teaching environment.

Facilities in the Department of Obstetrics and Gynaecology at CUMH allow students to participate in lectures with study space and video conferencing facilities to link with their colleagues at other sites.



All staff are supported with ongoing education and training via the Centre of Midwifery Education to facilitate the ongoing development of clinical competencies and promote evidence-based care. New and qualified midwives and nurses are supported by clinical skills facilitators from the Practice Development Team, alongside highly qualified staff in each clinical area.

## CUMH: Managing COVID-19

The worldwide COVID-19 pandemic continued during 2021. Comparably with 2020, the multidisciplinary team at CUMH responded and continued to deliver maternity and gynaecology services to the women and infants of our region.

In early 2021, the rollout of the vaccine programme was viewed as welcome progress. Almost 25 of our staff made themselves available to assist with the mass vaccination drive to healthcare staff at our sister hospital, Cork University Hospital (CUH). The successful roll out of vaccines to healthcare workers is in no small part to the hard work and dedication of staff at local hospital level.

Visitor restrictions continued early in 2021 but a Visitor Scheduling App was developed by Yellow Schedule and put in place at CUMH in April 2021. The app also allowed partners to book their place at the anatomy scan. These developments were welcomed by patients and their partners.

All non-urgent gynaecology clinics were cancelled until late March 2021 to allow staff to return to frontline services. CUMH utilised theatre capacity at the Bons Secours Hospital, Cork for gynaecology operating lists to reduce overall footfall in CUMH and to make more staff available for frontline services. Due to the impact of COVID-19 and the HSE cyberattack and resulting clinic cancellations, the gynaecology waiting list climbed to just over 2,000 by the end of 2021.

Throughout 2021, the team at CUMH continually showed courage, resilience and optimism. Focus remained on patient and staff safety at all times as we continued to deliver our maternity and gynaecology services.

## CUMH: Key Achievements 2021

### Vaccinations:

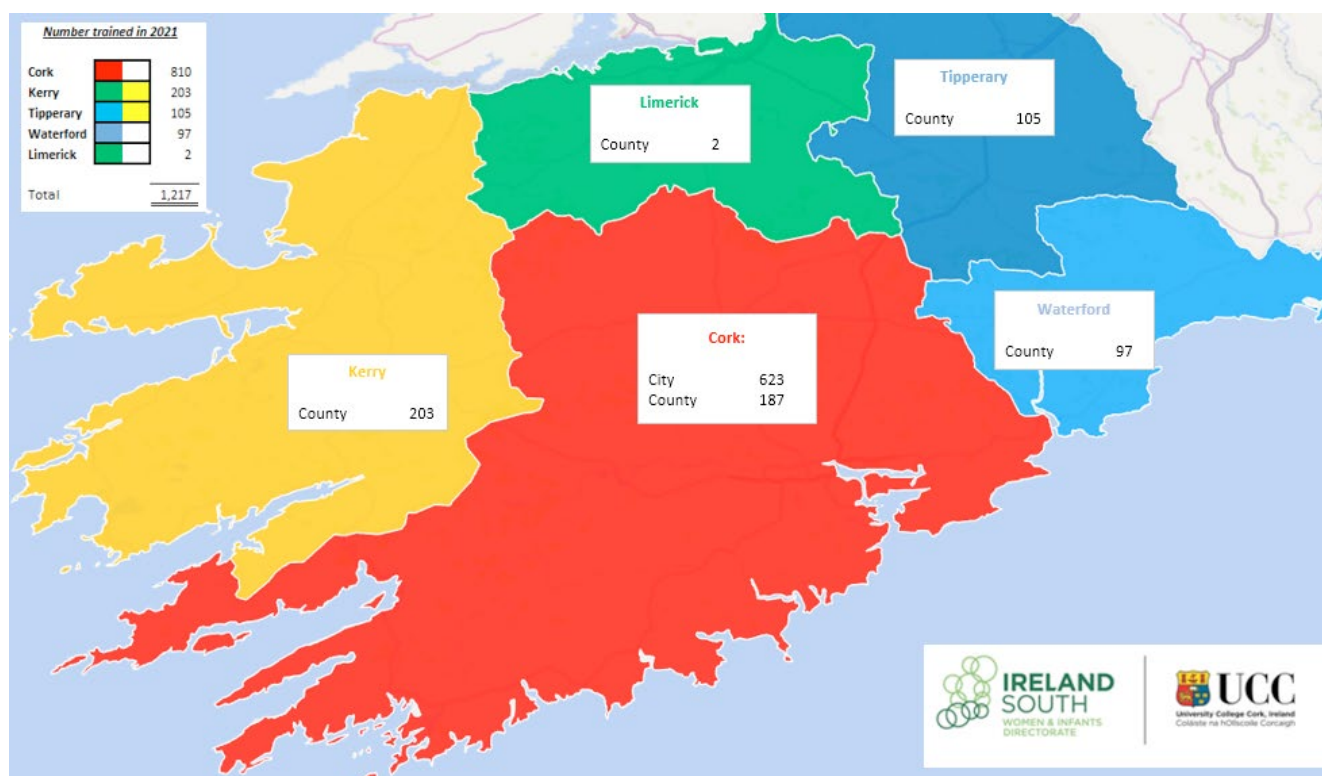
- **CUMH leads out on a regional peer vaccination training programme in collaboration with UCC & CIT:**

In the period from January to October of 2021, Ireland South Women & Infants Directorate, through the funding support of Professor John R. Higgins, Clinical Director, in collaboration with training partners Critical Care Training and UCC 1,217 people underwent training in both Basic Life Support (BLS) and Anaphylaxis training. An initial target of 500 people was the aim; the programme surpassed this target and proved to be of huge success within the South/South-West Hospital Group (SSWHG).

The initiative covered the full Ireland South Women & Infants Directorate and more. A broad spectrum of professionals availed of the training across various training locations. Undertaking any training program aimed at the diverse needs of so many different healthcare professionals is challenging at any time. To do so under urgent time constraints, with the twin challenges of an ongoing pandemic and at one stage a cyberattack was unique. The logistics around safe training in a pandemic situation, and even identifying suitable venues that are able to accommodate safely the numbers needed to train during a national lockdown was also a challenge. Our training partners CUMH staff, Critical Care training and UCC all stepped up to the mark and provided tailored sessions for the needs identified.







**Figure 4:** CUMH regional peer vaccination training programme in collaboration with UCC & CIT.

• **CUMH staff support the COVID-19 mass vaccination drive for campus healthcare staff:**

The Ireland South Women & Infants Directorate made a decision to assist with the mass vaccination drive and provided 30 staff to the vaccination drive in the Cork University Hospital (CUH) campus. The administration of the first dose of COVID-19 vaccines took place from 30 December 2020, with second doses administered from 20 January 2021. In total, CUMH peer vaccinators and administrators alongside CUH peer vaccinators provided 5,830 of the first dose of the COVID-19 vaccine to healthcare staff. It was great to see both CUH and CUMH collaborating to protect frontline staff in Cork.

• **CUMH flu vaccine 2021 campaign**

- There was a 67% successful uptake of the flu vaccine supported by the Practice Development Team in coordination with the Infection Prevention Control, CNS.

• **Capital Equipment upgrades**

- 17 ultrasound machines – 8 high end GE Voluson E8 ultrasound machines (€461k), 8 Mid range Hitachi ultrasound machines (€127k), 1 NeoNatal TE7 ultrasound machine (€37k)
- 10 Braun Syringe Pumps for NNU (€20k)
- 33 replacement theatre lights (€49k)
- HCI Innovate & Knowledge for Implementation of Q-Pulse and HCI's Quality and Safety monitoring (€70k)
- Uniform Subsidy for staff (€25k)
- Upgrade of Induction Room
- Upgrade of Reception Area

**Service and infrastructure developments 2021:**

**Opening of new CUMH Gynaecology Suite at The Lee Clinic**



CUMH expanded its offsite women's health services in Ireland South, with the first clinic held at the Lee Clinic on November 18, 2021. The Lee Clinic is an attractive three storey building comprising 22 medical suites. The suites provide self-contained accommodation with private own door internal access. The Lee Clinic is strategically located in the Lee Valley, minutes from Cork University Hospital, the Bons Secours Hospital, the South Infirmary Victoria Hospital, St. Finbarr's and the Mercy Hospital.

CUMH acquired 10 suites in the building on the 1st and 2nd floor in 2020 totalling c8500 square feet and fitted out to a high spec in 2021 for urogynaecology and fertility outpatient services. CUMH urogynaecology nurse led clinics have been running at the Lee Clinic since November 2021.

The CUMH suites consist of:

- 9 consult rooms
- 6 procedure rooms
- 2 scan rooms
- 3 nurse rooms
- Laboratory space
- Expansion space for regional fertility service
- Reception and waiting areas
- MDT room, staff facilities, stores and utilities

### **New Ambulatory Gynaecology Suite at CUMH**

Thanks to funding provided by the National Women & Infants Health Programme to develop this service, CUMH fitted out a dedicated area on 4 South in CUMH for a new Ambulatory Gynaecology Suite in 2021. The suite consists of an admissions office and waiting area, 1 history taking room and 2 treatment rooms. The 2 treatment rooms are used to carry out gynaecology day procedures from Monday to Friday.



### **Specialist Perinatal Mental Health Service, CUMH**

Since referral pathways from the maternity booking clinics and obstetric clinics were developed in 2020, the Specialist Perinatal Mental Health Service (SPMHS) has seen significant growth in monthly referral statistics. Referrals are also received from GPs and community mental health teams. Presently the team consists of two Clinical Nurse Specialists, one Mental Health Midwife, a Senior Mental Health Social Worker, one NCHD, administrative support and Consultant Psychiatrist, Dr Deirdre Muller-Neff, as Clinical Lead. In 2021 we had the welcome addition of a Senior Psychologist to the team and are looking forward to having our second Perinatal Mental Health Midwife and Occupational Therapist in early 2022.

### **DOMINO scheme in CUMH**

The CUMH DOMINO (Domiciliary Care Inside and Outside of Hospital) scheme had 243 women who gave birth within the service during 2021, 72% had a spontaneous vaginal birth and 13% had an operative vaginal birth. The caesarean section rate was 15%. Breastfeeding rate was 87%. 341 postnatal visits to mothers and babies were provided, although home visits were suspended for a time (January –end April) due to COVID-19 restrictions. Postnatal phone support was provided during this time and some staff were redeployed to other areas within CUMH.

### **Early Transfer Home Scheme (ETHS)**

The Early Transfer Home Scheme (ETHS) commenced in Cork University Maternity Hospital in December 2021 and involves the transfer of care of eligible postnatal mothers and babies living within

a designated geographical radius of the hospital to their home setting. Transfer home happens after a minimum of 24 hours hospital stay following the baby's birth. On transfer, care is undertaken by the ETHS midwifery staff and public health nursing staff up to 7 days post-birth. The scheme aims to provide holistic, evidence-based postnatal care within a continuity model of care. The ETHS midwife uses professional judgment in determining the number and timing of home visits required per the agreed schedules for vaginal and caesarean births, recognising that care plans may change as the postnatal period progresses. The ETHS midwife will refer the woman or baby to the appropriate service if issues arise beyond the ETHS scope.

The National Maternity Strategy 'Creating a Better Future Together' (2016) identifies three levels of care for women progressing through the maternity system, depending on their level of risk. The Supported Care Pathway provides the framework for postnatal care in the community for women and babies considered to be at normal risk.

### **CUMH virtual classes**

With face-to-face parent education classes paused, CUMH provided a variety of virtual antenatal, breastfeeding and nutrition classes to expectant and new mothers. The antenatal classes were launched in January 2021. As a result of high demand, expectant mothers were asked to wait until they were 32 weeks before booking into them.

CUMH also offers antenatal classes for VBAC (Vaginal birth after C-section) and DOMINO. Our team of dieticians offer nutrition in pregnancy classes for expectant mothers from 12 weeks up until 20 weeks gestation.

CUMH Lactation Consultants run antenatal breastfeeding classes on a weekly basis.

### **Smoke Free Start**

'Smoke Free Start' is Ireland's first midwifery-led opt-out on site stop smoking service for pregnant women. It was a joint initiative between the National Women & Infants Health programme and Tobacco Free Ireland. It was funded by Sláintecare integration fund and commenced in CUMH and the National Maternity Hospital, Holles Street, in August 2020. It was initially a pilot programme and following quantitative and qualitative evaluation of the service was made permanent in August 2021. The success of the programme has informed the roll out of the service to other maternity units in Ireland.

The service provides intensive behavioural support to pregnant women to stop smoking using the six week Standard Treatment Programme. Being supported doubles a woman's chances of stopping smoking compared to self-care. During 2021 the service in CUMH provided support to pregnant women to set a quit date, supported them to stay quit and supported women who had spontaneously quit smoking to stay quit as this cohort have a high relapse rate.

### Termination of Pregnancy Services

The Termination of Pregnancy Service commenced in CUMH on 1 January 2019 in line with the Health Act 2018 (Regulation of Termination of Pregnancy). A pathway of care was developed between key groups - nursing/midwifery, social work, consultants, ultrasound and general practitioners. Non-directional counselling has also been made available to women under the service.

In line with the pathway of care developed, the service facilitated a review of women from primary care providers for ultrasound; and/or medical review; and/or inpatient care for medical termination of pregnancy.

### Visit by An Taoiseach, Micheál Martin, T.D. to CUMH

On Friday 15 October, An Taoiseach, Micheál Martin, T.D. officially opened new and upgraded facilities at Cork University Maternity Hospital (CUMH) that will further enhance the maternity and gynaecological services that the hospital currently offers women and infants in Cork and the surrounding region.

The facilities include an Ambulatory Gynaecology Suite and Gynaecology Day Unit (GDU), which are both located on the fourth floor of the hospital.

Referred patients will be seen and treated for specialised day care by staff focussed on improving the health of their patients as efficiently as possible.

This further streamlines gynaecological patient care and forms part of the ongoing innovations that have been developed by CUMH to tackle gynaecology waiting lists and provide exceptional levels of care to women in Cork and its surrounding area.

The existing Induction Room Delivery Suite on the ground floor of CUMH has been enhanced considerably making the suite a more comfortable environment for both patients and staff. The suite now has three private single rooms and a midwife monitoring station, facilitating close monitoring of the birthing mother, ensuring the patient is at the centre of care at all time and their birthing partner can be with the patient at all times too.

### COVID-19 Commemorative medal presentation

An Taoiseach's visit to CUMH concluded with him presenting commemorative medals to staff representatives from the teams at CUMH to honour staff for their hard work during the COVID-19 pandemic. The front of the medals carries the Ireland South brand, along with the names of the hospitals/units in the Directorate. On the reverse of each medal, the words "Dedication, Compassion, Resilience" appear along with the message "Go raibh míle maith agat."

Professor Higgins said: "Our staff continued to provide their excellent level of care during the COVID-19 pandemic, and we felt it appropriate to mark their dedication to CUMH and the community we serve with a commemorative medal."

Representatives who received medals on the day included but were not limited to staff members from diverse teams such as midwifery, nursing, non-consultant hospital doctors (NCHDs), administration, security, catering and housekeeping.

### New Innovation Lead in Ireland South

Ireland South Women & Infants Directorate is delighted to welcome Caitriona Heffernan as





Innovation Programme Lead for Ireland South Women & Infants Directorate. Based in Cork University Maternity Hospital (CUMH), the Innovation Programme Lead is the first role of its type in a HSE hospital in Ireland. Its primary aim is to support the vision of creating an innovative healthcare system that implements new service models, products and technologies to support service delivery and improve outcomes for our patients. "Healthcare innovation is a really dynamic space to work in and I'm so excited to be a part of it," says Caitriona.

#### **New Business Manager, CUMH, Grainne Moloney**

Grainne Moloney was appointed Business Manager at Cork University Maternity Hospital in 2021. Grainne has worked in CUMH since 2018 as a Project Manager supporting the team on the Gynaecology Waiting List Initiative, COVID-19 response planning and the Lee Clinic fit out project. CUMH are delighted to welcome Grainne to her new role.

#### **Roll out of Digital Dictation system at CUMH**

T-Pro is a global leader in clinical documentation improvement software, digitally transforming 600+ healthcare organisations across Ireland, the UK, Australia and New Zealand with over 85,000 active users. Their cloud-based solutions enable workflows for efficient and accurate speech recognition, medical transcription, messaging and coding. We facilitate a patient-centred solution by making it easy for clinicians to capture the patient narrative and deliver information when it is needed most – at the point of care.

In February 2021, after a successful pilot period, the decision was taken to make T-Pro available to the wider clinical teams. Since then, T-Pro has worked closely with the hospital administration team and have rolled it out to all clinical teams and departments.

With T-Pro, the document turnaround times have decreased significantly.

#### **Roll out of Yellow Schedule**

To prepare for the ease of COVID-19 induced visitor restrictions, a new Visitor Scheduling App was being worked on in CUMH. The app allowed inpatients nominate a visitor who can book their preferred, available visiting time at the hospital. Partners could also make a booking to attend the anatomy scan through the app. This means that there is an accurate single source of data to ensure rapid contact tracing if required and allows CUMH to recommence access for partners in a safe and controlled manner.

The benefit of an app also means that it reduces the administrative burden of scheduling visitors over the phone and conducting screening for COVID-19 in-person. Nominated partners receive a bar code to enable fast track entry to the hospital. This reduces the demands on resources at the hospital, reduces queueing and ensures a more efficient approach to partners being able to support their loved ones in a safe environment.

The app was developed by a Limerick based software company called Yellow Schedule who originally applied to the HHI Healthcare Innovation Call to deliver safe visiting solutions to hospitals. After testing and fine tuning the app to suit needs at CUMH, the anatomy scan booking went live on 29 March and visitor booking went live in April 2021.

## Education, CUMH

#### **Undergraduate**

- A total of 207 UCC final-year medical students received education and clinical training at CUMH and the maternity units of Ireland South Women & Infants Directorate in 2020, along with 196 fourth-year medical students over seven rotations during the academic year.
- The Practice Development Department provided education and clinical placement for 120 nursing students, 91 midwifery BSc students and 13 Public





Health Nurses were supported on placement in CUMH, to ensure a consistent and learning environment. Clinical assessments of midwifery students are completed in partnership with UCC.

### Professional development

- 217 multidisciplinary staff trained in the Neonatal Resuscitation Programme (NRP). These CUMH staff comprised 40 student midwives, 28 NCHDs and 149 RGNs/RMs/RSCNs. Training continued with COVID-19 guidelines in place where smaller workshops were facilitated. New equipment for NRP was updated for training which included Panda machines throughout delivery suite and NNU with the roll out of piped oxygen throughout clinical areas.
- Two nurses in Neonatal graduated with the postgraduate Diploma in Neonatology Nursing having been facilitated online for the duration of the course.
- In September 2021, five further nurses from Neonatology enrolled and commenced the postgraduate one-year course online in collaboration with UCC.
- At CUMH, Nurse/Midwife Prescribers are supported by the Practice Development Coordinator. In 2021 there were 2 successful candidates who undertook the prescribing programme in collaboration with UCC and one commenced the programme in collaboration with UCD.

## CUMH: Key challenges 2021

- **COVID-19:** The worldwide pandemic remained a key challenge at CUMH during 2021. Level 5 national restrictions returned in January resulting in further visitor restrictions and cancellation of non-urgent gynaecology clinics. The multidisciplinary team at CUMH responded with resilience and the rollout of the COVID-19 vaccination programme brought new hope to both staff and patients. At all times patient and staff safety remained critical to how the team at CUMH delivered our services in 2021.
- **Waiting list management:** The team at CUMH worked tirelessly from 2017 to 2020 to eliminate the gynaecology outpatient waiting list backlog. The waiting list had been reduced from 4,700 in April 2017 to just over 900 in early March 2020 thanks to the extraordinary efforts of the multidisciplinary team at CUMH. Due to the impact of COVID-19 and the HSE cyberattack and resulting clinic cancellations, the waiting list climbed to just over 2,000 by the end of 2021.
- **Recruitment and retention:** Once again in 2021, midwifery recruitment remained an ongoing challenge in CUMH, similar to other maternity hospitals across Ireland. Absenteeism and sick leave due to COVID-19 added to pressures on staff at CUMH and compounded staffing challenges. When COVID-19 travel restrictions eased in 2021, many midwifery candidates started to look abroad for career opportunities to combine travelling with careers.



## Tipperary University Hospital

**Dr Vijayashree Hiremath**, Clinical Lead, Consultant Obstetrician and Gynaecologist  
**Sinead Heaney**, Director of Midwifery

TippUH provides acute hospital services for the population of Tipperary and surrounding regions. In 2021, TippUH maternity services delivered 948 babies and provided inpatient and outpatient gynaecology services.

The colposcopy department at TippUH undertakes colposcopy, LLETZ, insertion of Mirena coils and nurse-led smear clinics.

TippUH maternity services comprise:

- 2 bedded delivery suite including an obstetric theatre.
- 4 bedded assessment unit (1st stage).
- 5 bedded Special Care Baby Unit (SCBU).
- 20 bedded combined antenatal and postnatal ward
- A shared outpatients area for antenatal, and gynaecology clinics. CNS-led diabetic maternity clinics are also now available.
- Self-contained colposcopy area.
- The scanning unit for booking, anatomy and reassurance scans with a consultation room for use by social work, bereavement and perinatal mental health services.
- Maternity services outreach clinics in Tipperary Town, Carrick-on-Suir (commenced 16 August 2021) and Thurles, providing supportive care to the women of Tipperary.

TippUH has had full accreditation with the WHO/ UNICEF Baby Friendly Health Initiative since 2015. It is the first unit in Ireland South Women & Infants Directorate to achieve this award, which recognises practices that protect, promote and supports breastfeeding.

In 2021, breastfeeding support increased by 100% due to the approval of increased Lactation Consultant hours. This acknowledges the value of this service and the women we serve.

Clinical Midwife Specialist posts continue in bereavement and loss, ultrasonography, lactation, diabetes, clinical skills facilitation and perinatal mental health services. The appointment of a candidate AMP was also achieved in 2021 which will strengthen the supportive care pathways and progress service advancements in community settings.

Maternity services at TippUH support the education of undergraduate medical students from University College Cork (UCC) - postgraduate and undergraduate nursing students from UCC and undergraduate midwifery students from University of Limerick (UL). In 2021 UCC midwifery students were also placed in TippUH.

Facilities allow students to participate in lectures with study space and video conferencing facilities to link with their student colleagues at other sites.

### TippUH: Managing COVID-19

In 2021, COVID-19 continued to impact maternity services across the four hospitals/units in the Directorate. However, through combined approaches across the group, the impact of the virus was controlled.

Various methods of delivering patient-centred care were introduced to ensure both patients and staff were able to work together safely.

A designated area for all women who had contracted or had symptoms of COVID-19 was made available. Women could avail of a scheduled approach to care where they were assessed and scanned, and a plan of care put into place to ensure appropriate care throughout their pregnancy.



Public health guidance alongside collaboration and information sharing with the individual infection control teams across the Directorate shaped how our hospitals/units managed COVID-19 as safely as possible.

Staff continued to be redeployed or have their service delivery method changed. They responded with courage, determination and teamwork in supporting each other and the service through the COVID-19 pandemic.

Staff in TippUH continued to demonstrate their innovative ability to embrace technology with promptness. Examples are as follows:

**The Ultrasonography Unit:** 2021 saw the return of women attending for ultrasound scans with their partners. Every effort was made to ensure that everyone was kept as safe as possible. There was a greater demand for the ultrasonography service, not only with the time allocation for scanning, but also to ensure that the women and partners felt supported emotionally at what can be a very vulnerable time. All ultrasound clinics continued to function throughout 2021 facilitating comprehensive antenatal care.

**The Specialist Midwifery staff** continued to avail of the virtual appointment system to facilitate the bereavement and Perinatal Mental Health Midwife, carrying out duties by phone.

While it has been largely business as usual in TippUH maternity services throughout 2021, all service changes which were made in 2020 had been reinstated e.g., hearing screening programme.

**Meetings:** Many briefings and meetings continued to take place online or in large meeting rooms where social distancing and large numbers of staff could still be accommodated.

Senior Executive Management in TippUH scheduled regular outbreak meetings via telecoms throughout 2021 for all Heads of Department, IPC, Occupational Health and Public Health around updates within the hospital to discuss the impacts of COVID-19 among staff and patients. The frequency of these meetings decreased over the year and was further reduced when an outbreak was detected in a ward.

**Online Parent Education:** The facilitation of antenatal education continued as an online experience through the delivery of live online antenatal classes. All pregnant women attending the hospital were informed of the online antenatal education resources. The classes which had a multidisciplinary approach were very well received by our service users. The popularity of online classes was evident in the number of those attending. A new scheduling appointment system was introduced to facilitate pregnant women to book classes that suited them.

**Social distancing:** TippUH continued to facilitate social distancing requirements. However, this also brought about the need to expedite the upgrade of facilities in the maternity ward and the Special Care Baby Unit. Therefore, a further push to release capital for the refurbishment of the unit was sought by senior management from the Directorate. Funding was secured from NWIHP, and it is hoped that the work on the unit refurbishment will commence in 2022.







**Special Care Baby Unit (SCBU):** Visiting restrictions were lifted in 2021 and both parents were facilitated to visit their babies in the unit. Final drawings for the refurbishment of the area were signed off, allowing for an extra isolation room in the unit. This will be of utmost importance to facilitate the transferring of babies to and from the other units within Ireland South.

**Outreach clinics:** In a bid to minimise contact within the acute setting and reduce the risks when travelling, the demand for TippUH outreach clinics increased.

In 2020/2021 attendance at Thurles and Tipperary Town clinics exceeded 1,200 women. The new Carrick-on-Suir clinic proved to be very popular throughout 2021.

**Booking appointments by telephone:** Our approach in 2021 was to combine both telephone and in-person booking visits to align with whichever suited the women at the time.

## COVID-19: Challenges

**Bereavement:** Where a bereavement occurred, supporting, and facilitating the needs of women and families was a priority throughout 2021.

**Wearing masks:** 2021 saw the changing of wearing masks from surgical masks to FFP2 masks and returning to surgical masks as the hospital and public adapted to the pandemic. Mask wearing can make it more difficult to reassure pregnant women coming in for appointments. As a result, eye contact and tone of voice played an important part in reassuring women throughout their pregnancy.

**Visiting restrictions:** Visiting restrictions remained in line with national policy, and while they had been very restrictive, the attendance of partners/support persons in 2021 was a welcome addition.

## TippUH: Key achievements 2021

**Dr Vijayashree Hiremath Clinical Lead, Obstetrics & Gynaecology:** Dr Vijayashree Hiremath, Consultant Obstetrician & Gynaecologist continues in her role as Clinical Lead for Obstetrics & Gynaecology in TippUH as part of the Ireland South Women & Infants Directorate alongside being part of the Executive Management Team in the Tipperary hospital. As TippUH Clinical Lead, Dr Hiremath is responsible for leading the multidisciplinary maternity team in Tipperary University Hospital in conjunction with Sinead Heaney, Director of Midwifery, to provide safe patient-centred care to all the women who attend the service.

**University Hospital status:** In 2021, South Tipperary General Hospital was elevated to University Hospital status. The hospital is partnered academically with UCC and is called Tipperary University Hospital (TippUH). In addition to being linked with UCC, the hospital has a strong history of students coming from UL, WIT and UCD for training.

**Gynaecology:** TippUH continued to operate a smooth-running service for gynaecology for both outpatients and inpatients in 2021. Consultants operated at a high level to ensure that gynaecology waiting lists were negligible and manageable throughout 2021.

**Midwife, Consultant and HSCP recruitment:** Additional midwives and healthcare assistants were recruited in 2021 following an ongoing recruitment

initiative. The maternity unit is also supported by a dedicated dietician, physiotherapist, pharmacist and social worker. The support given to the service by our HSCP colleagues is appreciated. Additional support has been given to support the service from our colleagues across the Ireland South Women & Infants Directorate during times of sick leave associated with COVID-19. We welcome all colleagues recruited to our maternity service in 2021, and we are proud to have a diverse and multicultural workforce at TippUH.

#### **Impressive maternal smoking cessation quit rates:**

Supporting pregnant women to quit and stay quit in TippUH is run by Southeast Community Healthcare and supported by the Sláintecare Integration Fund. This scheme has been running for a couple of years now. However, Mary O'Donnell, retired CMM3, TippUH Maternity Unit, received a National Excellence Award regarding our cessation smoking campaign in Farmleigh House in 2021. One of our new smoke-free families recorded a YouTube video highlighting the positive effects of the programme.

**Sláintecare QUIT Programme/Making Every Contact Count (MECC):** The Sláintecare QUIT team expanded their service to include colposcopy with the option for referral to the QUIT programme now included on the colposcopy data sheet (history form).

#### **Termination of Pregnancy Service:** TippUH

Ultrasound Department continues to facilitate early pregnancy dating scans for women to return to their General Practitioner to consider options. Women accessing medical termination of pregnancy in the community at less than nine weeks gestation may require interaction with the Obstetrics & Gynaecology services on the gynaecology ward for follow on care.

In circumstances of pregnancy beyond 12 weeks gestation where there is a diagnosis of fatal fetal abnormality, there is a care pathway in place to facilitate a review in CUMH.

The gynaecology ward has processes in place, both legally, and clinically when providing care to women in any of the above circumstances.

## Education, TippUH

#### **Undergraduate/Postgraduate**

BSc midwifery students from the University of Limerick and general nursing students from Waterford Institute of Technology continued to successfully complete clinical placements in TippUH in 2021 despite placements pausing for several months.

A successful request to facilitate a midwifery adaptation course in TippUH was granted by NMBI for all international nurses who wished to register as a midwife on the live register. To date, eight nurses have successfully adapted at TippUH.

#### **Professional development**

- Three midwives undertook an MSc in Midwifery and one midwife embarked on an MSc in Neonatal Care at UCC.

- One midwife completed a Midwife Prescriber's Course in the RSCI.
- PROMPT (PRactical Obstetric Multi-Professional Training). The benefits of PROMPT to staff include better response to emergencies and improved outcomes for mothers and babies. Noreen Ryan, Preston, Clinical Skills Facilitator ran these courses with support from Mary O'Donnell, CMM3 and Catriona Coughlan S/M. During 2021, to encourage further understanding, Noreen also ran short education sessions on the labour ward amongst staff whenever possible.

## TippUH: Key challenges 2021

#### **Recruitment and retention**

Recruitment is an ongoing challenge with midwifery posts vacant throughout 2021. COVID-19 has had a detrimental effect on staff with a lot of focus on mental health support through EAP and online HSE formats etc. These ongoing challenges are being addressed by a workforce planning group and action plans including innovative and collaborative measures between maternity hospitals/units across the Directorate.

#### **Development of a new unit**

Drawings and plans of a refurbishment of current facilities have been agreed and funding secured through NWIHP with the proposed works to start in 2022. The refurbishment will significantly enhance the existing service facilities. This is welcomed by all staff and patients who have been waiting on an infrastructural maternity development in TippUH for several years in line with other units across the country.

#### **Setting up community outreach clinics**

The development of additional community outreach clinics is needed to enable women to access care in the community as per the National Maternity Strategy. Engagement has started with primary care staff to utilise Cahir Primary Care Centre in 2022 to expand our outreach clinics.





## University Hospital Kerry

**Dr Paul Hughes**, Clinical Lead, Consultant Obstetrician and Gynaecologist  
**Sandra O'Connor**, Director of Midwifery

University Hospital Kerry (UHK) opened in 1984. The hospital provides acute general hospital services to the population of County Kerry, North Cork and West Limerick. In 2021, UHK delivered 1,284 babies with perinatal morbidity and mortality rates well below the national average for the last 14 years. UHK provided antenatal, postnatal, neonatal, gynaecology inpatient and day case and outpatient services including ambulatory gynaecology and colposcopy outpatient clinics.

UHK maternity services comprises:

- 4 bedded delivery suite.
- 22 bedded postnatal.
- 6 bedded gynaecology ward.
- 8 bedded antenatal ward/3 bed admission space/4 delivery rooms.
- 10 cots - Special Care Baby Unit (SCBU.)
- Stand-alone outpatient's department for antenatal, gynaecology, urodynamics, sexual health/sexually transmitted infections and midwifery-led scanning.

2021 brought the arrival of additional clinical nurse/midwives' specialist positions covering perinatal mental health services and a clinical placement coordinator to support student midwives. New midwives and nurses were also welcomed to the maternity services at UHK.

Midwifery outreach clinics commenced in Listowel for the women of North Kerry and West Limerick in March with the addition of clinics in Killarney and Dingle later in the year. Antenatal outpatient supported and assisted pathway clinics like the Newborn Hearing Screening outpatient clinics, the Infant feeding Postnatal outpatient clinics and the Early Transfer Home Service continued.

UHK maternity services commenced clinical placements for UCC Maternity Midwife student

placement in May 2021 with a total of 19 students across direct entry, post graduate midwifery, post graduate midwifery H Dip and PHN students. A clinical practice coordinator was appointed to UHK in 2021.

UHK maternity services support the education of undergraduate nursing students from the Institute of Technology Tralee (ITT) (now Munster Technological University). Medical students from UCC also gain clinical experience as part of their placement which lends to an interdisciplinary teaching environment.

Facilities at UHK allow students to participate in lectures with study space and video conferencing facilities to link with their colleagues at other sites.

### UHK: Managing COVID-19

University Hospital Kerry (UHK) maternity services continued to manage the COVID-19 pandemic under the guidance of the Director of Midwifery, Sandra O'Connor; Clinical Lead for Maternity Services, Dr Paul Hughes (Consultant Obstetrician and Gynaecologist) and UHK hospital management team.

COVID-19 affected a number of aspects of maternity services including visiting hours, services offered and methods of delivering women centred care. Examples include:

**Visitor restrictions:** In the interest of patient and public safety, accompanying persons were permitted to attend the maternity unit in support of our attending mothers. The access guidelines were in line with other units in Ireland South Women & Infants Directorate which included the AMRIC Guidelines. We have been very mindful of how difficult this is for women and their families, and we are very grateful for their cooperation.



**Service changes:** While it has been largely business as usual in UHK maternity services, some service changes have been made. Staff changed contracts to work extra shifts/hours to support their colleagues and provide care to mothers, babies and their families.

**Outreach Clinics continues:** Outreach clinics established at the outset of the pandemic continued successfully into 2021 to minimise contact with acute settings. There was a need to continue with maternity services outreach clinics and virtual booking clinics. Supportive care clinics continued in a bid to minimise contact with the acute setting and reduce the risks when travelling.

UHK maternity services worked tirelessly with the supportive staff of Centre Point Community Building. Because of effective teamwork, good communication, and a united focus on providing woman-centred care, community outreach clinics were realised. Women using the service have given positive feedback regarding the outreach clinics, describing them as a relaxing and comfortable environment.

Clinics set up included:

- Maternity services antenatal outreach clinics across the community setting.
- Early transfer home service (ETHS).
- Virtual antenatal education.
- Maternity services virtual bookings clinics.
- Virtual diabetic clinics.
- Virtual gynaecological clinics.
- Newborn hearing screening programme - relocated to a maternity service outreach clinic.
- Postnatal infant feeding outpatient clinics.

Extra efforts are being put into keeping women attending these appointments safe, including reducing the numbers of people in waiting rooms.

**Online Parent Education:** Maternity services responded early to convert the facilitation of antenatal education into an online experience. This was done by both producing a number of short educational videos for online, for on demand viewing and by delivering live online antenatal classes. All pregnant women attending the hospital were informed of the antenatal education online resources.

The videos can be viewed on <http://uhk.ie/maternity/> and have also been made available on the CUMH website. In addition, they are linked from the HSE <https://mychild.ie/> website and have been publicised on Twitter by both @IrelandSouthWID and @Hospital Kerry.

The online resources present a valuable opportunity to build a woman's confidence in her ability to give birth and provide pregnant women and their partners with the knowledge and skills that may assist them during labour, birth and early parenting during the restrictions of COVID-19.

In addition to the Virtual Antenatal classes, maternity services also developed a Virtual Infant Feeding education class. Infant feeding resource video education is available on <http://uhk.ie/maternity/>

**2021 Virtual Parent Craft Education:** Virtual Parent Craft education classes were established and offered at 32 weeks gestation via WebEx in 2021. In 2021 Virtual Parent Craft classes had a total of 424 expectant parents in attendance.

The vision for the Parent Craft Education Services in 2022 is to expand classes to include hypnobirthing classes, mid-pregnancy education classes and twin pregnancy classes.



**Virtual visiting for babies in UHK NICU:** As with other maternity hospitals/units in Ireland South Women & Infants Directorate, UHK introduced a secure video messaging platform in the Neonatal Intensive Care Unit in partnership with the INFANT Research Centre at University College Cork. Called VCreate, this new initiative allowed families to remotely check-in on premature babies amid COVID-19 visiting restrictions.

## UHK: Key achievements 2021

• **Breastfeeding in UHK:** During 2021 breastfeeding services were led by A/CNM2 Infant Feeding Coordinator, Mairead O'Sullivan with the aim to increase exclusive breastfeeding at point of discharge. Breastfeeding services focused on education and providing support to both staff and service users. A Breastfeeding Management Programme was facilitated along with Breastfeeding Refresher Programmes for staff in UHK and community-based staff in Kerry. Additional specific education was provided to the Paediatric Team and GP trainees regularly during the year. Antenatal Breastfeeding Classes were supported on a fortnightly basis through a virtual capacity with additional specialist classes facilitated for mothers expecting twins.

UHK breastfeeding rates for 2021 show initiation of 52.1%, a significant improvement in breast feeding rates in UHK.

• **Perinatal Mental Health Services:** The role of Perinatal Mental Health Midwife (Ms Zodwa Lenihan) became operational in UHK in 2021. The role's primary purpose is to provide specialist care to women at risk of or experiencing mild to moderate mental health problems\* in the perinatal period, and to support women and partners who have experienced birth trauma or who have a fear of giving birth.

The induction into the role was supported by the Kerry Mental Health Services with ongoing training and education through the Specialist Perinatal Mental Health National Programme Team and Perinatal Mental Health Midwife Forum.

UHK PMHS accepts both inpatient and outpatient referrals. The impact of COVID-19 has allowed for an expansion of services to increase accessibility to women through the use of Video Enabled Care (Attend Anywhere). This has been utilised to better support women to connect with PMHS and also proved a suitable method of linking in and connecting with patients with limited transport or those post C-section.

For the period October to December 2021, 5.2% of the total number of patients who delivered in UHK attended PMHS, highlighting the need for the service. The key objective for 2021 is to deliver a timely, early detection, management, support and follow-up service for women in the care of UHK.

\*Mild to moderate mental health problems such as depression, anxiety, adjustment disorders and distress



## • **Maternal and Newborn Clinical Management**

**System: MN-CMS:** At the start of 2021 an MN-CMS training foundation module started and is available to users on HSELand. Due to after effects of the HSE cyberattack, many projects planned for 2021 could not be commenced. The HIE Template for NICU was implemented successfully which will be followed by a Gynaecology Template in Q1 2022. CAG services have been re-established to all practices and IPMs V5 has been upgraded. Future plans include starting e-discharge summaries to GP via Health link and to add photo ID to Electronic Health Record by Q4 2022.

- **Community Midwifery Services 2021:** In 2021 the development of outreach clinics commenced in Listowel in February and Killarney in May. Antenatal classes became virtual during the pandemic. These classes included a mid-pregnancy class at 24 weeks, birth preparation class at 32 weeks and a new hypnobirthing course of five classes, focusing on how to achieve a physiological birth. In this time a community staff midwife became a certified hypnobirthing instructor and the cAMP continued with year 1 of the MSc in Advanced Practice, completing the PG cert in Midwife Prescribing.

The Birth Choice clinic commenced in December 2021 to offer education and choice to women who have experienced a caesarean section previously.

In support of outreach services and the early transfer home model a fleet of Ireland South cars were distributed across the Ireland South Women & Infants Directorate. The cars support provision of midwifery-led care in the community in line with the maternity strategy that is “safe standardised and of high-quality and offers a better experience and more choices to women.”

- **Hypnobirthing classes** have been provided to the women booked with maternity services since June 2021. Hypnobirthing promotes an easier more comfortable birth by supporting relaxation techniques, visualisation and breathing techniques to help a woman cope with the birthing experience.

These techniques are practised antenatally to help women prepare for the upcoming birth and encourage her to release any associated fears or anxiety around the birthing process. The birth companion develops confidence in their ability to support the labouring woman, learning the hypnobirthing techniques at the same time.

Women who have practised hypnobirthing report feeling more empowered and enabled to face their birthing journey with positivity and confidence.

- **Labour Hopscotch in UHK:** During April the Labour Hopscotch station was installed in maternity services. This tool promotes optimal fetal positioning, resulting in a more positive birth experience. Labour hopscotch is a visual depiction of the steps women can undertake to remain active during labour. The process can start at home,

where a labouring woman starts at the bottom of the hopscotch as they are more active and mobile. The 20-minute rotating steps include keeping mobile by walking sideways and lunging on a stairs or sitting on a stool while being massaged by a birthing partner. As labour progresses, the woman advances towards baby's footprints, a motivational image used to help women visualise and maintain focus during labour.

- **Maternity Services Diabetes:** Maternity services at UHK include a Medical/Antenatal Clinic in association with a Consultant Endocrinologist and Clinical Nurse Specialist in diabetes. The number of women attending the clinic is steadily increasing. Maternity services continues to aim to guide, advocate for, and support women and their families throughout their journey within the services.
- **UHK flu vaccine uptake:** Facilitation and administration of the flu vaccine was structured differently in UHK due to COVID-19. In 2021, UHK maternity services have their own trained peer-to-peer vaccinators. The team of vaccinators and senior management in UHK maternity services encouraged all maternity staff to avail of the vaccine. Flu vaccine uptake in 2021 was lower than 2020 with 30% of staff vaccinated within the maternity services.
- **Bereavement Services:** Final plans to renovate the Snowdrop Bereavement Family Room are underway as funding has been secured for the room.
- **Antenatal care:**
  - Community Outreach Antenatal (low risk) Clinics expanded to Listowel, Dingle and Killarney.
  - Community Outreach Antenatal Education.
  - Antenatal Shared Care messaging via Health link.
  - Home from Home Birthing Suite with water immersion for pain relief during 1st stage of labour.
  - Labour Hopscotch.
  - Birth Choice Clinics.
  - One to one continuous midwifery care during labour.
  - MN-CMS Electronic Healthcare record for obstetrics.
  - 24/7 epidural availability.
- **Postnatal care:**
  - Infant Feeding Co-ordinator on site.
  - Infant Feeding Outreach Postnatal clinic.
  - Early Transfer Home Service (commenced September 2020 with expansion of service planned for 2022).
  - MN-CMS Electronic Healthcare record for obstetrics
- **Additional achievements in UHK Maternity Services in the last 12 months:**
  - Perinatal mental health midwife appointed.
  - Senior social worker appointed for maternity services
  - Business Manager appointed to maternity services.





- **Midwife and HSCP recruitment:**

- New midwifery posts were approved for UHK by Ireland South Women & Infants Directorate and SSWHG in 2021.
- CMS, perinatal mental health.
- Maternity services senior social worker
- Approval 0.5 WTE dietician women's health
- Approval of 0.5 WTE physiotherapist women's health

- **Programme implementation**

Various programmes such as the National Health Communication Programme, Breastfeeding Support Programme and Flu Vaccine Programmes implementation were ongoing in 2021.

- **Termination of Pregnancy Service:** UHK ultrasound department facilitates early pregnancy dating scans for women to return to their General Practitioner to consider options.

Women accessing medical termination of pregnancy in the community less than 9 weeks gestation may require interaction with the Obstetrics and Gynaecology services on the gynaecology (Kells) ward for follow on care.

In circumstances of a pregnancy beyond 12 weeks gestation where there is a diagnosis of fatal fetal abnormality or where a risk to the life of the mother has been identified a UHK Consultant Obstetrician /Gynaecologist may facilitate a termination of pregnancy.

The gynaecology (Kells) ward has processes in place both legally and clinically when providing care to women in any of the above circumstances.

The related PPPG has been developed and rolled out locally.

- **Investment in infrastructure/Capital developments:**

- **New Maternity Development**

UHK maternity services team with the support of estates and O'Connell Architects designed a new maternity building incorporating antenatal, delivery suite, postnatal, neonatal and gynaecology services. The design has been submitted to the SSWHG for consideration.

- **Women's Health Services:** Funding has been approved for New Women's Health Service in the community setting with funding for additional associated posts (ANP/AMP, CNM3/CMM3, Staff Nurse, General Practitioner, HCA and Clerical Support).

## Education, UHK

Kerry Centre of Nursing & Midwifery Education (KCNME) provides continuing competency-based accredited education and training for all registered nurses, midwives and support staff in the health services in the Kerry region and Bantry Hospital.

As part of this education emphasis on continuing professional development in maternity related education has always been paramount and the introduction of the midwife specialist coordinator post in 2020 has further strengthened this education roll out and allowed for a standardised approach to maternity education within UHK.



**Classroom Management System:** The Classroom Management System (HSEland) allows for easy enrolment on education programmes in the CNME in Kerry.

**Quality and Qualifications of Ireland (QQI):** During 2021, the Kerry and Limerick CNMEs on behalf of consortium of Nursing and Midwifery Education began developing a Comprehensive Health assessment of the adult and infant/child module for registered nurses and registered midwives. This micro credential's special purpose award module will achieve 10 European Credit Transfers at Level 8 on the National Framework of Qualifications. It is envisaged that this module will be submitted to Quality and Qualifications of Ireland (QQI) for approval in September 2022. This module will enable nurses and midwives to develop their competence in completing a comprehensive health assessment of the adult and infant/child and assist with clinical reasoning and decision making in clinical practice.

#### **Undergraduate**

##### **UHK Maternity Services Nursing & Midwifery Students:**

- Between 25 to 30 UCC medical students receive clinical training in UHK in any given year, with a rotation of three to four students received over seven rotations from September to April during the academic year.
- In 2021, 86 general and mental health undergraduate nursing students from the Institute of Technology Tralee (ITT) undertook clinical placements in UHK maternity services. In addition, there were two Public Health Students placements in UHK maternity services.
- UHK maternity services commenced clinical placements for UCC Maternity Midwife student placement in May 2021 with a total of 19 students across direct entry, post graduate midwifery, post graduate midwifery, H Dip and PHN students. A Clinical Practice Coordinator was appointed to UHK in 2021.

## **Kerry CNME STATISTICS**

- 01.01.2021 - 30.06.2021 (Quarters 1 & 2)  
Number of Staff who attended from Maternity Service area = 130
- 01.07.2021 - 31.12.2021 (Quarters 3 & 4)  
Number of Staff who attended from Maternity Service area = 93

#### **In 2021 the following specific courses were delivered:**

- Anaphylaxis.
- Audit for Nursing and Midwifery practice.
- Basic Life Support.
- Bereavement Care following Pregnancy Loss and Perinatal Death Education.
- Breastfeeding (20 hour course and 6 hour updates).
- Care of the Infant with tongue tie.
- Care of Women in Labour- 2nd Trimester.
- Domestic violence and pregnancy.
- Induction programme for new maternity staff nurses and midwives.
- Intravenous medication.
- *Making Every Contact Count* - Enhancing your brief Interventions.
- Nasopharyngeal swabbing sampling for COVID-19.
- National Healthcare Communication Programme- Module 1.
- Neonatal resuscitation.
- Preceptorship.
- PROMPT.

Additionally, maternity staff have also always been invited and welcomed to attend any other Kerry CNME courses which may supplement and benefit their clinical practice standards.

#### **Bereavement education delivered and undertaken:**

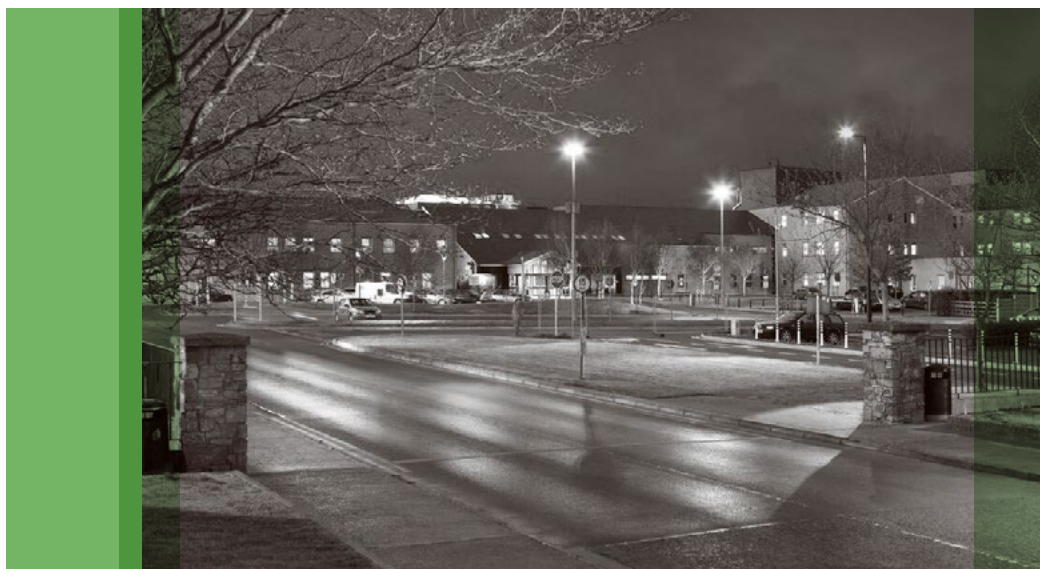
- The Bereavement Education Study Day.
- Palliative Care Education.
- Neonatal Nurse orientation.
- New Staff orientation.
- Numerous online education days.



## UHK Maternity Services, Key Challenges 2021

- **Recruitment and retention:** Recruitment and retention remained an ongoing challenge during 2021 and is being addressed by a workforce planning group that have put an action plan in place. Local, national and international recruitments drives are ongoing.
- **Expansion of facilities:** Maternity facilities in UHK need to be expanded to cater for more choices for women. Work is ongoing for the development of a new maternity unit that will also offer women's health multi-professional facilities. A proposed new maternity development on site of the UHK campus has been submitted for consideration to SSWHG at year end of 2021.
- **Setting up community outreach clinics:** UHK maternity services continue to develop additional community outreach clinics in locations throughout Kerry, such as Killarney and Dingle to enable women to access care in the community in line with the 2016-2026 Maternity Strategy.
- **Bereavement Services delivery:** The impact of COVID-19 within the Bereavement Services in the maternity services at UHK led to an increase in the provision of support for the women and their families experiencing pregnancy loss. Bereavement care for women experiencing pregnancy loss was adapted with reduced personal interaction. The majority of bereavement services work became phone based. Therefore, women were receiving results over the phone which does not compensate for human contact and face-to-face meeting. Face-to-face meetings continued with inpatients while respecting COVID-19 restrictions. The isolation that can be associated with pregnancy loss is heightened in the crisis of the COVID-19 pandemic.
- **Gynaecology waiting lists:** Gynaecology outpatient and inpatient waiting list management is an ongoing challenge, alongside increased demands for gynaecology services. The proposed development of a Women's Health Service in the community setting is predicted to be a beneficial influence on the gynaecology waiting lists.
- **Physiotherapy Women's Health Service Waiting List:** The physiotherapy service includes inpatient services at UHK and outpatients service in UHK, Listowel, Killorglin and Dingle. Gynaecology outpatients are waiting approximately six months at all sites (UHK, Listowel, Killorglin, Dingle) for an appointment. In order to progress the service, staffing needs to be increased in line with national standards, suitable clinical space for assessments needs to be available along with administration support for community clinics and increased IT facilities.





## University Hospital Waterford

**Dr Eddie O'Donnell**, Clinical Lead, Consultant Obstetrician and Gynaecologist  
**Paula Curtin**, Director of Midwifery

University Hospital Waterford (UHW) has been delivering babies as a maternity unit since 1995 and delivered 1,765 babies in 2021 which is an increase in the delivery of 130 babies in the previous year.

UHW maternity unit comprises:

- A 4 bedded delivery suite with a 3-bedded, 1-stage room.
- Obstetric theatre on delivery suite with adjacent recovery room.
- 24 bedded postnatal ward.
- 29 bedded antenatal and gynaecology ward and a specifically nominated bereavement room.
- An Early Pregnancy Treatment Unit is located adjacent to the antenatal and gynaecology ward.
- Neonatal Intensive Care Unit (NICU) and Special Care Baby Unit (SCBU)-18 cots in total.
- Stand-alone outpatients department for antenatal and gynaecology services including urodynamics/ambulatory gynaecology service, midwifery clinics, and specialist clinics for diabetes and perinatal mental health services.
- The midwifery-led scanning department and Integrated Hospital and Community Midwifery Service (IHCMS) room are also located in the OPD.
- The colposcopy service is in a separate, purposely equipped outpatient department in UHW.
- The Sexual Assault Treatment Unit (SATU) is in a discrete location in UHW but with full support and access to maternity and gynaecology services as required.
- Maternity services outreach clinics in Dungarvan, Co. Waterford, City GP Clinic offer supportive care in a local setting as outlined in the National Maternity Strategy 2016-2026. These clinics are staffed by the Integrated IHCMS team and midwifery staff from OPD Services.

### Specialist roles

There is a Clinical Midwife Specialist (CMS) in Bereavement and Loss services. This role has proven to be of great value to families and staff alike. The CMS also undertakes recurrent miscarriage clinics with Dr Azriny Khalid in addition to an educational role for staff.

UHW maternity services has a long history of midwifery-led ultrasonography services. There are three CMS in place providing the full programme of scanning for all attendees.

The advanced midwife practitioner (AMP) role in UHW has been in place since 2011. This senior role brings many benefits to the service in terms of education, staff development and clinical supervision of midwifery-led services as well as to many women who attend the AMP with a specific pathway of care.

The clinical midwife manager 2 for perinatal mental health offers a robust programme of support for women attending services under the Specialist Perinatal Mental Health Services Model of Care for Ireland.

The clinical midwife manager 2 (CMM2) for ambulatory gynaecology coordinates the termination of pregnancy services in a timely and sensitive manner. This role has evolved during 2021 to include support for day hysteroscopy. It is hoped to have a candidate Advanced Nurse Practitioner in ambulatory gynaecology in place in 2022 to grow and develop these services.

The service is seeking a full-time Clinical Midwifery Manager post for the Urodynamics service that is currently undertaken in a part-time capacity by a CMM1 in OPD.





A midwife is currently undertaking Level 9 education in diabetes to allow the service to move forward with a CMS diabetes post in 2022.

## UHW: Managing COVID-19

COVID-19 affected many aspects of maternity services including visiting hours, services offered and methods of delivering women-centred care.

- **Visitor restrictions:**

In the interest of the patient and public safety, visiting restrictions were put in place in UHW, in line with other units in Ireland South Women & Infants Directorate. This was a changing picture during 2021 and the service adapted as best as possible, taking consideration of the needs of women and their families and remaining mindful of national guidance at all times.

- **Service changes:**

The home birth service continued to deliver babies at home with the adaptation of existing guidelines to include COVID-19 risk assessment. The Integrated Hospital and Community Midwifery Service (IHCMS) is moving towards increased antenatal visits in the community to support women to be seen nearer home and to decrease footfall into the acute services.

- **Adaptation of roles due to COVID-19:**

UHW's multidisciplinary teams responded by being flexible, adaptable, and committed to the continued delivery of high-quality care for women and babies during these times of uncertainty and apprehension. Staff have seen their service delivery

method change and have responded with courage, determination and teamwork in supporting each other and the service through this global pandemic. Examples are as follows:

- **CMS Ultrasonographer:** In accordance with HSE guidelines, the number of women undertaking scans in the department at any one time has reduced. Women attend unaccompanied for their ultrasound scan and the scan time has also been reduced. There is a greater demand for the ultrasonographer's service, not only with the time allocation for scanning but also to ensure that the women feel supported emotionally at what can be a very vulnerable time. All ultrasound clinics are still operating, facilitating comprehensive antenatal care. The midwifery and medical teams are mindful of the anxiety this could create and have worked hard to ensure support for the attendees and flexibility for partners in certain circumstances. It is hoped that these restrictions will ease in 2022.

- Gynaecology reviews were undertaken virtually to continue care for patients.

- Diabetes in pregnancy education was undertaken virtually.

There were increased virtual appointments in 2021 including booking consultations. In addition, antenatal education continued online.

- **UltraNews** kept staff abreast of information from other Maternity Services in Ireland South Women & Infants Directorate.

- **Daily huddle:** This short, socially distanced, 10-minute daily huddle continued in 2021 and included up to date COVID-19 information for attendees both around the Maternity and Neonatal Services and the wider hospital. The opportunity was also taken to do bite-sized Infection Prevention and Control information (IP&C) sessions in line with up-to-date guidance. Operational issues were discussed to mitigate the need for repeated meetings. During this time, staff adapted very well to communication changes.
- **Virtual visiting for babies in the UHW NICU:** Like other maternity hospitals in Ireland South, UHW continued with the use of a secure video messaging platform in the Neonatal Intensive Care Unit in partnership with the INFANT Research Centre at University College Cork. Called vCreate, this initiative allows families to remotely check in on premature babies amid COVID-19 visiting restrictions.
- **Outreach clinics:** In a bid to minimise contact with the acute setting and reduce the risks when travelling, the demands on Waterford's outreach clinics grew. Extra efforts were put into keeping women attending these appointments safe, including reducing the number of people in waiting rooms. In Dungarvan, Co. Waterford, the clinic time was extended to allow for increased control of appointment times and surveillance. The antenatal clinic in a Community Centre in Waterford continued and ongoing use of space in a GP practice helped minimise footfall through the OPD.
- **Successful parentcraft education delivered online:** Online education was increased and supplemented with online breastfeeding education and support. These initiatives will be continued and developed in 2022.
- **Labour Hopscotch:** Introduction of Labour Hopscotch in 2021 with strong support for this initiative by the midwifery staff. Labour Hopscotch is a visual depiction of the steps women can undertake to remain active during labour.
- **Additional video resources:** "What's Up Mum?" videos introduced for antenatal appointment attendees to view at clinic appointments.
- **Outpatient hysteroscopy:** The commencement of outpatient hysteroscopy clinics in 2021 proved successful for women attendees and staff facilitating the service. This service will be developed in 2022.
- **Gynae oncology services:** Streamlined gynae oncology nursing services with the commencement of CMM2 into a liaison post.
- **Termination of Pregnancy Service:** University Hospital Waterford has facilitated medical termination of pregnancy since the change in legislation in Ireland Health (Regulation of Termination of Pregnancy) Act 2018. The service began on 1 January 2019.

A Monday to Friday ultrasonography (dating) service is available to women, and those under 9 weeks gestation return to their GP for continuing care. Over 9 weeks gestation is facilitated in UHW as a day case procedure on the gynaecology ward. If required women may return to the service if any complications arise in the post-termination period.

The service is supported by Clinical Lead (obstetrics and gynaecology) and Clinical Midwife Manager 2 Ambulatory Gynaecology. This CMM2 is also a trained Ultrasonographer which allows for a smooth pathway of care. The service has been well evaluated and accessed by local and regional GPs seeking pathways of care for women.

- **MaternityONESouth:** Ongoing participation in the MaternityONESouth project with the other hospitals/units in Ireland South Women & Infants Directorate. This project aims to improve the safety and quality of the service we provide to women and their babies when emergencies occur and to ensure all our staff have access to evidence-based up-to-date policies and training.

## COVID-19: Challenges

- The challenges around the COVID-19 pandemic were strongly felt by the service users and staff alike. Visiting restrictions were difficult but staff did their utmost to support women and facilitate early discharge and follow-up at home wherever possible. Full consideration of individual circumstances was acknowledged, and arrangements were made accordingly.
- Staff were required to maintain social distancing at break time and were ever mindful of COVID-19 precautions. Maternity services formed part of the overall pandemic efforts and arrangements of the wider hospital and received support from the senior management team.

## UHW: Key achievements 2021

- **Impressive maternal smoking cessation quit rates:** Supporting pregnant women to quit and stay quit in UHW is run by Southeast Community Healthcare and supported by the Sláintecare Integration Fund. This continued with ongoing success in 2021.
- **Online professional development:** Online platforms were successfully supported by the Centre for Nurse and Midwifery Education- to continue to bring professional development to staff.

## Human Resources

### New posts

- Aoife Hartwell, Clinical Midwife Manager 2, Oncology Liaison.
- Claire Bulfin, Clinical Midwife Specialist, Lactation.
- Linda Connolly, Business Manager, Maternity Services.

## Retirements

In late 2021, Breda Crotty, ADON retired from Maternity Services. During the year, a number of senior staff from across all areas also retired.

Thank you to everyone, you will be missed by UHW maternity services.

- Marcella O'Connor, CMM2 Antenatal & Gynaecology Ward.
- Margaret Spencer, Senior Staff Nurse NICU.
- Breda Kennedy, Senior Staff Midwife.
- Geraldine Quinn, Senior Staff Midwife.
- Dymrna O'Brien, Senior Staff Nurse NICU.

## Education, UHW

### Undergraduate

- UCC medical students continued to receive clinical training in UHW in 2021.
- UHW provided clinical placements to BSc Nursing students from Waterford Institute of Technology (WIT) and BSc Midwifery students from University of Limerick (UL) as well as elective placement to the Integrated Hospital and Community Midwifery Service (IHCMS) team from Cork and Dublin.
- Placement site for Public Health Nurse students from UCC (Two at any one time).

### Professional development

- Education and training were challenging due to COVID-19 restrictions in 2021. The move towards online education was necessary to allow staff to develop and for the service to continue its strong practice of multidisciplinary training and development. During this time online educational platforms continued to develop and grow. Great support was given to staff by the IT department, UHW.
- UHW continued with PROMPT 3 obstetric emergency training in 2021. Training was delivered online. This training has received a positive evaluation from the multidisciplinary team.
- A selection of online programmes were undertaken by staff members including:

- Legal aspects of midwifery practice.
- Diabetes in Pregnancy.
- Perinatal Mental Health.
- Termination of Pregnancy Education.

Each of these programmes was well attended and evaluated. In 2021, there was a drive for online Domestic Violence Awareness training which several staff attended. It is planned to increase this programme content in 2022.

- 'Children First' continued to be a priority for all staff and online training for Mandated Persons was facilitated by HSE Training & Development Officer on a couple of occasions in 2021. This will continue into 2022.
- PhD Scholarship: Colette Cunningham, Senior Neonatal Intensive Care Nurse at UHW continued with a full-time employment-based PhD Scholarship from the Irish Research Council in conjunction with the RCSI.

These education programmes are chosen in line with service needs and staff interests and skills. Many thanks to the Regional Centre for Nurse and Midwifery Education for their ongoing support of UHW Maternity Services.

## UHW: Key challenges 2021

- **Recruitment and retention:** Staffing recruitment and retention remained a major focus throughout 2021.
- **Gynaecology waiting lists:** The strategy to deal with outpatient waiting lists for gynaecology services is multidimensional and ongoing.
- **Service delivery:** Delivering maternity and gynaecology services as close to normal despite the extraordinary challenges of the COVID-19 pandemic remained a challenge for all. The staff worked tirelessly to care for service users and tried at all times to be innovative in the delivery of care.



# 2021 Highlights

- Stylish scrubs: New Ireland South Women & Infants Directorate uniform
- International Day of the Midwife
- University Hospital status for Tipperary University Hospital
- Ireland South Green Group
- COVID-19 Vaccine Rollout
- Ireland South Mass Vaccinator Drive
- Continuity of care in TippUH: The gold standard
- Welcome Dr Mairéad Butler, Consultant Obstetrician & Gynaecologist at UHW
- Bereavement Standards: From Implementation to Oversight
- Outreach Maternity Clinics in UHK
- CUMH and the Babies with Books read-a-thon
- Outpatient Hysteroscopy: introducing ambulatory gynaecology to UHW
- Labour Hopscotch in UHK
- National Breastfeeding Week
- Joint Quality Improvement Initiative launched by CUMH Breastfeeding Coordinator and Community Public Health Team in Kinsale Primary Healthcare
- Visitor Scheduling App for CUMH
- Welcome Dr Oratile Kgosidialwa, MB BCH BAO, MRCPI, MSc  
Consultant Physician in Endocrinology and Diabetes
- World Prematurity Day
- An Taoiseach, Micheál Martin, T.D. opens new and upgraded facilities at CUMH
- Ireland South Fleet Rolled Out
- Smoke Free Start
- An update on MaternityONESouth
- Joan O'Donovan retires after 42 years
- Penneys raising Euros for CUMH Neonatal Unit

## EDUCATION

- CUMH virtual classes
- Higher Diploma in Midwifery
- NUI Dr Henry Hutchinson Stewart Medical Scholarships
- HIHI Healthcare Innovation Diploma Graduates
- CME Classroom upgrade
- The Neonatal Resuscitation Programme (NRP)
- Congratulations to MSc Midwifery graduates
- First student nurse clinical placement in UHK
- Kangaroo care awareness day

## INNOVATION & RESEARCH

- Professor Eugene Dempsey is the first ever Chair in Neonatology in Ireland
- New Innovation Lead in Ireland South: Caitriona Heffernan
- INFANT - AI4Life
- HRB Irish Network for Children's Clinical Trials (In4kids) led by Professor Geraldine Boylan, University College Cork
- 20th Annual Research Conference by UCC School of Nursing and Midwifery





## Stylish scrubs: New Ireland South Women & Infants Directorate uniform

During 2021, Ireland South Women & Infants Directorate launched a variety of stylish and flattering new uniforms in a range of colours customised to suit the needs of staff in our hospitals/units. Colourful embroidery is used to feature the Ireland South logo on the sleeve, as well as the hospital name and department on the front.

The midwife uniform is a beautiful teal colour, the consultant one is a charcoal grey, administration is black and midwifery management is blue. CUMH is the first of our hospitals to adopt the new uniform which will be rolled out across the Directorate in the future. Staff who have opted to wear them to date are happy with the comfort, style and fit.

## International Day of the Midwife

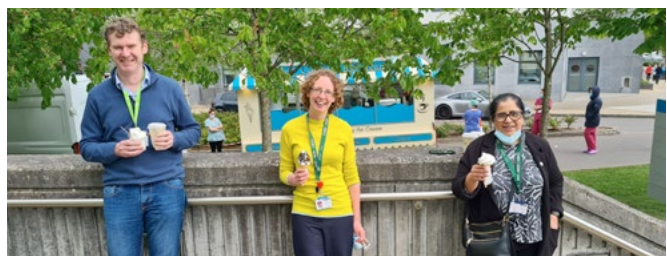
Midwives and staff came together on International Day of the Midwife on 5 May 2021 to celebrate, acknowledge and thank the midwifery profession.

All maternity hospitals/units across the Directorate celebrated International Day of the Midwife with refreshments like ice cream or cakes, sponsored by Ireland South. Luckily, the sun was smiling down on everyone on the day and so many could enjoy the celebratory refreshments outside with colleagues.

Each maternity hospital/unit arranged for a raffle to take place, with prizes including some €100 One4All vouchers donated by Ireland South, as well as a number of gifts kindly offered by local businesses. Inspiration was taken from UHK's certificate for babies born on 5 May and we created an Ireland South certificate with each hospital's name on it. These certs can be used each year for babies born on International Day of the Midwife.

UHK organised a 5km forest walk in Glanageenty, known as a 'hidden gem' amenity situated between Tralee and Castleisland. Staff undertook the walk throughout the week to raise funds for Féileacáin, in loving memory of Mary Cotter.

Staff at TippUH marked the occasion by holding a walk along the Blue Way to raise funds for the facility's Special Care Baby Unit, dressed in 'Call the Midwife' costumes from the 1960s-set television drama. The fun spectacle was captured by RTÉ for the television news, which was a fantastic way to celebrate the midwives and raise the profile of the profession.



## University Hospital status for Tipperary University Hospital

The elevation to University Hospital status for South Tipperary General is seen as a major boost for the facility. The Clonmel hospital is partnered academically with UCC. General manager of Tipperary University Hospital Maria Barry says the upgrade should make a difference when it comes to attracting and retaining staff.

*"We are training a significant number of students – a significant amount of the workforce of the future so I think it is only timely that the hospital in Clonmel is recognised as a University Hospital."*

*"It will add to the recruitment and retention of staff. I think people always want to work in those centres that are clearly linked with academic partners and while we're linked to UCC, we also have students coming from UL, WIT and UCD, so it's time that the hospital was recognised."*

Originally published on **Tipfm.com** on 20 May 2021



## Ireland South Green Group

Ireland South Green Group was established in September 2020 with representation from the four maternity hospitals/units in the Ireland South Women & Infants Directorate. This group was formed to provide strong leadership towards making the world a better place for the babies born in our maternity units to grow up in. Cathy Burke, Consultant Obstetrician and Gynaecologist, CUMH is Chairperson of the group. In 2021, the group comprised 20 committee members and over 30 Green Advocates, with this number expected to increase in 2022.

An Energy Awareness Survey was carried out in CUMH towards the end of 2020. This demonstrated that 80% of staff thought that there was significant energy wastage at work, with lights and computers being left on as major issues. A Register of Opportunities was established to make changes towards a more energy-efficient organisation.

2021 was an energising year for the Green Group who identified many things that can be changed for the better. The group planned to continue to get the basics right in 2021 with more ambitious plans for the years ahead.

Some of the many key achievements at CUMH in 2021 included:

- CUMH moved from virgin paper to recycled paper for general use. It is estimated this will save 300 trees from being felled annually, an area of forest the size of Páirc Uí Chaoimh!
- Working towards eliminating printed laboratory reports being sent to our outpatient departments and wards. These are unnecessary due to the laboratory results being automatically uploaded to the electronic healthcare record (EHR).
- Paper bags have replaced plastic bags initially used in the provision of staff masks in CUMH.
- Individual bins have been removed from two of our secretarial offices and replaced by large bins, a change which is estimated will save around 1,500 plastic bin bags annually.
- To eliminate plastic water bottle use, new water dispensers have been installed in meeting rooms at CUMH and plastic water bottles are no longer provided for hospital meetings.
- Surplus plastic tubing in the ambulatory gynaecology clinic at CUMH is being sent to the operating theatre for use for anaesthetic suction machines.
- Additional bins for general waste, recycling, compost and glass, together with appropriate signage have been procured throughout the hospital.
- Bin locations and placement comply with the EPA Waste Bin Provision and Placement guidance.
- Messaging is circulated to staff via the hospital email system on an intermittent basis with regard to switching lights and electrical devices off after use.





## COVID-19 Vaccine Rollout

With most of 2020 marked by the coronavirus pandemic, 2021 became the year when COVID-19 vaccines helped the world return to some semblance of normality. The rollout of the vaccine across the Ireland South Women & Infants Directorate involved a series of large-scale operations delivered in collaboration with colleagues at each hospital campus.

Sinéad Horgan, Assistant Director of Nursing and Flu Lead, SSWHG commented: *"The beginning of the end. No matter what site you were in across the South/ South West Hospital Group, every person queueing for vaccine had the same look of their faces – a look of delight, excitement, relief and hope. It was so uplifting to see multidisciplinary staff across the Hospital Group to be so generous with their time and skills, to assist not only in the vaccine rollout in the acute hospitals, but also in the residential care facilities."*

### CUMH: COVID-19 Vaccinators

The Ireland South Women & Infants Directorate made a decision to assist with the mass vaccination drive and provided close to 25 staff to the vaccination drive in our sister hospital Cork University Hospital. The administration of the first dose of COVID-19 vaccines took place from 30 December 2020, with second doses administered from 20 January 2021.

In total, CUMH peer vaccinators alongside CUH peer vaccinators provided 5,830 of the first dose of the COVID-19 vaccine to healthcare staff. It was great to see both CUH and CUMH collaborating to protect frontline staff in Cork.

Sinéad Creedon, Infection Prevention and Control Clinical Nurse Specialist in CUMH who co-ordinated the scheduling of peer vaccinators from CUMH commented: *"We were able to quickly mobilise to support the COVID-19 vaccination efforts, as we had 25 staff trained as peer vaccinators since August 2020 for the flu vaccination drive. Peer vaccinators for the COVID-19 vaccine need similar training – Basic Life Support (BLS) training alongside Anaphylaxis training. In addition, they need training on the protocol that is specific to the particular vaccine being administered. This was the only additional training our CUMH vaccinators needed, and all were more than willing to support the vaccination drive."*

Over 13 days in January alone, almost 6,000 vaccines were administered at the vaccination clinics in Seahorse Ward in CUH. The successful roll out of vaccines to healthcare workers is in no small part to the hard work and dedication of staff at local hospital level.

Peer vaccinators who made themselves available from CUMH included Sinéad Creedon from IPC; Sheila Coghlan from ER; Mary Quaid, Kate Lyons and Niamh Spillane from Midwifery Management; Mary McSweeney, Ann Buckley, Catherine O'Sullivan, Mary Cullinane and Susan Vaughan from NNU; Helena Mulcahy, Isobel Scally and Siobhán Hayes from Labour Ward; Orla Attridge from 2 South; Averil Stannard, Cora Murphy and Breda Hayes from Practice Development; Barbara Hall and Adrienne Murphy from Outpatients Department and Karyn Walsh from Early Pregnancy Unit.

### UHK: COVID-19 Vaccinators

Having completed the winter flu vaccination drive in UHK in 2020, the maternity services peer vaccination team were called upon again in early 2021. Although administration of Pfizer BioNTech vaccine required additional upskilling and training, it was a challenge that three members of the team in Kerry, (Joann Malik cAMP Maternity Services, Carrie Dillon, CMS Bereavement and COVID-19 Co-Ordinator Maternity Services and Mairéad O'Sullivan A/CNM2 Infant Feeding Coordinator) undertook without hesitation.

### UHW: COVID-19 Vaccinators

A large team of trained and active peer vaccinators are the key to University Hospital Waterford's successful flu vaccine rollout in 2020. The same team upskilled to become COVID-19 peer vaccinators in UHW in January 2021. Among them was UHW maternity services peer vaccinator, Janet Murphy, Advanced Midwife Practitioner. The chapel at UHW was used as the vaccination centre for staff - this allowed for social distancing, vaccine stations, recovery area and access and exit planned and contained.

### TippUH: COVID-19 Vaccinators

A large multidisciplinary team of peer vaccinators in TippUH powered through the vaccination of colleagues with the Pfizer BioNTech vaccine. Having achieved vaccination rates of over 70% for the flu vaccine in 2020, they were more than ready to roll out the COVID-19 vaccine. Up to 400 staff were vaccinated in a day, thanks to the efficient scheduling work of clerical staff, alongside the vaccinators themselves. Both Siobhán Kavanagh (Midwife) and Mary O'Hanlon (CMM2, Colposcopy) returned from retirement to assist with the peer vaccination drive. The team at TippUH are so grateful for their continued service and commitment to helping colleagues and staff.





## Ireland South Mass Vaccinator Drive

To help in the fight against COVID-19, Ireland South Women & Infants Directorate funded and organised the training of hundreds of healthcare personnel in Kerry, Cork, Tipperary and Waterford to deliver the COVID-19 vaccine. Ireland South quickly reached the target of 500 trained vaccinators and continued with the training drive for as long as there was demand for it.

Professor John R. Higgins, Clinical Director, Ireland South Women & Infants Directorate granted the funding for the initiative, Katie Bourke, Director of Midwifery, CUMH, led the training drive and Stephen O'Connor, CUMH Finance Manager managed and oversaw the operation. Additional trainers were sourced thanks to close collaboration between local hospitals, primary care, UCC, HSE Ambulance and the company, Critical Care Training.

The small army of vaccinators was crucial to the rollout of vaccinations in our community through hubs in the South and South West of Ireland. This rollout was co-ordinated by Bridie O'Sullivan, Chief Director of Nursing/Midwifery, SSWHG.

Vaccinators were required to be clinical staff such as nursing/midwifery or medics and needed to complete a number of training elements. First, they needed to complete the initial Basic Life Support (BLS) training online. Then they attended face-to-face vaccinator training at locations such as Brookfield Health Science Complex, University College Cork and hotels in Kerry, Waterford and Tipperary. These training sessions included a two-hour practical training for BLS as well as 1.5 hours of face-to-face training for anaphylaxis (severe allergic reaction). Following this, COVID-19 vaccine specific training (depending on the type of vaccine being administered) could be done on HSELand, the online training portal providing courses and learning resources for staff in the HSE.



## Continuity of care in TippUH: The gold standard

The team at TippUH is passionate about providing a woman centred maternity service accordance with the National Maternity Strategy. As a result, they set up three midwife-led clinics in Clonmel, Thurles and Tipperary town, to offer women choice and community-based integrated care as close as possible to home. The midwifery led clinics offer the supported care pathway for normal-risk mothers

and babies, where midwives lead and deliver care within a multidisciplinary framework. The gold standard is to offer continuity of care for TippUH patients.

Continuity of care is when a woman sees the same midwife throughout her pregnancy, including postnatally in hospital and at home. This helps to ensure safe care based on a relationship

of mutual trust and respect and has been associated with a lower rate of interventions and increased satisfaction in childbirth.

For midwives, it's so rewarding to offer continuity of care, and while it can be challenging to deliver for a variety of reasons, the team at TippUH aim to offer continuity of carer where possible.

## Welcome Dr Mairéad Butler, Consultant Obstetrician & Gynaecologist at UHW

The team at UHW was delighted to welcome a new consultant obstetrician & gynaecologist, Dr Mairéad Butler who started on 30 December 2020. Originally from South Kilkenny, Mairéad went to school in the Sacred Heart in Ferrybank, Waterford before studying Medicine in University College Cork. After graduating in 2006, she gained experience both in Ireland in The Coombe, Dublin and as a Junior Registrar in CUMH in 2010/2011.

Mairéad received her specialist training in Australia and was planning to take a break to travel around Europe before starting her first consultant position in UHW. COVID-19 put a stop to that plan, but Mairéad still enjoyed the time off before starting her new role. While she was introduced to the obstetrics specialty in the Mercy Hospital in Melbourne, Mairéad's decision to become an obstetrician must have been strongly influenced by her family background. Mairéad's mother was a clinical midwife specialist in Sonography in UHW for 20 years and her sister is also a midwife – a CMS in sonography. Mairéad has always wanted to be a doctor and is now not only working in the hospital her mother used to work in, but also in the hospital she was originally born in.



## Bereavement Standards: From Implementation to Oversight



Friday, 19 February 2021 marked the end of four years of development and implementation of National Standards for Bereavement Care following Pregnancy Loss and Perinatal Death.

Congratulations to Professor Keelin O'Donoghue, Consultant Obstetrician & Gynaecologist in CUMH in her role as National Implementation Lead for the Standards and Ríona Cotter, Midwife in Quality & Patient Safety, CUMH who led as Programme Manager.

We sincerely thank them for leading and advocating for perinatal bereavement care in Ireland. Both will continue to provide oversight to the ongoing development of the National Standards for Bereavement Care Following Pregnancy Loss and Perinatal Death in all 19 maternity units in Ireland.

## Outreach Maternity Clinics in UHK

Midwifery Outreach Clinics commenced in Listowel for the women of North Kerry and West Limerick in March 2021. Locations for antenatal outreach clinics were accessed in Killarney and Dingle, with clinics commencing in both areas on 19 and 21 May, respectively. The normal risk woman, who is within the supported care pathway of maternity care, fit the criteria for access to these clinics.

The aim of the Midwifery Outreach Clinics is to provide safe, appropriate care, according to the woman's needs, in a location close

to her home and in line with the National Maternity Strategy. The benefits of this option are that women will generally meet the same midwife during the antenatal period, with more time dedicated at each visit and so providing continuity of care and carer. In Ireland, it is estimated that 60% of women have normal pregnancies. In view of these figures, increasing the amount of midwifery-led care services would ensure that the appropriate care is given to each woman. UHK maternity services is dedicated to implementing further community services in line with National Maternity Strategy

recommendations. These will include expanding the Early Transfer Home Service over 7 days to further streamline early discharge and also introducing a DOMINO service at a later date.



## CUMH and the Babies with Books read-a-thon

In September 2021, CUMH NNU took part in the 'Babies with books read-a-thon.' This is a fun annual event that started in America to promote family-led reading in Neonatal Intensive Care Units for the benefit of infants and their families. According to the American Academy of Pediatrics, reading with babies creates and strengthens neural connections that: *"promote... social-emotional development... and language and literacy skills during this critical period of early brain and child development."*

Reading to NICU babies is a great way to bond and to improve the hospital experience. Babies love to

hear the comforting sound of their parent's voice. While a baby is in NNU it can be a stressful or difficult time for families and being able to take the time to read a nursery rhyme or a short story is beneficial for baby and parent/caregiver.

In CUMH, the initiative was led by Susan Vaughan, Staff Midwife and embraced by NNU staff and parents alike. Susan registered CUMH for the read-a-thon and got in touch with the CUH Charity who provided money to buy books for CUMH NNU.

The read-a-thon was a great success. Parents really engaged with reading to their preterm

babies, and staff received very positive feedback. The team at CUMH are keen to increase reading encounters even more next year.





## Outpatient Hysteroscopy: introducing ambulatory gynaecology to UHW

On 21 April 2021, the first patients were welcomed into the Outpatient Hysteroscopy Clinic (OHC) in UHW. The clinic is an initiative to improve access to diagnostics and treatments for women with heavy menstrual bleeding, abnormal uterine bleeding and postmenopausal bleeding.

The OHC serves as a one-stop service for the management of abnormal uterine bleeding. In one visit, patients with abnormal uterine bleeding have a pelvic ultrasound followed by hysteroscopy, endometrial biopsy and treatment including removal of endometrial polyps, submucosal fibroids, IUCD insertions and retrieval of lost IUCDs. This replaces traditionally having a pelvic ultrasound in the Radiology Department followed by EUA, hysteroscopy, D&C in theatre. This should reduce the outpatients and radiology waiting lists, number of outpatient visits and save costs on theatre sessions and day-case beds.



This will also increase access for other gynaecological procedures to be done in theatre.

The OHC is run weekly by Dr Azriny Khalid, Consultant Obstetrician/ Gynaecologist, Ms. Elaine Roche, CMM, Ambulatory Gynaecology and Ms. Valerie Barry, Health Care Assistant, and once a month by Dr John Bermingham.

The team at UHW hope to develop this service further to provide a wider range of treatments suitable for the ambulatory setting in the future.

## Labour Hopscotch in UHK

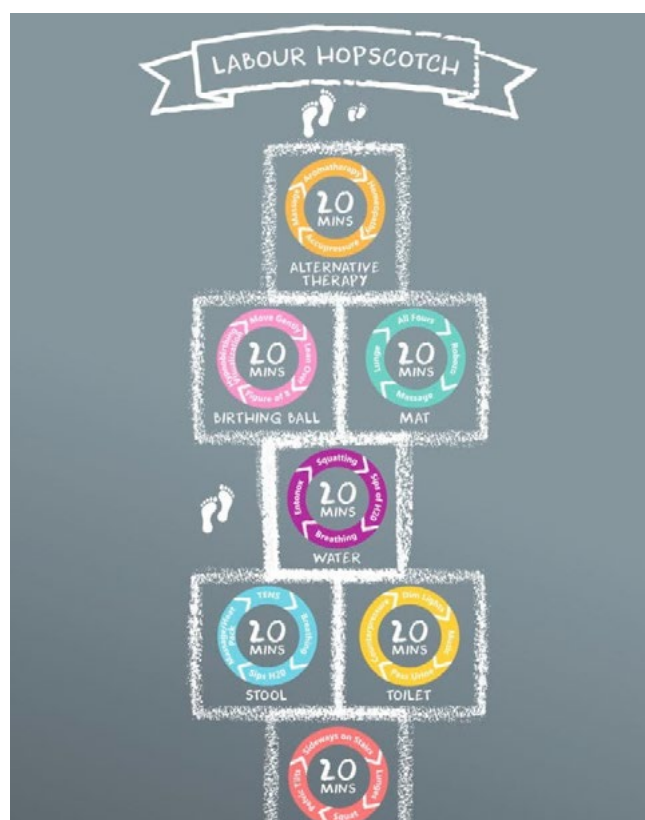
In April 2021, the Labour Hopscotch station was installed in UHK Maternity Services. This is a labour tool to promote optimal fetal positioning, resulting in a more positive birth experience.

Labour Hopscotch is a visual depiction of the steps women can undertake to remain active during labour. The process can start at home, where women start at the bottom of the hopscotch as they are more active and mobile. The 20-minute rotating steps include keeping mobile by walking sideways and lunging on a stairs or sitting on a stool while being massaged by a birthing partner.

As labour progresses, they advance towards baby's footprints, a motivational image used to help women visualise and maintain focus during labour. To enhance the promotion of Labour Hopscotch, a quality improvement team was set up with the specific aim of successfully implementing Labour Hopscotch to the UHK service. Six team members have become champions of promoting the use of Labour Hopscotch at booking and all antenatal encounters, ensuring

that every contact counts. This ensures women are informed that "training in pregnancy," as stated by Sinead Thompson (creator of Labour Hopscotch), is necessary to prepare for birth.

To date, women have received this tool positively and it is hoped that it will become a normal part of antenatal and labour care in UHK.





## National Breastfeeding Week



National Breastfeeding Week is a HSE-led event, marked each year from 1-7 October.

'Feeding the future: Supporting breastfeeding through a pandemic and beyond' was the theme of this year's National Breastfeeding Week. The week was celebrated across Ireland South Women & Infants Directorate with a variety of events.

### National Breastfeeding Week at Tipperary University Hospital

With the aim to diverge the focus from feeding challenges, onto the benefits of breastfeeding, the TippUH maternity unit team put together a display of real statements from mums about their breastfeeding experiences. The displays were located at several areas across TippUH to raise breastfeeding awareness amongst clients and staff. All mums whose babies were born during National Breastfeeding Week received a gift bag with breastfeeding and infant hygiene products, as well as a 'Thank you for breastfeeding' card.

### National Breastfeeding Week at University Hospital Waterford

An exhibit was installed at UHW based on photos sent in by mothers of their babies born recently in the service. Organised by Clinical Midwife Specialist -Lactation, Claire Bulfin the exhibit was opened by Nicola O'Rourke (recent mum to baby Rían) and addressed by Paula Curtin, Director of Midwifery, UHW.

The launch also featured senior staff nurses in the UHW Neonatal Intensive Care Unit (NICU), Marie Claire Skehan and Eveleen Herron, who spoke about the starter pack given to mums with all she needs (information and equipment) to get the process of hand expressing started.

### National Breastfeeding Week at UHK

To commence National Breastfeeding Week, UHK specially designed celebration posters were on display throughout the Unit. Pull up posters first designed in 2020 which displayed four images of maternity service staff in UHK feeding their newborn babies, were on display in the antenatal waiting areas, postnatal ward and Special Care Baby Unit (SCBU).



With support from the Infant Feeding Committee, Infant feeding Coordinator, Mairead O'Sullivan, hosted a virtual coffee morning via WebEx on 1 October for past service users of the maternity department. This was received well by the service user group and attended by Maternity CMM3, Mary Stack Courtney, Practice Development Coordinator, Priscilla Lyons, Business Manager, Janice McHugh and cAMP, Joann Malik. The morning provided an opportunity for staff to hear back from mothers on how their breastfeeding journeys had evolved over the last weeks and months with a variety of topics discussed.



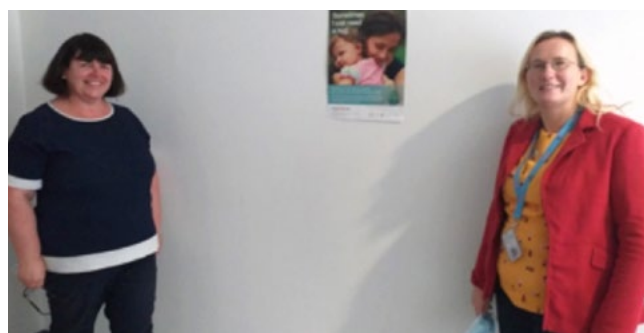
## Joint Quality Improvement Initiative launched by CUMH Breastfeeding Coordinator and Community Public Health Team in Kinsale Primary Healthcare

On 7 October 2021, a new joint quality improvement initiative was launched by CUMH Breastfeeding Coordinator, Susan O'Driscoll, RM, International Board-certified Lactation Consultant (IBCLC), Martina Corkery, Assistant Director of Nursing and Barbara Noonan Sexton RM, Public Health Nurse, IBCLC. This joint initiative was to start a breastfeeding support group outside of the hospital with the community public health nursing teams. This joint initiative was to run as a pilot project for 3 months. The current situation in CUMH is many mothers are contacting maternity services once having left, requesting additional supports. There are many public health nurses who are also IBCLC's in the community and this joint approach aims to increase community supports and also provide a platform for ongoing information sharing falling in line with the Breastfeeding in Healthy Ireland Document.

With the support of Director of Midwifery, CUMH, Katie Bourke and Director of Public Health Nursing, Brenda Golden in the community, Susan facilitated a six-hour breastfeeding refresher course for HSE staff in the Kinsale/ Bandon area. Enhanced training and continued education are associated with better outcomes for breastfeeding initiation and duration. The course was facilitated by Susan and expert guest speakers from Public Health were Sheila Lucey PHN,

IBCLC, West Cork and Claire Crowley, PHN, IBCLC North Lee. Following on from this education day, the Kinsale Breastfeeding support group was established. Barbara Noonan Sexton, a Public Health Nurse and an IBCLC came on board to facilitate this support group.

Susan and Barbara feel strongly that women, dads/ partners need the support once they have left the maternity hospital to ensure they are provided with the right advice at the right time and at the right place to ensure that each mother's breastfeeding journey is a positive and empowering experience. All Public Health Nurses and GP's in Kinsale/Bandon area were able to refer mums and babies to this Breastfeeding Clinic. Appointments booked well in advance with demand for this service ever increasing.



## Visitor Scheduling App for CUMH

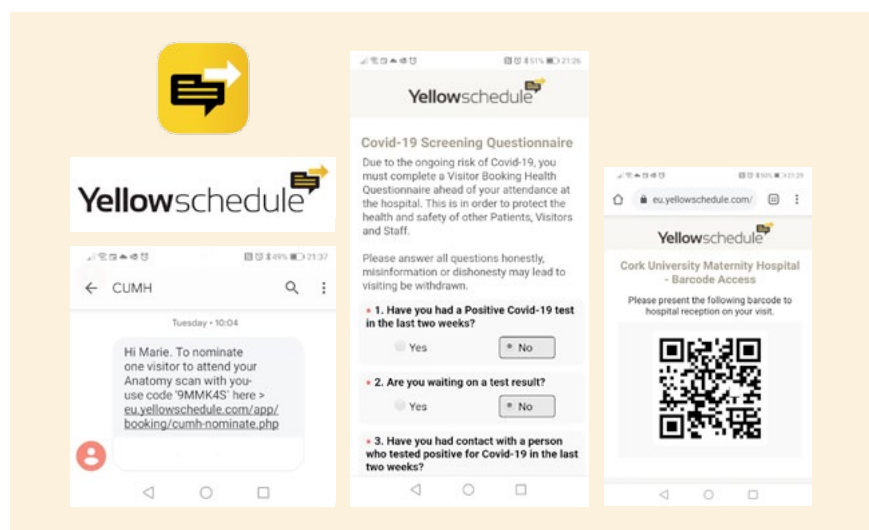
In early 2021, to prepare for the ease of COVID-19 induced visitor restrictions, at CUMH a new Visitor Scheduling App was being worked on in CUMH. The app allows inpatients nominate a visitor who can book their preferred, available visiting time at the hospital. Partners can also make a booking to attend the anatomy scan through the app. This means that there is an accurate single source of data to ensure rapid contact tracing if required and allowed CUMH to recommence access for partners in a safe and controlled manner.

The benefit of an app also means that it reduces the administrative burden of scheduling visitors over the phone and conducting screening for COVID-19 in-person. Nominated partners receive a bar code to enable fast track entry to the hospital. This reduces the demands on resources at

the hospital, reduces queueing and ensures a more efficient approach to partners being able to support their loved ones in a safe environment.

The app was developed by a Limerick based software company called Yellow Schedule who

originally applied to the HIHI Healthcare Innovation Call to deliver safe visiting solutions to hospitals. After testing and fine tuning the app to suit needs at CUMH, the anatomy scan booking went live on 29 March and visitor booking went live in April 2021.





## Welcome Dr Oratile Kgosidialwa, MB BCH BAO, MRCPI, MSc Consultant Physician in Endocrinology and Diabetes

In April, Dr Oratile Kgosidialwa started in her new role as Clinical Lead for the Diabetes in Pregnancy Service in CUMH/ SSWHG. This is a new post and Oratile also started a new role in CUH as an Endocrinology Consultant with commitments in both diabetes and endocrinology and general medicine. Her roles mean that her time is split 50:50 in CUH and CUMH.

As a trainee in the basic specialist training program through the Royal College of Physicians of Ireland (RCPI), Oratile developed an interest in maternal diabetes. When she finished her basic training, she completed a clinical research masters in the field of maternal diabetes and published this work in the British Journal of Obstetrics and Gynaecology. Her interest in both clinical work and research in the area of diabetes in pregnancy was reinforced during this time and Oratile decided to undertake a higher specialist training (HST) in Diabetes and Endocrinology. Upon completion of her HST, she completed an MD under the mentorship of Professor Fidelma Dunne in NUI Galway. This work was focused on improving future research outcome reporting in pregnant women with diabetes in order to improve evidence synthesis in this field and which will then translate to better outcomes for both mum and baby which is something that Oratile is particularly passionate about.

Oratile's long-term plan is that any woman with diabetes in the SSWHG will have similar pregnancy outcomes compared to those without diabetes through improvements in pre-pregnancy, antenatal and post-natal care an area that is often neglected. This will be made possible by providing training and education to both staff and patients in diabetes, in addition to undertaking meaningful research.

Oratile is delighted to be working with a strong multidisciplinary team who also wish to ensure that CUMH is a centre of excellence for the provision of care for women with diabetes and their babies.



## World Prematurity Day

World Prematurity Day is observed each year on 17 November. The objective of the day is to highlight awareness of preterm birth and the challenges associated for both infants and their families. One in ten babies is born premature worldwide.

Every year, across the Directorate our teams shine a light on World Prematurity Day and 2021 was no different.

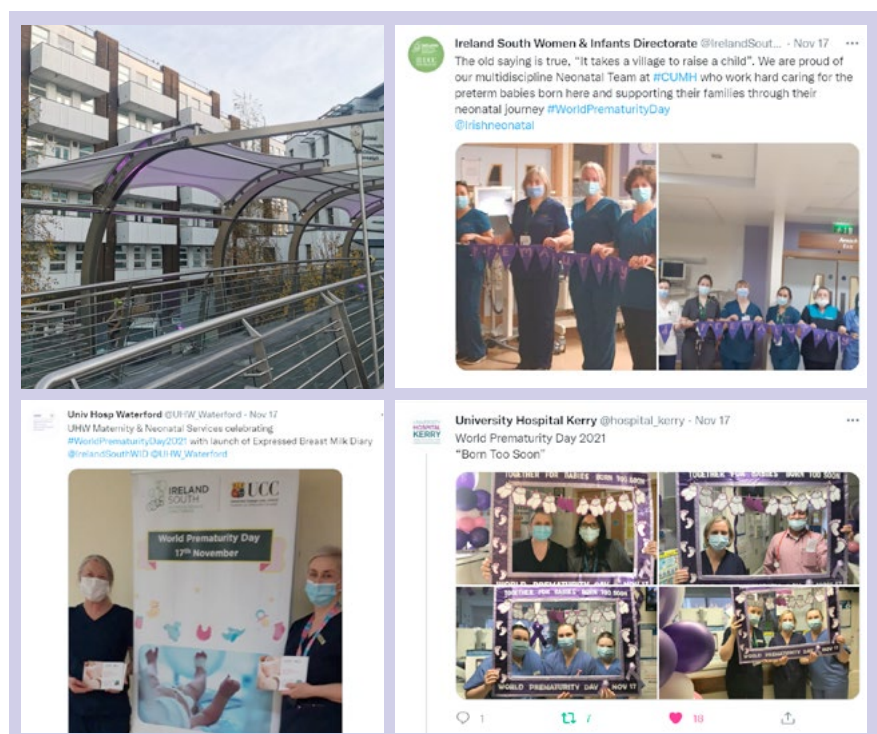
Throughout the day, tweets were shared to support our preterm infant families and showcase the multidisciplinary teams in the Directorate that care for our preterm infants. New World Prematurity Day pull up banners displayed in each hospital/unit.

At UHW, the team launched their Breast Milk Expressing Diary and both UHK and CUMH lit up with purple lighting to mark this important day in the calendar.

Due to COVID-19, it wasn't possible for CUMH NNU to hold their

traditional World Prematurity Day coffee morning, but some tasty cupcakes were available on site to mark the occasion. Thank

you to our teams throughout the Directorate who care for our preterm babies and work so hard to support their families too.





## An Taoiseach, Micheál Martin, T.D. opens new and upgraded facilities at CUMH

On Friday, 15 October 2021, An Taoiseach, Micheál Martin, T.D. officially opened new and upgraded facilities at CUMH that will further enhance the maternity and gynaecological services that the hospital currently offers women and babies in Cork and the surrounding region.

An Taoiseach was met on arrival to CUMH by Professor John R. Higgins, Clinical Director of Cork University Maternity Hospital and Ireland South Women & Infants Directorate and Gerry O'Dwyer, Chief Executive Officer, South/South West Hospital Group.

A short tour of the new and enhanced facilities followed, during which An Taoiseach listened as staff described the benefits that the facilities will bring to patients. The new facilities include an Ambulatory Gynaecology Suite and Gynaecology Day Unit (GDU), which are both located on the fourth floor of the hospital. Referred patients will be seen and treated for specialised day care by staff focused on improving the health of their patients as efficiently as possible.

The existing Induction Room Delivery Suite on the ground floor of CUMH has been enhanced considerably making the suite a more comfortable environment for both patients and staff. The suite now has three private single rooms and a midwife monitoring station, facilitating close monitoring of the birthing mother, and ensuring the patient is at the centre of care at all time and their birthing partner can be with the patient at all times too.

After the official opening, a small and socially distanced group of staff gathered on the fifth floor to hear speeches from Professor Higgins, An Taoiseach and Gerry O'Dwyer. The visit was concluded with An Taoiseach presenting commemorative medals to representatives of the teams at CUMH to honour staff for their hard work during the COVID-19 pandemic. For those who could not be present, the speeches and medal presentations were shared via a live video link.

Photos by Ger McCarthy.



## Ireland South Fleet Rolled Out

Glistening in white and green and proudly brandishing the brand, the fleet of Ireland South cars were distributed to the maternity units of University Hospital Kerry (UHK), University Hospital Waterford (UHW) and TippUH by Miriam Lyons, Head of Operations, Ireland South Women & Infants Directorate.

The cars are to support the provision of midwifery-led care in line with the maternity strategy that is “safe, standardised, of high-quality and offers a better experience and more choice to women,” Maternity Strategy (2016). Women who attend hospitals within the Directorate are provided with an expert service as well as choice with regards to the type of care and birthing options available, such as Early Transfer Home and DOMINO services.

The stylish Hyundai i30 Fastback Estates are branded with Ireland South Women & Infants Directorate on the bonnet and sides, while also featuring the hospital name and HSE logo on the rear. The cars are also used for community outreach where appropriate.



## Smoke Free Start

Smoking in pregnancy is a modifiable factor that directly affects the outcome of pregnancy (MacFarlane, 2018). Although data is limited in Ireland, it is estimated that 10% of pregnant women in Ireland smoke in pregnancy and up to 17% have smoked at some stage of pregnancy. Maternal smoking during pregnancy impairs foetal growth and development and is associated with low birth weight, foetal growth restriction, stillbirth, preterm birth and increased morbidity and mortality for both mother and infant. The National Maternity Strategy – Creating a Better Future Together 2016 – 2026 recommends there is an onsite stop smoking service in each maternity hospital. Ireland’s National Clinical Guidelines No 28 – Stop Smoking, addresses pregnant women who smoke as a priority group.

‘Smoke Free Start’ is Ireland’s first Midwifery-led opt-out on site stop smoking service for pregnant women. It was a joint initiative between the National Women

& Infants Health programme and Tobacco Free Ireland. It was funded by Sláintecare integration fund and commenced in CUMH and the National Maternity Hospital, Holles Street, in August 2020. It was initially a pilot programme and following quantitative and qualitative evaluation of the service was made permanent in August 2021. The success of the programme has informed the roll out of the service to other maternity units in Ireland. In recognition of the achievements of the service in implementing a successful Sláintecare project, ‘Smoke Free Start’ was presented in the Aviva on 31st of May for ‘World No Tobacco Day’ at the TFI ‘Endgame; Leave No-one Behind conference’

The service provides intensive behavioural support to pregnant women to stop smoking using the six week Standard Treatment Programme. Being supported doubles a woman’s chances of stopping smoking compared to

self-care. During 2021 the service in CUMH provided support to pregnant women to set a quit date, supported them to stay quit and supported women who had spontaneously quit smoking to stay quit as this cohort have a high relapse rate.



Number of women referred to the service in 2021	Number of women who received standard treatment programme in 2021	Number of women who set a quit date in 2021	Number of women who spontaneously quit smoking and were supported to stay quit in 2021	Smoke Free Babies Born in 2021
554	435	88	75	148



## An update on MaternityONESouth

MaternityONESouth paused when the last meeting in March 2020 was cancelled due to COVID-19. However, during 2021, thanks to funding provided by NMPDU for one year MaternityONESouth recommenced with Kate Lyons named as project manager. Kate was originally a committee member and is familiar with the project that was started in 2019 by Katie Bourke, Director of Midwifery, CUMH and Dervla Hogan, SSWHG Project Management Office Liaison.

In MaternityONESouth, the ONE stands for Obstetric and Neonatal Emergencies. The project was developed in response to the Health Information and Quality Authority (HIQA) published 'Guide to HIQA's monitoring programme against the National Standards for Safer Better Maternity Services, with a focus on obstetric emergencies.'

The purpose is to create a maternity network training strategy for obstetric emergencies and develop standardised policies, procedures, protocols and guidelines (PPPGs) across the Directorate, pool resources and avoid duplication of effort. This is a key benefit of being part of a maternity network

like Ireland South Women & Infants Directorate. This project aims to improve the safety and quality of the service we provide to women and their babies when emergencies occur, and to ensure all our staff have access to evidence-based up-to date policies and training. Together we are stronger, and when we share resources and experiences, we can all feel even more proud of the work we do.



## Joan O'Donovan retires after 42 years

The Neonatal Unit in Cork University Maternity Hospital (CUMH) bid farewell to Joan O'Donovan, CNM2 who retired in March 2021 after a career spanning 42 years. Known as gentle, kind and experienced, Joan is a person who has the right words for everyone. Joan trained as a general nurse in the North Infirmary and caught the tiny baby bug in the Crumlin, when she was there doing her paediatrics training. Joan spent her career in the Erinville and then the CUMH Neonatal Unit (NNU). She will be missed by the team at CUMH.



## Penneys raising Euros for CUMH Neonatal Unit

On 1 May 2021, Penneys in Wilton, Cork started an epic fundraising event, with staff doing a full marathon each week in May to raise funds for the unique Neonatal Family Sanctum Project for mothers, babies and families at CUMH.

By the end of May, Penneys staff had raised close to €6.5k to go towards the building of this special sanctum located in the CUMH central garden, near the Neonatal unit. The Sanctum is to be a dedicated space for parents and families with their baby receiving palliative care, or for a seriously ill mother to access within the central garden of CUMH.

Stepping outside, away from the busy clinical critical care environment is important for families. They will be able to share a small glimpse of nature and see the sky in a place of quiet, solace and privacy.

This Neonatal Family Sanctum Project has received support from different sources to date, including Apple who set up an internal fundraiser for staff to raise funds in September 2020.





## EDUCATION

### CUMH virtual classes



With face-to-face parent education classes paused due to COVID-19 restrictions in early 2021, CUMH turned to providing a variety of virtual antenatal, breastfeeding and nutrition classes to expectant and new mothers.

The virtual antenatal classes were launched in January, later than planned due to technical challenges. As a result of high demand, expectant mothers were asked to wait until they were 32 weeks before booking into the classes. An average of 15 women attended each antenatal class. Partners were also encouraged to attend. Classes were interactive with questions coming in throughout each session.



Following on from initial online classes, CUMH offered further online education in antenatal classes for VBAC (Vaginal birth after C-section) and DOMINO offered by the DOMINO team.

The CUMH team of dietitians offered nutrition in pregnancy classes for expectant mothers from 12 weeks up until 20 weeks gestation. CUMH Lactation Consultants, Veronica Daly and Susan O'Driscoll also ran antenatal breastfeeding classes on a weekly basis on Monday mornings for 2.5 hours. Feedback on the virtual classes was overwhelmingly positive. Well done to everyone who worked hard to bring virtual education classes to the women of our region.

### Higher Diploma in Midwifery

Hearty congratulations to our midwives, who successfully completed the Higher Diploma in Midwifery and officially graduated in March 2021. We wish them all the best in their career and CUMH are delighted to have them as part of the team.



### NUI Dr Henry Hutchinson Stewart Medical Scholarships

The National University of Ireland, of which University College Cork is a constituent university, grant a number of scholarships each year. UCC's School of Nursing and Midwifery has had a remarkable record of success in the Dr Henry Hutchinson Stewart Medical Scholarships and Prizes over many years. 2020 was no exception with Niamh Enright being awarded 1st Prize Scholarship in Midwifery. In addition, Chloe Doyle received 1st prize Scholarship in Mental Health Nursing and Emma Cullen- Second Prize Scholarship in Mental Health Nursing. Congratulations to the students and their mentors. Well done.



## HIHI Healthcare Innovation Diploma Graduates

Kannan Natchimuthu, Senior Neonatal/Paediatric Occupational Therapist, CUMH was the first member of staff in Ireland South Women & Infants Directorate to complete the HIHI Healthcare Innovation Diploma. He completed his diploma in September 2020, officially graduating in January 2021 to join a growing network of HIHI Healthcare Innovation Champions, qualified to lead and shape the direction of Irish healthcare innovation.

Caitriona Heffernan, Innovation Programme Lead, CUMH is another recent graduate of the HIHI Healthcare Innovation Diploma and another high potential change maker in Irish health. She was named one of the top 100 Professionals in Healthcare in 2020

by Hospital Professional News due to her passion for improvement and innovation. Congratulations to both Kannan and Caitriona on your achievements.



## CME Classroom upgrade

The Centre of Midwifery Education (CME) welcomed the arrival of new IT equipment, funded by Ireland South Women & Infants Directorate in both CME classrooms at CUMH. Each classroom was fitted out with an extra-large 86-inch, HD screen and updated computer equipment to enhance the teaching and learning experience.

The CME team found the new equipment to be both intuitive and dependable, improving the educational experience and benefitting staff and patients alike.

Setting up the equipment was a collaborate effort involving CUH IT support team, the engineering team and the multidisciplinary team in the CME.



## The Neonatal Resuscitation Programme (NRP)

The Neonatal Resuscitation Provider programme (NRP- 7th Ed) is a mandatory training programme for those working with newborns or infants in clinical practice. NRP is one of the key training courses overseen by the shared MaternityONESouth project across our maternity network.

NRP recertification is required every two years. Midwives, nurses, neonatal doctors and paramedics currently attend, leading to a good multidisciplinary skill mix at each course. The NRP programme is coordinated by Breda Hayes in CUMH, and the clinical lead for the programme is Dr Liam O'Connell, Neonatology Consultant, CUMH.

The NRP program was developed by the American Heart Association and the American Academy of Paediatrics. The aim is to teach an evidence based approach to newborn care and to use a structured methodology and teamwork approach at the time of birth to provide the best outcomes for the newborn infant.

The course is offered in a half-day workshop in CUMH as well as onsite in all our maternity units in Ireland South Women & Infants Directorate. It consists of NRP skills training, simulation and debriefing. NRP

utilises a blended-learning approach, including online examination and computer based simulation exercises of case scenarios. Simulation focuses on developing effective teamwork and communication.

Barriers to smooth running of NRP in 2021 included the COVID-19 pandemic which limited training numbers in classrooms. The HSE cyberattack also added to the challenge, in particular communication about the course and setting up of online learning.





## Congratulations to MSc Midwifery graduates



Hats off to the three midwives who graduated with their MSc Midwifery on 15 March 2021. Congratulations to Lorna Sewell, Midwife from CUMH and Roberta Spillane, Acting Clinical Midwife Manager 2 and Noreen Preston-Ryan, Clinical Midwife Manager 2, both from TippUH. Well done all on your success in completing you masters, despite the COVID-19 pandemic.

---

## First student nurse clinical placement in UHK

The team at UHK was delighted to welcome two first year student midwives from UCC on a clinical placement in the UHK Maternity Service – the first ever to take place from UCC. Saoirse Horgan and Maud Kelly started their clinical placement on 1 May 2021. While CUMH, UHW and TippUH have all had student midwives from UCC on clinical placement, this took additional time to be rolled out in UHK. Sincere thanks to all who worked in the background to make this a reality.



---

## Kangaroo care awareness day



On 15 May 2021 Kangaroo Care Awareness Day was celebrated in CUMH. Kangaroo Care was first developed in the 1970s in Columbia as a response to a shortage of caregivers and resources. Mothers were used as incubators to maintain their babies body temperatures, provide nutrition and appropriate stimulation. This led to reduced morbidity and mortality rates.

Kangaroo Care is now the gold standard across the world in caring for babies in neonatal units. Kangaroo Care is the practice of holding baby in an upright prone position, skin-to-skin against their parent's chest. The baby experiences their parent's heart sounds, rhythmic breathing and warmth, all of which offers security and gentle stimulation of the auditory, tactile, vestibular and

thermal sensory systems of the preterm baby.

Studies have shown that Kangaroo Care leads to a preterm baby that is more physiologically stable, has better temperature regulation, reduced oxygen requirements and better sleep which leads to positive effects on baby brain growth and development. For parents there are many proven benefits too. Parents feel calmer, more empowered and confident in caring for their baby; it supports bonding and reduction in the incidence of postnatal depression and posttraumatic stress disorders. For mothers it increases milk supply and triggers the production of maternal antibodies to help her baby fight infections. For the staff, babies are more stable, and it increases job satisfaction too.



## INNOVATION & RESEARCH



### Professor Eugene Dempsey is the first ever Chair in Neonatology in Ireland

Professor Eugene Dempsey, Consultant Neonatologist in CUMH has been appointed to the Horgan Chair in Neonatology – named after UCC alumnus Daragh Horgan and his wife Anne who recently gave a million-euro donation to support the important research ongoing at the INFANT centre.

Led by Professor Geraldine Boylan, the INFANT centre is Ireland's only dedicated research centre spanning maternal and child health. Commenting on the appointment, Mr Horgan said: *"Research into paediatric medicine generally is significantly underfunded and so supporting neonatal research at the INFANT centre is incredibly important. We are huge cheerleaders of Professor Boylan and her team and have helped the centre with our support for nearly seven years. Improving care for newborn or pre-term babies is vital: for their longer term outcomes, for the impact it has on their families, and on the cost to society as a whole. We are delighted that Professor Dempsey will become the new Chair of Neonatology – with his energy and expertise, we are sure that the team will press home this advantage in making INFANT a world leader in neonatology."*

Professor Eugene Dempsey, the new Horgan Chair in Neonatology, Infant Centre, UCC and Consultant Neonatologist at CUMH, described his priorities for the new role: *"This new role represents an exciting opportunity to grow our world leading research programme in newborn care. Over the next 5 years we will continue to develop strong international collaborative links in newborn clinical trials. We will lead and partner in some of these exciting multinational trials all aiming to generate new knowledge and enhance patient outcome. These trials encompass many important aspects of clinical care including newborn stabilisation at delivery, studying antiseizure medication in full-term newborns and measuring brain oxygen levels non-invasively in preterm infants. We will continue to deliver high quality evidence based clinical care to our families."*

Professor John Higgins, Clinical Director of CUMH commented: *"CUMH is delighted to support the joint appointment of the first Chair in Neonatology in Ireland at UCC. The ability to unlock innovation potential from the health system and provide the best clinical care for mothers and newborns is driven by high calibre leadership that spans academic and clinical domains. This appointment is a strategic investment in clinical and research capacity and we congratulate Professor Dempsey and acknowledge the significant gift that made this possible."*

## New Innovation Lead in Ireland South: Caitriona Heffernan

In 2021, we were delighted to welcome Caitriona Heffernan as Innovation Programme Lead for Ireland South Women & Infants Directorate.

Caitriona is the winner of the 'Outstanding Graduate Award' following her completion of the Post Graduate Diploma in Healthcare Innovation at Trinity College Dublin in 2019 and is seen to be a high potential change maker in Irish health, being named one of the top 100 Professionals in Healthcare last year by Hospital Professional News.

Based in CUMH, the Innovation Programme Lead is the first role of its type in a HSE hospital in Ireland. Its primary aim is to support the vision of creating an innovative healthcare system that implements new service models, products and technologies to support service delivery and improve outcomes for our patients.

As this is a new role both locally and nationally, Caitriona's focus in 2021 was to establish the role and see how it can best add value within the existing ecosystem of the maternity hospital and other maternity units in Ireland South Women & Infants Directorate. On a practical level, her two first main areas of focus are 'Innovation in and Innovation out'.

In terms of 'Innovation in,' Caitriona works closely with the Health Innovation Hub of Ireland (HIHI)

to introduce to the hospital new products or technologies that represent value to our patients, staff and the wider organisation. For the 'Innovation out' agenda, Caitriona acts as a support for staff in assisting them to define and develop some of their great ideas into real actionable solutions to healthcare challenges. With Caitriona's new role, the future looks bright for innovation at Ireland South Women & Infants Directorate!



## INFANT – AI4Life

The INFANT Centre's AI4Life team was one of six teams nationally shortlisted and funded over 2020 and 2021 to compete in Science Foundation Ireland's AI for Societal Good Challenge. The Challenge, as well as the INFANT team's AI-4-Life solution, featured in the documentary Science To The Rescue on RTÉ on 10 November 2021.\*

The AI4Life team, led by Professor Liam Marnane, Professor Geraldine Boylan and Dr Mairead O'Riordan, is harnessing Artificial Intelligence to address the challenge of improving intrapartum fetal monitoring. Intrapartum fetal monitoring is used during labour to identify oxygen deprivation to the fetal brain and to help reduce the risk of neonatal morbidity and mortality. Lack of oxygen at birth is responsible for 23% of all deaths in full-term infants worldwide and approximately 1.15 million infants survive with significant disability.

Interpretation of the fetal heart trace can be challenging in the busy labour room environment. The AI4LIFE team is developing a novel, easy to interpret,

fetal monitoring system, which will use artificial intelligence (AI) assisted interpretation. Other clinical data will also be used to enhance decision making. It is hoped that by enabling a more accurate assessment of fetal wellbeing during labour, the prevalence of oxygen deprivation to the fetal brain may be reduced. The team is developing a software algorithm to simplify interpretation of data, guiding clinicians on the appropriate intervention. Machine learning is used to train the algorithm to identify patterns in the data that suggest the baby is not tolerating labour as well as expected. The AI4LIFE project has the potential to impact current clinical practice and significantly reduce neonatal morbidity and mortality.



\*Currently featured on the RTÉ website.

[www.rte.ie/lifestyle/living/2021/1112/1259533-scienceto-the-rescue-ai-technology-forfetal-wellbeing/](http://www.rte.ie/lifestyle/living/2021/1112/1259533-scienceto-the-rescue-ai-technology-forfetal-wellbeing/)

## HRB Irish Network for Children's Clinical Trials (In4kids) led by Professor Geraldine Boylan, University College Cork

Ireland has one of the highest proportion of children in the EU. Despite this, for decades clinical trials of new therapies in children have been extremely limited. Most medicines prescribed for children and newborns have never been tested in these populations, as the focus of pharmaceutical companies has been on obtaining marketing approval in adults.

Medicines take years to reach the bedside in paediatric care. Therefore, to improve the health and well-being of future children, this needs to change. This is an exciting time for paediatric care in Ireland, with the amalgamation of the three largest children's hospitals in Ireland to form Children's Health Ireland (CHI).

At the same time, many well-established paediatric researchers working in centres throughout Ireland have recently been brought together to form the In4kids network. In4kids is the national hub for the European conect4children (c4c) network for research collaboration and clinical trials.

**<https://conect4children.org/>**

In the first three years, the network will implement three, already funded, clinical studies due to begin recruitment in 2021. In4kids will allow healthcare staff throughout Ireland to work together to develop a multidisciplinary network, with access and support for participation in national and international clinical trials. The network will develop educational and training resources for all healthcare staff involved in paediatric

trials to ensure best practice. Our national young person's advisory group will allow well-informed children to provide input into the research priorities of the State.

The Network will work closely with CHI, established Clinical Research Facilities and the newly established Paediatric Academic Health Science Network. In4kids will build a sustainable Clinical Trial Network (CTN) of established paediatric researchers, fostering new research collaborations whilst cementing existing relationships. The Network will allow Irish children to access cutting edge therapies and medicines, through well governed trials, conducted to the highest international standards.



## 20th Annual Research Conference by UCC School of Nursing and Midwifery

The UCC School of Nursing and Midwifery's 20th Annual Research Conference took place virtually on Thursday, 4 February 2021. This year's conference was called *International Year of the Nurse and Midwife: Responding to Crisis* and was well attended with 181 attendees tuning in on the day.

The conference showcased research that relates to the significance of the first International year of the Nurse and Midwife in 2020, or to the unprecedented global pandemic and the response of Nursing and/or Midwifery to the unfolding crisis.

The conference highlight was the keynote address by Soo Downe OBE, Professor in Midwifery Studies, on the impact of COVID-19 on maternity care.

The conference worked well in the online space, although attendees did miss out on networking opportunities.





# Neonatology Report

Throughout 2021, Ireland South Women & Infants Directorate provided Level 3 neonatal services against the backdrop of the COVID-19 pandemic and the HSE cyberattack, with all the resultant challenges relating to staff shortages and how to best continue providing compassionate family-centered care.

Dr Brendan Murphy was Clinical Lead for Neonatology, Ireland South Women & Infants Directorate. Each of the three Maternity Centres at University Hospital Waterford (UHW), Tipperary University Hospital (TippUH) and University Hospital Kerry have Consultant Paediatricians nominated as Clinical Leads for Newborn Care, Dr Robert Kernan in University Hospital Waterford, Dr Daniel Onyekwere in University Hospital Kerry, and Dr John Walsh in Tipperary University Hospital.

## CUMH Neonatal Unit

The CUMH neonatal unit is the tertiary neonatal centre within the Directorate supporting the neonatal services at TippUH, UHW and UHK. CUMH also accepts infants requiring neonatal neurocritical care and therapeutic hypothermia from University Maternity Hospital Limerick and other centres when required. As a neonatal neurocritical care unit, CUMH is the only centre providing therapeutic hypothermia outside Dublin.

In 2021 CUMH NICU admitted 1,325 infants to the neonatal unit with a total of 1,411 admissions (including readmissions) overall. This numbers includes 81 very low birth weight infants ( $\leq 1500\text{g}$ ) and 96 infants  $< 32$  weeks gestation. Sixteen infants received therapeutic hypothermia, 9 of whom were inborn in CUMH and 7 were transferred in for hypothermia treatment.

## CUMH Neonatal Nursing Update

Throughout 2021, facilitative meetings, study days and online training continued although forced to pause until safe to resume post-HSE cyberattack. Staff embraced this positively ensuring the continuity of a high-quality service being delivered despite ever changing dynamics.

Two nurses in the unit graduated with the Postgraduate Diploma in Neonatology Nursing having been facilitated online for the duration of the course. In September 2021, five additional nurses from the unit enrolled and commenced the postgraduate one-year course online in collaboration with UCC.

## CUMH Neonatal Speech and Language Therapy Service (SLT)

The Neonatal SLT provides a Feeding, Eating, Drinking and Swallowing (FEDS) Service to inpatients, and outpatients and facilitates objective

assessment video fluoroscopy. This service was established in 2007, upon the opening of Cork University Maternity Hospital (CUMH). The FEDS Service is a subspecialty which encompasses developmental feeding issues from birth as it impacts nutritional, medical, physical development and psycho-social aspects which form the foundation for the infant's life journey.

Infants are referred as inpatients within the Neonatal Intensive Care Unit or via the Neonatologists' Outpatient clinics. The SLT service will follow infants' progression with feeding skills in keeping with an infant's developmental milestone achievements. Pending the pathway of the baby, egress from this service could be:

1. Discharge from service upon meeting age-appropriate FEDS skills.
2. Referral to the local network for ongoing developmental support once swallowing safety and adequate growth has been achieved and maintained.
3. Upon transfer from the Neonatology service to the Paediatric service of an acute facility for ongoing medical management of a new acute or long-term condition.

In 2021, there was 1.0 WTE SLT on the Neonatal service. 48% of all the premature infants in the Neonatal unit that were born under 34 weeks gestation were seen by SLT for individual developmental feeding support.

## CUMH Neonatal Physiotherapy

Throughout 2021, the Neonatal Physiotherapy team continued to provide highly skilled physiotherapy input to the babies in the Neonatal unit and their subsequent outpatient follow-up to age two.

Activity continued to be high and the provision of multidisciplinary teamwork for the Neonatal Neurodevelopmental Thursday clinics commenced with good success.

The team continued to provide developmental care based on the NIDCAP principles in the NICU, involved in the education provision to all staff members involved in the care of these vulnerable babies to optimise their developmental outcomes.

0.5 WTE continues to be seconded to the INFANT research centre investigating the effect of HIE on infant development.

An audit on kangaroo care in the NICU commenced in 2021 and contributed to the UCC neonatal nursing postgraduate course as well as the NCHD induction and education.

100% of babies seen in the Neonatal unit are offered follow up appointments at CUMH or arranged in their local area.

## CUMH Neonatal Dietetics Service

The neonatal dietetics service provides nutrition and dietetics support to both the neonatal unit and neonatal outpatients.

In 2021, Dr. Ann-Marie Brennan, Clinical Specialist Neonatal Dietitian led the implementation of a new innovative standardised parenteral nutrition (SPN) system across all neonatal units in Ireland and, is now the National Model of Care for Preterm SPN in Ireland. By streamlining clinical care, this innovation has delivered superior clinical and economic outcomes (in excess of €100,000 cost savings to CUMH and ~ €500,000 nationally pa).

## Key Achievements 2021

- The unit continued to support the NNU in Dar es Salaam in Tanzania with policies/guidelines/information, as they required them. Unfortunately, staff from the unit were unable to visit with the COVID-19 restrictions.
- Ann Buckley was honoured with a bursary of €2,500 for the unit from Water Wipes for her positive impact on the care and lives of babies and their families in the unit. Ann was nominated by a parent for this extraordinary healthcare professional award for the high level of neonatal care she provided.
- The unit became involved in its first Read-a-thon which ran for 10 days in September in the unit. The unit was placed 13th from the 120 units worldwide that participated, being ranked on the number of reading encounters over this period. It proved a very successful initiative led and coordinated by Susan Vaughan. There was much enthusiasm and participation from staff and parents as they embraced this activity and new concept within the unit.
- The Neonatal Videofluoroscopic Swallowing Service resumed in 2021 following a 14-month hiatus due to COVID-19 and a shortage of a

Barium Sulphate product suitable for infants with dysphagia. We are the first service in Ireland to receive approval to use Varibar® Barium Sulphate- the only premixed, premeasured barium product line consistent with IDDSI (internationally recognized diet and fluid consistency). The standardisation of our protocol provides continuity and uniformity in videofluoroscopy results, lending to more accurate diet/fluid recommendations outside the study. We are the only Neonatal Unit in the country which offers this service to our inpatients and outpatients.

## Key Challenges 2021

- Staff recruitment and retention: Staffing recruitment and retention remained a major focus throughout 2021.
- Service delivery: The neonatal unit continued to face the same challenges that the COVID-19 pandemic created across almost all departments in the CUMH with staff shortages due to illness and self-isolation.
- From mid-May, we were simultaneously dealing with the severe impacts of the cyberattack on the HSE. Returning to paper documentation and lack of access to any IT resources was challenging but plans and workflows were created. Systems were generated and modified to ensure that the standards of care being delivered to the babies and their families were maintained throughout.
- Across all four neonatal units in the Directorate, we continued to adopt a parent-friendly approach to visiting that aimed to include parents as 'partners in care' rather than visitors, while still being cognisant of the importance of protecting the infants, their parents and healthcare staff from COVID-19. There was no restriction to the time parents could spend with their infants but we continued to ask that they were present one at a time in order to minimise the numbers of people, including staff, in the unit at any given time.
- In the case of critically unwell infants or end of life care we continued to individualise the approach ensuring that parents and key supporting family members were present together at the cot side.



## University Hospital Waterford

UHW is the Level 2 centre within the Directorate. It catered for 1,765 births in 2021. In line with the National Neonatal Model of Care, UHW offers inpatient care for neonates > 28 weeks gestation, including referrals from Tipperary University Hospital (TippUH) within the Directorate and from Level 1 centres outside Directorate – within the Southeast Region - Wexford General Hospital and St. Luke's Hospital Kilkenny.

The Neonatal Unit at UHW has 10 NICU and 8 SCBU beds, with 3 isolation rooms and a 1 negative pressure room. The technical skill set available in UHW includes the ability to care for neonates who need advanced respiratory support including ventilation and nitric oxide inhalation, thoracostomy chest drains, Percutaneous Intravenous Central Catheter (PICC) insertion and care for PN nutritional support and neurological monitoring with Amplitude Integrated EEG (CFAM) and induction of therapeutic hypothermia pre-transfer for infants with Hypoxic Ischemic Encephalopathy.

Our team also actively transfers out to Level 3 Neonatology centres and Children's Health Ireland as clinically indicated, whilst facilitating retro-transfers for step down care of babies who no longer need tertiary care. The care of our infants is supported with access to a Paediatric Dietician, Paediatric Physiotherapist, a Lactation Consultant, and a Liaison Perinatal Mental Health CNS. Our department is also supported with collaboration of on-site specialist services, including Paediatric Radiology for cranial ultrasound screening, Paediatric Ophthalmology for ROP screening and Paediatric Orthopaedics through the Regional DDH clinic.

## University Hospital Kerry

In 2021, the Neonatology Services in UHK continued to provide an extensive neonatology/newborn services against the backdrop of COVID-19 pandemic with all the resultant challenges relating to staff shortages due to illness/isolation and hospital visitor restrictions. Neonatal services, UHK is a Level 1 neonatology service which includes 10 bedded Special Baby Care Unit (SBCU) with facilities to

care for, stabilise and ventilate up to two critically ill babies. There are two HDU cots in the unit, run by a highly motivated baby and family friendly, medical team. Due to ongoing COVID-19 restrictions on access to our unit, 2021 was a difficult year for both parents and staff.

The clinical teams in Neonatology engage in robust clinical educational activities with weekly neonatal resuscitation simulation as well as weekly maternity governance and quarterly perinatal morbidity and mortality meetings. UHK also supports the ongoing education of UCC medical students and nurses from both MTU and UCC.

University Hospital Kerry Neonatal Services celebrated World Prematurity Day, "Born Too Soon" on 17 November 2021. The day was to highlight awareness of preterm birth and the challenges associated for both infants and their families. It wasn't possible for UHK NNU to hold a coffee morning due to COVID-19 restrictions, however cake and coffee were available on site to mark the occasion. Staff made great efforts to decorate the unit and mark what a very special day it is.

## Tipperary University Hospital

As the COVID-19 pandemic stretched into 2021, it continued to bring significant challenges to our Neonatal services. Staffing was maintained throughout the year but staff absences were ongoing as a result of COVID-19. In May the HSE cyberattack further compounded difficulties when we had to return to paper based systems as a result of the loss of digital systems. Preterm infants are our most vulnerable patients, requiring specialised and individualised care. The Neonatal team at TippUH worked tirelessly around the clock to ensure the care of our preterm infants continued to be delivered in the best way possible despite the challenging circumstances we found ourselves in.

In 2021, the number of births at TippUH increased on 2020. As a result, more preterm deliveries were noted. As a result of the ongoing COVID-19 pandemic, visitor restrictions to Special Care Baby Unit continued at Tipperary University Hospital.

**Table 1.0: Number of infants admitted to the Neonatal Unit**

Year	(N)
2021	1325

**Table 1.1: Number of admissions to the Neonatal Unit (includes readmissions)**

2020	1442
2021	1411



**Table 1.2: Admissions to Neonatal Unit**

Admissions to Neonatal Unit	N (%)
Total admissions	1411
Primary admissions	1325 (94)
• Labour ward	791 (60)
• Postnatal ward	464 (35)
• Home	53 (4)
• Other hospital	17 (1)
Readmissions	86 (6)
• Postnatal ward	34 (40)
• Home	26 (30)
• Other hospital	26 (30)

**Table 1.3: Gestational age categories of primary admissions to neonatal unit (N=1325)**

Gestation (weeks)	N (%)
≤ 28	44 (3)
29 - 31	52 (4)
32 - 36	371 (28)
≥37	858 (65)

**Table 1.4: Gestational age (weeks) of primary admissions to neonatal unit (N=1325)**

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
8	5	4	7	10	10	10	17	25	25	45	87	91	123	208	213	210	133	92	2

**Table 1.5: Birthweight profile of primary admissions to neonatal unit (N=1325)**

≤ 500g	501-1000g	1001-1500g	1501-2000g	2001-2500g	2501-4500g	≥4501g
3	33	45	95	162	967	20

**Table 1.6: Reason for admission to neonatal unit (N=1411)**

Category	N (%)
Prematurity	248 (18)
Respiratory	396 (28)
Gastrointestinal	345 (24)
Infection related	115 (8)
Neurological	120 (9)
Low birth weight	25 (2)
Congenital abnormality	44 (3)
Cardiac	27 (2)
Others	91 (6)

Criteria for deciding reasons for admission: this is the primary reason for admission at the time of admission, this is not the final diagnosis at time of discharge, and the criteria are as follows:

Prematurity defined as <35 weeks, all infants born at 34+ 6 weeks are automatically admitted to the neonatal unit.

**Respiratory:** Any cause respiratory distress eg TTN pneumonia, meconium aspiration, RDS in near term infants, apnoea/cyanotic spells.

**Gastrointestinal:** Jaundice, poor feeding, vomiting, bilious vomiting, hypoglycaemia, concern re weight gain.

**Infection related:** Any infant where the primary concern is specific to infection, sepsis/suspected sepsis/significant risk of sepsis based on septic risk factors, skin/scalp/bone

infection, does not include infants with respiratory distress who have a partial septic screen.

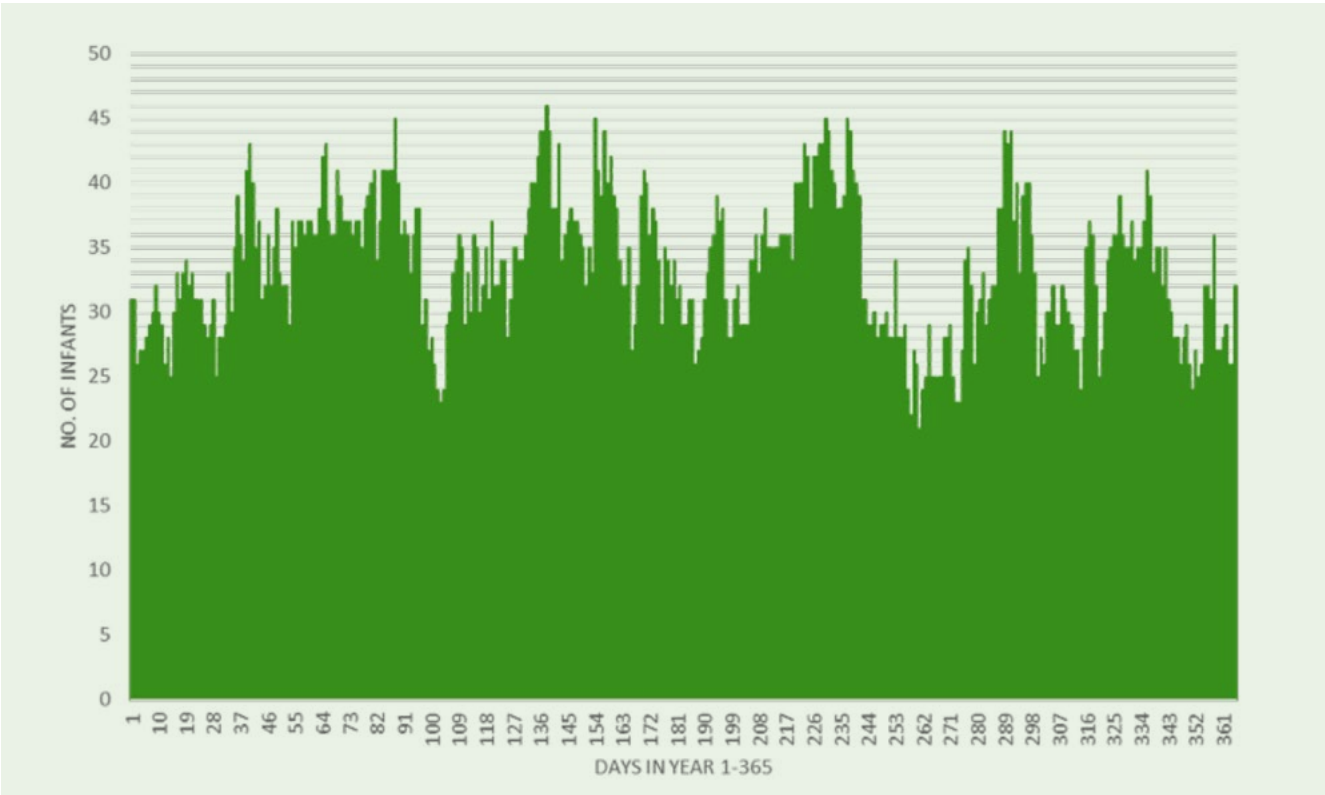
**Neurological:** Where the primary concern is neurological either central or peripheral, encephalopathy (neurological cause) seizures, abnormal movements, low cord pH, low apgars, hypotonia, neonatal abstinence syndrome.

**Low birth weight:** >35+0 weeks gestation and < 2.0kg.

**Congenital abnormality:** Congenital anomalies either structural or genetic (chromosomal/deletions/gains/single gene), when known at time of birth.

**Cardiac:** Infant with a known or suspected cardiac condition.

**Others:** Miscellaneous category when infant does not fit into any of the above categories.



**Figure 5: Neonatal Unit Cot Occupancy**

Cot occupancy is measured as the number of infants in the neonatal unit at 08.00 each day. The median occupancy was 34 (IQR 29, 37).

## Vermont Oxford Network (VON) infants

Infants with a birthweight between 401g and 1500g and/or a birth gestation from 22 weeks to 29 weeks are reported annually to the VON database.

**Table 2.0: Number of infants reported to VON**

Year	(N)
2021	83
2020	84
2019	71
2018	86
2017	79
2016	91

**Table 2.1: Clinical characteristics of infants reported to VON 2021 (N=83)**

	2021
Inborn	80 (96)
Male	43 (52)
Prenatal Care	83 (100)
Chorioamnionitis	24 (29)
Maternal Hypertension	16 (19)
Antenatal Steroids	79 (95)
C-Section	53 (64)
Antenatal Magnesium Sulphate	68 (84)
Multiple Gestation	19 (23)
Congenital Malformation	11 (13)
Small for Gestational Age	18 (22)

**Table 2.2: Summary of respiratory support (N=83)**

Intervention	N (%)
Intubation in delivery suite	38 (46)
Surfactant (in delivery suite)	36 (43)
Surfactant (at any time)	53 (64)
Mechanical Ventilation	51 (61)
High Frequency Ventilation	14 (17)
CPAP (at any time)	66 (80)
Initial CPAP and subsequent intubation	14 (17)
Nitric Oxide	12 (14)

**Table 2.3: Survival to discharge by gestation (N=83)**

Gestation (weeks)	N	CUMH 2021 N (%)	CUMH 2015-2020 (%)	VON 2021 (%)
23	8	4 (50)	64	45
24	5	2 (40)	75	64
25	4	4 (100)	90	75
26	7	4 (57)	83	82
27	9	8 (89)	81	89
28	10	9 (90)	100	92
29	10	8 (80)	92	94
30	10	10 (100)	95	96
31	8	7 (87)	100	96
≥ 32	12	12 (100)	91	95



**Table 2.4: Survival to discharge by birthweight (N=83)**

Birthweight (g)	N	CUMH 2021 N (%)	CUMH 2015-2020 (%)	VON 2021 (%)
≤500	3	1 (33)	56	28
501 – 750	15	10 (67)	78	64
751 – 1000	20	14 (70)	88	86
1001 – 1250	17	16 (94)	94	94
≥1251	28	27 (96)	94	96

**Table: 2.5: Major morbidities amongst infants reported to VON (N=83 unless otherwise stated)**

Mortality	15/83
Admission temperature < 36°C	8/79 (10)
Pneumothorax	6 (7)
Oxygen at 28 days	30/59 (51)
Oxygen at 36 weeks CGA	12/51 (23)
Postnatal steroid therapy	11/82 (13)
Home oxygen	1/49 (2)
Ibuprofen for PDA	7 (8)
PDA ligation	2 (2)
NEC	4 (5)
NEC surgery	4 (5)
Coagulase negative Staph. in blood culture	15/76 (20)
Fungal infection	1/76 (1)
Grade 3 or 4 IVH	6/78 (8)
Cystic PVL	0/78 (0)
Neurosurgery	1/83 (1)
Retinopathy of prematurity (any stage)	18/59 (30)
Retinopathy Surgery	6/81 (7)

**Table 2.6: Summary of infants with neonatal encephalopathy (total N=25)**

	Inborn	Outborn
Hypoxic ischaemic encephalopathy	12	6
• Severe (grade 3)	2 (both died)	1
• Moderate (grade 2)	5	5
• Mild (grade 1)	5	0
Non HIE encephalopathy	4	3
Therapeutic hypothermia	9*	7

\*One infant who was cooled and was subsequently diagnosed with myotonic dystrophy, therefore is included in therapeutic hypothermia numbers but not included in encephalopathy numbers. \*\*One 34 week infant with a cerebrovenous sinus thrombosis at 34 weeks gestation is not included in the encephalopathy numbers as was < 35 weeks gestation

# Obstetrics Report

## Maternal and Delivery Characteristics

**Table 3.0: Frequency (N) of maternities and births 2014-2021**

	Ireland South	CUMH	TippUH	UHK	UHW
<b>Mothers delivered 2021</b>	11,210	7,273	935	1,270	1,732
<b>Mothers delivered 2020</b>	10,398	6,876	771	1,141	1,610
<b>Mothers delivered 2019</b>	10,773	7,023	875	1,177	1,698
<b>Mothers delivered 2018</b>	11,359	7,401	960	1,230	1,768
<b>Mothers delivered 2017</b>	11,354	7,224	979	1,349	1,802
<b>Mothers delivered 2016</b>	11,745	7,442	1,017	1,389	1,897
<b>Mothers delivered 2015</b>	12,343	7,903	1,054	1,389	1,997
<b>Mothers delivered 2014</b>	12,473	7,878	1,434	1,087	2,074
<b>Babies born &gt;500g 2021</b>	11,435	7,438	948	1,284	1,765
<b>Babies born &gt;500g 2020</b>	10,612	7,040	782	1,155	1,635
<b>Babies born &gt;500g 2019</b>	11,010	7,204	885	1,193	1,728
<b>Babies born &gt;500g 2018</b>	11,601	7,577	969	1,254	1,801
<b>Babies born &gt;500g 2017</b>	11,577	7,386	982	1,368	1,841
<b>Babies born &gt;500g 2016</b>	12,011	7,629	1,032	1,410	1,940
<b>Babies born &gt;500g 2015</b>	12,620	8,113	1,062	1,406	2,039
<b>Babies born &gt;500g 2014</b>	12,746	8,071	1,454	1,102	2,119

**Table 3.1: Distribution of maternal and delivery characteristics**

	Ireland South Frequency N (%) (N=11,210)	CUMH Frequency N (%) (N=7,273)	TippUH Frequency N (%) (N=935)	UHK Frequency N (%) (N=1,270)	UHW Frequency N (%) (N=1,732)
Nulliparous	4,182 (37.3)	2,785 (38.3)	318 (34.0)	452 (35.6)	627 (36.2)
Multiparous	7,028 (62.7)	4,488 (61.7)	617 (66.0)	818 (64.4)	1,105 (63.8)

**Table 3.2: Distribution of maternal and delivery characteristics – Vaginal delivery**

	Ireland South Frequency N (%) (N=11,210)	CUMH Frequency N (%) (N=7,273)	TippUH Frequency N (%) (N=935)	UHK Frequency N (%) (N=1,270)	UHW Frequency N (%) (N=1,732)
Vaginal Delivery (Total)	7,050 (62.9)	4,433 (61.0)	586 (62.7)	758 (59.7)	1,273 (73.5)

**Table 3.3: Distribution of maternal and delivery characteristics – Instrumental delivery**

	Ireland South Frequency N (%) (N=11,210)	CUMH Frequency N (%) (N=7,273)	TippUH Frequency N (%) (N=935)	UHK Frequency N (%) (N=1,270)	UHW Frequency N (%) (N=1,732)
Instrumental Delivery (Total)	1,608 (14.3)	1018 (14)	109 (11.6)	177 (13.9)	304 (17.5)
Instrumental Delivery nulliparas (% of total nulliparous women delivered)	1,162 (27.8)	734 (26.4)	79 (24.8)	122 (26.9)	227 (36.2)
Instrumental Delivery multiparas (% of total multiparous women delivered)	446 (6.3)	284 (6.3)	30 (4.8)	55 (6.7)	77 (6.9)

**Table 3.4: Induction of labour characteristics**

	Ireland South Frequency N (%) (N=11,210)	CUMH Frequency N (%) (N=7,273)	TippUH Frequency N (%) (N=935)	UHK Frequency N (%) (N=1,270)	UHW Frequency N (%) (N=1,732)
Inductions of labour (Total)	4,175 (37.2)	2,941 (40.4)	301 (32.2)	297 (23.3)	636 (36.7)
Inductions nulliparas (% of total nulliparous women delivered)	1,880 (45.0)	1,315 (47.2)	130 (40.8)	162 (35.8)	273 (43.5)
Inductions multiparas (% of total multiparous women delivered)	2,295 (32.7)	1,626 (36.2)	171 (27.7)	135 (16.5)	363 (32.8)

**Table 3.5: Incidence of caesarean delivery per total mothers delivered, 2021**

	Ireland South Frequency N (%) (N=11,210)	CUMH Frequency N (%) (N=7,273)	TippUH Frequency N (%) (N=935)	UHK Frequency N (%) (N=1,270)	UHW Frequency N (%) (N=1,732)
Caesarean delivery	4,160 (37.1)	2,840 (39.0)	349 (37.3)	512 (40.3)	459 (36.7)
C-sections nulliparas (% of total nulliparous women delivered)	1,647 (39.4)	1,172 (42.1)	122 (38.4)	195 (43.1)	158 (25.2)
C-sections multiparas (% of total multiparous women delivered)	2,471 (35.2)	1,626 (36.2)	227 (36.8)	317 (38.8)	301 (27.2)

**Table 3.6: Distribution of labour epidurals**

	Ireland South Frequency N (%) (N=11,210)	CUMH Frequency N (%) (N=7,273)	TippUH Frequency N (%) (N=935)	UHK Frequency N (%) (N=1,270)	UHW Frequency N (%) (N=1,732)
Labour Epidurals	4,565 (40.7)	2,961 (40.7)	301 (32.1)	380 (29.9)	923 (53.2)



**Table 3.7: Distribution of obstetric blood transfusions**

	Ireland South (N=11,210) Rate per 1000 (N)	CUMH (N=7,273) Rate per 1000 (N)	TippUH (N=935) Rate per 1000 (N)	UHK (N=1,270) Rate per 1000 (N)	UHW (N=1,732) Rate per 1000 (N)
Obstetric Blood Transfusions	264 (23.5)	176 (24.20)	12 (12.8)	20 (15.7)	56 (32.3)

**Table 3.8: Inutero transfers admitted**

	Ireland South (N=11,210)	CUMH (N=7,273)	TippUH (N=935)	UHK (N=1,270)	UHW (N=1,732)
Inutero transfers admitted	75	41	0	0	34

**Table 3.9: Inutero transfers sent out**

	Ireland South (N=11,210)	CUMH (N=7,273)	TippUH (N=935)	UHK (N=1,270)	UHW (N=1,732)
Inutero transfers sent out	52	3	18	23	8



## Maternal Mortality

Maternal mortality is a devastating outcome for a family left without their mother/daughter/ partner. Maternal deaths have a significant effect on the staff also. There was one case of maternal death and two cases of late maternal deaths in Ireland South Women and Infants Directorate.

### Definition and classification of maternal death

A maternal death is the death of a woman while pregnant or within 42 days of termination of 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.

Maternal deaths are subdivided into two groups, direct and indirect obstetric deaths.

\*This includes delivery, ectopic pregnancy, miscarriage or termination.

Complications of pregnancy or childbirth can lead to death beyond the 6 weeks' postpartum period and are classified as a late maternal death.

### Classification of maternal deaths

- **Direct obstetric deaths:** direct obstetric deaths are those resulting from obstetric complications of the pregnancy state (pregnancy, labour and the puerperium), from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above.
- **Indirect obstetric deaths:** indirect obstetric deaths are those resulting from previous existing disease or disease that developed during pregnancy and which was not due to direct obstetric causes, but which was aggravated by physiologic effects of pregnancy.
- **Coincidental maternal deaths:** deaths from unrelated causes which happen to occur in pregnancy or the puerperium
- **Late maternal deaths:** the death of a woman from direct or indirect obstetric causes, more than 42 days, but less than 1 year after termination of pregnancy.

### Reference:

International Classification of Diseases, 10th Revision, Geneva, World Health Organization, 2004

## Perinatal Mortality

Table 4.0: Perinatal deaths*					
Perinatal deaths	Ireland South (N=11,435)	CUMH (N=7,438)	TippUH (N=948)	UHK (N=1,284)	UHW (N=1,765)
Stillbirths	42	25	3	6	8
Early neonatal deaths	19	16	-	1	2
Late neonatal deaths	7	5	1	-	1

**Stillbirth:** Baby delivered without signs of life from 24 weeks gestation and/or with a birthweight  $\geq 500\text{g}$ .<sup>2</sup>

**Early neonatal death:** Death of a live born baby occurring within 7 completed days of birth.

**Late neonatal death:** Death of a live born baby occurring after the 7th day and within 28 completed days of birth.

\*As used by the National Perinatal Epidemiology Centre

<sup>2</sup>Stillbirths Registration Act, 1994.

**Table 4.1: Perinatal mortality rates**

	Ireland South (N=11,435)	CUMH (N=7,438)	TippUH (N=948)	UHK (N=1,284)	UHW (N=1,765)
Overall perinatal mortality rate per 1000 births	5.3	5.5	3.2	5.5	5.7
Perinatal mortality rate corrected for congenital anomalies	3.9	4.0	3.2	2.3	5.1
Stillbirth rate per 1000 births	3.7	3.4	3.2	4.7	4.5
Stillbirth rate corrected for congenital anomalies	2.7	2.4	3.2	2.3	3.9
Early neonatal death rate per 1000 births	1.7	2.2	0	0.8	1.1
Early neonatal death rate corrected for congenital anomalies	1.2	1.6	0	0	1.1

All infants weighing 500g and/or over 24 weeks' gestation are reported.  
All mothers who booked and delivered are included.

## Case Reviews

**Table 4.2: CUMH case reviews – Stillbirths**

Gestation (Wks.)	BW (g)	Mode of delivery	Conclusion
39	3550	SVD	Placental
24	550	SVD	SARS-CoV-2 placentitis
35	2540	SVD	Placental
33	760	Caesarean Section	Placental
23	610	SVD	Major Congenital Anomaly
35	3320	SVD	Major Congenital Anomaly
36	2900	SVD	Placental
38	2750	SVD	Infection
40	3540	SVD	Infection
30	1550	SVD	Major Congenital Anomaly
38	2930	Instrumental	Major Congenital Anomaly
Unknown	500	SVD	Cord accident
41	3020	SVD	Placental
39	3150	SVD	Placental
39	2280	SVD	Major Congenital Anomaly
34	2200	Caesarean Section	Hypoxia
29	1080	SVD	Unknown
25	560	SVD	Major Congenital Anomaly
25	640	SVD	Placental
32	1980	SVD	Unknown
37	2340	SVD	Placental
30	1110	SVD	Cord accident
38	3070	SVD	Placental
23	540	SVD	SARS-CoV-2 placentitis
33	1530	Caesarean Section	Major Congenital Anomaly



**Table 4.3: CUMH case reviews – Early neonatal deaths**

GA	BW (g)	Age (days)	Cause of Death	Place
37	2200	3	Major Congenital Anomaly	CUMH
40	3100	5	HIE	CUMH
32	2140	1	HIE	CUMH
24	800	19	Prematurity	CUMH
29	920	0	Prematurity	CUMH
31	1180	5	Prematurity	CUMH
23	520	2	Prematurity	CUMH
38	2750	0	HIE	CUMH
37	4120	0	HIE	CUMH
36	3550	4	HIE	CUMH
36	2900	1	HIE	CUMH
26	900	0	Prematurity	CUMH
26	900	2	Major Congenital Anomaly	CUMH
33	2040	3	Prematurity - IUGR	CUMH
24	430	2	Prematurity	CUMH
37	-	0	Major Congenital Anomaly	CUMH
37	1640	3	Major Congenital Anomaly	CUMH

**Table 4.4: CUMH case reviews – Late neonatal deaths**

BW (g)	Age (days)	Cause of Death	Place
3120	25	Major Congenital Anomaly	CUMH
560	8	Prematurity	CUMH
920	11	Prematurity	CUMH
580	9	Prematurity	CUMH

**Table 4.5: TippUH case reviews – Stillbirths**

Gestation (Wks.)	BW (g)	Mode of delivery	Conclusion
33	1800	SVD	SARS-CoV-2 placentitis
39	4200	Instrumental Delivery	Unknown
40	3250	Caesarean Section	Placental

**Table 4.6: TippUH case reviews – Early neonatal deaths**

BW (g)	Age (days)	Cause of Death	Place
3180			Our Lady's Children's Hospital, Crumlin

**Table 4.7: UHK case reviews – Stillbirths**

Gestation (Wks.)	BW (g)	Mode of delivery	Conclusion
37	3080	SVD	Unknown
27	575	SVD	Placental
28	1660	SVD	Major Congenital Anomaly
26	720	SVD	Major Congenital Anomaly
34	1990	SVD	Unknown
33	1750	SVD	Major Congenital Anomaly

**Table 4.8: UHK case reviews – Early neonatal deaths**

GA	BW (g)	Age (days)	Cause of Death	Place
41	3100	2	Major Congenital Anomaly	CUMH

**Table 4.9: UHW case reviews – Stillbirths**

Gestation (Wks.)	BW (g)	Mode of delivery	Conclusion
35	2835	SVD	Placental
36	3225	SVD	Placental
24	545	SVD	Cord accident
30	1445	SVD	Twin to twin transfusion
30	1255	SVD	Twin to twin transfusion
550	22	SVD	Prematurity
3400	39	SVD	Placental
33	754	SVD	Major Congenital Anomaly

**Table 4.10: UHW case reviews – Early neonatal deaths**

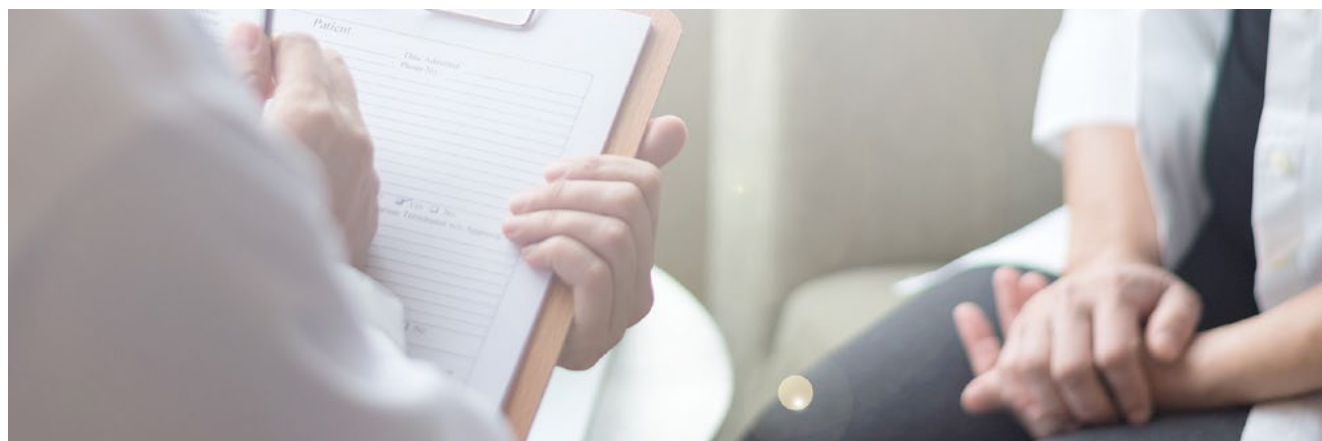
GA	BW (g)	Age (days)	Cause of Death	Place
22	545	0	Prematurity	UHW
22	555	0	Prematurity	UHW

**Table 4.11: UHW case reviews – Late neonatal deaths**

BW (g)	Age (days)	Cause of Death	Place
2615	10	Sudden infant Death	UHW

**Table 5: Severe maternal morbidity**

Organ Dysfunction SMM	Ireland South Frequency N	CUMH Frequency N	TippUH Frequency N	UHK Frequency N	UHW Frequency N
Major obstetric haemorrhage (MOH)	31	19	2	2	8
Uterine rupture	3	2	-	1	-
Peripartum hysterectomy (PH)	3	3	-	-	-
Eclampsia	3	3	-	-	-
Renal or liver dysfunction	-	-	-	-	-
Pulmonary oedema	-	-	-	-	-
Acute respiratory dysfunction	-	-	-	-	-
Pulmonary embolism	1	1	-	-	-
Cardiac arrest	-	-	-	-	-
Coma	-	-	-	-	-
Cerebro-vascular event	-	-	-	-	-
Status epilepticus	-	-	-	-	-
Septicaemic shock	7	3	-	3	1
Anaesthetic problem	-	-	-	-	-
Other severe morbidity	-	-	-	-	-
Interventional radiology (IR)	-	-	-	-	-
ICU/CCU admission	15	7	1	4	3





# Gynaecology Report

During 2021, Ireland South Women & Infants Directorate continued to provide extensive gynaecology services to the women of our region in addition to expanding and further developing service offerings. Building on learnings from 2020, the multidisciplinary teams across the four hospital/units in Ireland South continued to work innovatively and collaboratively to deliver gynaecology services in the safest way possible during the COVID-19 pandemic.

General and specialist gynaecology care is provided across the Directorate. Gynaecology clinics are run at the four main hospitals/units as well as outreach clinics in different areas. More specialised areas such as urogynaecology, colposcopy, oncology and ambulatory services, which also include outpatient hysteroscopy and cystoscopy are also included.

In addition to the ongoing impact of COVID-19 on services, the cyberattack on the HSE in May caused further disruption to the delivery of gynaecology services as non-urgent and routine outpatient appointments had to be cancelled, causing waiting lists to climb. Our teams continue to work incredibly hard across the Directorate reducing waiting lists whilst caring for our patients in the safest way possible.

Despite the challenges faced in these difficult times, further gynaecology services across the Directorate were introduced or enhanced. In April 2021, the first patients were welcomed into the Outpatient Hysteroscopy Clinic in University Hospital Waterford (UHW). The clinic is an initiative to improve access to diagnostics and treatments for women with heavy menstrual bleeding, abnormal uterine bleeding and postmenopausal bleeding. There are plans to provide a wider range of treatments suitable to an ambulatory setting in the future.

At CUMH, a new Ambulatory Gynaecology Suite was fitted out in 4 South Ward which allowed for service expansion from 2 to 5 days a week. Late in the year, CUMH opened a new urogynaecology and fertility outpatient suite at the Lee Clinic with CUMH nurse led urogynaecology clinics commencing in November 2021. All other urogynaecology clinics will be at the Lee Clinic from 2022.

The range of general and specialist services and clinics offered at the four main hospital/unit sites are outlined in this report.



# CUMH gynaecology services

Outpatient gynaecology services are provided at CUMH, South Infirmary Victoria University Hospital (SIVUH), and across a number of outreach clinics in Primary Care Centres (PCCs) including Mitchelstown PCC, Mallow PCC and Carrigaline PCC. The Mallow, Mitchelstown and Carrigaline gynaecology clinics are operated in partnership with local GP surgeries and are proving to be an effective way of providing gynaecology services in the community. Bantry General Hospital also plays host to CUMH staff to provide gynaecology services.

In addition to general gynaecology services, specialised care is also provided. These include endometriosis, fertility, oncology, post-menopausal bleeding and urogynaecology.

CUMH opened a new urogynaecology and fertility outpatient suite at the Lee Clinic in late 2021. CUMH nurse led urogynaecology clinics commenced at the Lee Clinic in November 2021 with the plan for all other urogynaecology clinics to be at the Lee Clinic from 2022. The specialised urogynaecology service provides; urodynamics, perineal clinic, pessary management, intravesical treatments and continence advice. CUMH received funding in 2020 to become 1 of 2 National Mesh Complications Centre's in Ireland (with the other being at the National Maternity Hospital, Dublin). This service will be based at the Lee Clinic from 2022.

Currently, weekly fertility clinics are run at CUMH with the plan to move these clinics to the Lee Clinic from 2022. Funding was received in 2020 to set up a Regional Fertility Hub and plans advanced during 2021 to develop this service including the appointment of a Clinical Nurse Manager.

A dedicated area on 4 South Ward in CUMH was fitted out in 2021 for a new Ambulatory Gynaecology Suite and additional staff were hired and trained to support the service expansion from 2 to 5 days per week. The service runs Monday to Friday and offers both operative and diagnostic procedures.

The colposcopy service is run from the St Finbarr's Hospital campus, providing smears and a colposcopy service for women who have abnormal cervical smears. These services form part of the national CervicalCheck screening programme. Additionally, CUMH commenced Cervical One Stop Assessment clinics (COSAC) at the colposcopy unit in March 2021 as an initial 'proof of concept' with 4 clinics and continued these clinics throughout 2021. The clinics see patients who have an abnormal looking cervix or post coital bleeding and rule out an invasive malignancy by looking at the cervix. This is not related to screening; colposcopy is not performed and the patients are informed that they still need regular smears. These new COSAC clinics have proven very successful in the efficient and effective management of this cohort of patients.

Chartered physiotherapists in CUMH specialise in the area of women's health and offer individualised assessment and treatment for a number of complex gynae conditions. Where appropriate, patients are also referred on to pelvic health physiotherapy services in the community.

Gynaecology surgeries are performed in CUMH, SIVUH and the Bons Secours Hospital Cork.

At the end of 2021, the waiting lists in CUMH stood at:

- Outpatients: 2,053
- Inpatient / day cases: 718

## CUMH: Key achievements in gynaecology in 2021

### • **Expansion of ambulatory gynaecology service:**

CUMH expanded its ambulatory gynaecology service in 2021 from 2 to 5 days per week. The ambulatory hysteroscopy service at CUMH began in 2007 as a small service running one session per week and performing five diagnostic procedures. As of 2021 is now able to offer both diagnostic and operative procedures 5 days per week across 2 treatment rooms.

A dedicated area on 4 South Ward in CUMH was fitted out in 2021 for a new Ambulatory Gynaecology Suite and additional staff were hired and trained to support the service expansion. The suite consists of an admissions office and waiting area, 1 history taking room and 2 treatment rooms. The 2 treatment rooms are used to carry out gynaecology day procedures Monday to Friday each week.

CUMH is delighted to have Candidate Advanced Nurse Practitioner (c/ANP), Noelle Gill, working in this service. Noelle started her ANP course in September 2020, with the support of midwifery management and the consultants involved in ambulatory hysteroscopy. The ANP course is two years in duration and upon completing the course, Noelle will have gained a master's degree in nursing, the ability to prescribe medication and learn new and advanced skills that will allow her to practice independently and manage a caseload in this specialised area.

In October 2021, An Taoiseach, Micheál Martin, T.D. visited CUMH where he met Noelle and the team and officially opened the new suite.

### • **Opening of new outpatient suite at the Lee Clinic for urogynaecology and fertility services:**

CUMH expanded its Women's Health services in Ireland South offsite, with the first clinic held at the Lee Clinic on November 18, 2021. The Lee Clinic is an attractive three storey building comprising 22 medical suites. The suites provide self-contained

accommodation with private own door internal access. The Lee Clinic is strategically located in the Lee Valley, a 10 minute drive from Cork University Hospital, the Bons Secours Hospital, the South Infirmary Victoria Hospital, St. Finbarr's and the Mercy Hospital.

CUMH acquired 10 suites in the building on the 1st and 2nd floor in 2020 and fitted them out to a high spec in 2021 for urogynaecology and fertility outpatient services. CUMH urogynaecology nurse led clinics have been running at the Lee Clinic since November 2021. CUMH is delighted to have another Candidate Advanced Nurse Practitioner (c/ANP), Ann Humphreys, working in this service. Like Noelle, Ann also started her ANP course in September 2020, with the support of midwifery management and the urogynaecology consultants. Upon completion of the course, Ann will have gained a master's degree in nursing, the ability to prescribe medication and learn new and advanced skills that will allow her to practice independently and manage a caseload in this specialised area.

- **Roll out of Cervical One Stop Assessment Clinics (COSAC):** CUMH commenced Cervical One Stop Assessment clinics (COSAC) at the colposcopy unit in March 2021 as an initial 'proof of concept' with 4 clinics which continued throughout 2021. These clinics see patients who have an abnormal looking cervix or post coital bleeding and rule out an invasive malignancy by looking at the cervix. This is not related to screening; colposcopy is not performed and the patients are informed that they still need regular smears. These new COSAC clinics have proven very successful in the efficient and effective management of this cohort of patients.
- **Continued collaboration with the Bons Secours Hospital Cork for additional theatre capacity:** Building on the successful partnership from 2020 where CUMH operated on over 400 gynaecology cases at the Bons Secours Hospital from March to July 2020, CUMH continued to avail of critical theatre time at the Bons Secours Hospital, Cork under the HSE agreement with the private hospitals in 2021. CUMH gynaecologists operated on their patients in the Bons Secours theatre complex demonstrating how public and private hospitals can successfully work together in partnership to get public patients treated in a timely manner.

## CUMH: Key challenges in gynaecology in 2021

- **The impact of COVID-19 on services:** COVID-19 continued to cause disruption to services in 2021. A surge in COVID-19 infections and the national move to level 5 in January meant that all non-urgent gynaecology clinics were cancelled for the first 3 months of 2021 following an instruction from the HSE CEO, Paul Reid to allow staff to be redeployed to frontline services. CUMH utilised theatre capacity at the Bons Secours Hospital, Cork for gynaecology operating lists to reduce overall footfall in CUMH and to make more staff available for frontline
- services. All non-urgent gynaecology clinics resumed in late March 2021 and all gynaecology theatre lists were reinstated at CUMH and SIVUH. A noticeable increase in the number of referrals to CUMH gynaecology was observed from March/April 2021 as more patients were able to visit their GP's as COVID-19 rates reduced.
- **Providing safe and effective care to gynaecology patients during COVID-19:** COVID-19 social distancing guidelines compounded the existing space challenges in CUMH, in particular in the outpatients department. Ways of working had to be altered and additional protocols put in place at short notice to minimise the risk of COVID-19 transmission at CUMH. Adapting to and working around the pandemic remained a challenge for the multidisciplinary team throughout the year.
- **The impact of the HSE cyberattack:** With healthcare services still reeling from the effects of COVID-19, the unthinkable happened. On 14 May 2021, a cyberattack brought, in the words of HSE CEO, Paul Reid, "unimaginable strain, duress and extreme high risk" to the country's health system. CUMH was impacted hardest due to being more digitally advanced, as electronic healthcare records for patients are managed via the Maternal and Newborn Clinical Management System (MN-CMS). While contingency plans were already in place, no contingency plan foresaw weeks of outage without tools to support care. Patients experienced significant disruption as all non-urgent and routine gynaecology outpatient appointments were cancelled for the remainder of May and early June.
- **Waiting list management:** The team at CUMH worked tirelessly from 2017 to 2020 to eliminate the gynaecology outpatient waiting list backlog. The waiting list had been reduced from 4,700 in April 2017 to just over 900 in early March 2020 thanks to the extraordinary efforts of the multidisciplinary team at CUMH. Due to the impact of COVID-19 and the HSE cyberattack and resulting clinic cancellations, the waiting list climbed to just over 2,000 by the end of 2021.
- **Filling vacant staff posts in a timely manner:** The ability to fill vacant staff posts in a timely manner continued to be a key challenge for the CUMH gynaecology service in 2021. A larger number of posts than normal were required to be filled in 2021 thanks to the additional funding secured by CUMH in 2020 for setting up a National Mesh Complications service, a new Regional Fertility Hub and expanding of the ambulatory gynaecology service at CUMH.
- **Continued funding support to provide a sustainable service:** To ensure that progress to date with the CUMH outpatient gynaecology waiting list is sustainable, the resulting inpatient waiting list and surgeries that will arise need to be proactively managed. CUMH need a commitment that reoccurring funding will be provided to keep its second gynaecology theatre open 5 days per week as promised.



## CUMH gynaecology services: outpatient and inpatient numbers

As highlighted above, CUMH gynaecology services were impacted by COVID-19 and the HSE cyberattack during 2021. All non-urgent gynaecology clinics and theatre sessions were cancelled at CUMH for several months during 2021. As a result, overall attendance numbers, particularly for outpatient services were lower than average as reflected in Table 7.0 opposite.



**Table 6.0: CUMH gynaecology service - outpatient attendances 2021**

Sub-specialty/clinic:	
General gynaecology	3909
Oncology	1573
Post-menopausal bleeding (PMB)	1562
Colposcopy (consultant led clinics)	3016
Colposcopy (nurse led clinics)	2516
Colposcopy (smears) clinic	1006
Gynae ultrasound scanning	1750
Urogynaecology (consultant led clinics)	1144
Urogynaecology (nurse led clinics)	2068
Physiotherapy for gynaecology patients	1570
Fertility	726
Gynae pre-operative assessment	1890
Ambulatory gynaecology	1152
Endometriosis	326
Adolescent gynaecology	134
Cervical one stop assessment	126
<b>Total</b>	<b>24,468</b>

**Table 6.1: CUMH gynaecology service - inpatient and day case procedures 2021**

Total inpatient and day case procedures	2,042
---	-------

\*Includes 260 CUMH gynaecology cases completed at the Bons Secours Hospital, Cork.



# UHK gynaecology services

General and specialist gynaecology care from minor to major inpatient procedures are provided in UHK on the gynaecology (Kells) ward. Care is provided under the umbrella of a Women's Health Service consisting of a colposcopy clinic, hysteroscopy outpatient services, ambulatory gynaecology services, sexual health/ STI Clinics and urodynamics clinics. Care provided is in line with the best evidenced based practice and is carried out with a multidisciplinary approach.

The Gynaecology ward takes care of pregnant women up to 19+6/40 in agreement with patients' consultant and close collaboration with ante-natal/delivery suite staff. If a postnatal woman is reviewed in the Emergency Department and requires admission, the gynaecology ward will accommodate this admission.

A reproductive service is also provided for new and ongoing patients incorporating a nursing led clinic that works in conjunction with the reproductive service consultant. In addition, the gynaecology services also oversee the Urodynamics Clinic Service for UHK. This is an outpatient clinic that assesses bladder function.

The following clinics/services are provided in gynecology services in UHK:

- Ambulatory gynaecology.
- Women's Health Service: colposcopy/hysteroscopy/smear clinics/sexual health clinics/sexual transmitted infection clinics/urogynaecology.
- Continence advice.
- Endometriosis.
- General gynaecology and telephone follow up.
- Reproductive service.
- Paediatrics/Adolescent gynaecology.
- Perineal clinic.
- Postmenopausal bleeding clinic.
- Pre-operative assessment.

## UHK gynaecology waiting lists

At the end of 2021, the waiting list stood at:

- OPD: 1014
- Inpatient/day cases urgent: 25
- Inpatient/day cases non-urgent: 52
- Total inpatient/day cases: 77

## UHK: Key achievements in gynaecology 2021

- The Ambulatory Gynaecology Clinic at UHK, Cill Ide Unit is ongoing and operates as a 'one-stop & see-and-treat' approach clinic for gynecological procedures provided in an outpatient setting, thereby reducing the demand on the inpatients beds.
- In addition, there are more gynaecological procedures than ever being performed through minimal access surgery, which has allowed for greater hospital bed availability.



# UHW gynaecology services

Gynaecology outpatient clinics experienced another very busy and challenging year in 2021. General and gynaecology oncology services are provided in UHW with an expert, multidisciplinary approach in line with the best evidence-based practice. Other specialist areas include colposcopy, Sexual Assault Treatment Unit (SATU) and genital urinary medicine clinics. All gynaecology services are provided in the UHW hospital campus on the antenatal and gynaecology ward, the Day Surgical Ward, UHW and the Gynaecology OPD adjacent to Maternity Services. Colposcopy services are located in a purpose designed clinic within the wider OPD setting in UHW and SATU is located in a discrete location in UHW, but with full support and access to maternity and gynaecology services as required.

## UHW: Key achievements in gynaecology 2021

### • Oncology

The Gynae oncology service is led by Dr John Stratton, Consultant Obstetrician & Gynae Oncologist and supported by Aoife Hartwell, CMMII Gynae Oncology Liaison. During 2021, there were 67 surgical procedures performed on cancer patients at UHW. Sixty four of these were major procedures.

**Table 6.2: UHW Gynaecological surgical procedures 2021**

Gynaecology surgical procedure	Number of women
Cervical cancer	10
Cervical/uterine	1
Ovarian cancer	19
Uterine cancer	31
Vulval cancer	4
Vaginal cancer	2
<b>Total:</b>	<b>67</b>

### • Cancer treatments

Neoadjuvant chemotherapy was used to treat 7 women, including 2 ovarian primary, 2 vaginal primary, 1 uterine primary, 1 cervical primary and 1 peritoneal disease. Chemo/radiotherapy was the primary treatment used for cervical cancers and vaginal cancer. Patients cases were discussed at the bimonthly multidisciplinary team meeting supported by Radiology and Pathology.

### • Colposcopy service

The Colposcopy Service in UHW offers a multidisciplinary team approach to care of women attending the service under the auspices of CervicalCheck, the national cervical screening programme. The service is provided by Dr Stratton,

Dr Bermingham and Dr Butler along with their nursing team. In 2021, UHW had 2,907 (colposcopy and smears) attendances in colposcopy clinics, including larger than projected numbers of new patient referrals. KPI data is collected and returned in line with CervicalCheck guidelines.

### • Minimal access surgery

There are more gynaecological procedures than ever being performed through minimal access surgery, which has allowed for a greater hospital bed availability and faster patient recovery. We look forward to further development of ambulatory gynaecology day hysteroscopy service in Q1, 2022.

### • Outpatient Hysteroscopy Clinic

On 21 April 2021, the first patients were welcomed into the Outpatient Hysteroscopy Clinic (OHC) in UHW. The OHC serves as a one-stop service for the management of abnormal uterine bleeding. In one visit, patients with abnormal uterine bleeding have a pelvic ultrasound followed by hysteroscopy, endometrial biopsy and treatment including removal of endometrial polyps, submucosal fibroids, IUCD insertions and retrieval of lost IUCDs. This replaces traditionally having a pelvic ultrasound in the Radiology Department followed by EUA, hysteroscopy, D&C in theatre. This should reduce the outpatients and radiology waiting lists, number of outpatient visits and save costs on theatre sessions and day-case beds.

This will also increase access for other gynaecological procedures to be done in theatre. The OHC is run weekly by Dr Azriny Khalid, Consultant Obstetrician/ Gynaecologist, Ms. Elaine Roche, CMM, Ambulatory Gynaecology and Ms. Valerie Barry, Health Care Assistant, and once a month by Dr John Bermingham. The team at UHW hope to develop this service further to provide a wider range of treatments suitable for the ambulatory setting in the future.

### • Gynaecology outpatient waiting lists

Through the development of a business case funding was secured from NTPF to support a Twilight Clinic initiative to facilitate long waiters on the gynaecology outpatient waiting list. This initiative commenced in Q4, 2021 and we look forward to continuing it into 2022.





# TippUH gynaecology services

Women's health services continued to expand with increasing activity in the colposcopy and gynaecology outpatient clinics through 2021. Despite this, outpatient services continued to deliver a high standard of patient-centred care.

Key activity in 2021 included:

- 2,569 attendances in gynaecology clinics
- 1,194 attendances at the colposcopy clinics (New and Follow up)
- 392 nurse led smear clinics

## TippUH gynaecology waiting lists

At the end of 2021, the waiting lists stood at:

- Outpatients: 491
- Inpatient: 34

### • Gynaecology waiting list management

TippUH continued to operate a smooth-running service for gynaecology in outpatients and inpatients during 2021. The consultants under the

leadership of Dr Vijayashree Hiremath have worked very hard at ensuring that gynaecology waiting lists are kept at a manageable level. In particular, the provision of three full day theatre lists per week have helped to keep down waiting times for treatment.

## Key Achievements

### • Colposcopy service

TippUH experienced above average numbers of new referrals to the colposcopy service in 2021, exceeding recommended numbers by CervicalCheck. The appointment of Gemma Hennessey, CNM2 and Annemarie Hayes, Staff Midwife further enhanced the gynaecology services at TippUH.

### • Minimal access surgery

More gynaecological procedures than ever were performed through minimal access surgery, which has allowed a greater turn-over of hospital beds.

**Table 6.3: Numbers of attendances in gynaecology outpatient clinics at UHK, UHW and TippUH**

Outpatient activity	UHK	UHW	TippUH
Gynaecology	1760	4939	2569
Ambulatory gynaecology (including hysteroscopy at UHW)	342	291	0
Colposcopy (including smears at UHW)	1175	2907	1194
Smears	439	N/A	392
Urodynamics	0	36	0
STI/SATU	152	116	0
Reproductive Clinic	446	-	-
<b>Total</b>	<b>4,314</b>	<b>8,289</b>	<b>4,155</b>

**Table 6.4: Numbers of inpatient and day case gynaecology procedures at UHK, UHW and TippUH**

Surgery activity	UHK	UHW	TippUH
Inpatient procedures	179	375	281
Day case procedures	568	412	526
<b>Total</b>	<b>747</b>	<b>787</b>	<b>807</b>

**Table 6.5: Gynaecology waiting lists at UHK, UHW and TippUH**

Gynaecology waiting lists	UHK	UHW	TippUH
Outpatients	1014	776	491
Inpatients/day cases	77	301	34

# The National Gestational Trophoblastic Disease Registry, Monitoring and Advisory Centre

The National Gestational Trophoblastic Disease (GTD) Registry, Monitoring and Advisory Centre was established in May 2017 to monitor and coordinate the follow up of women who have been diagnosed with a molar pregnancy.

The Centre is coordinated by the Health Service Executive, the National Cancer Control Programme and Cork University Maternity Hospital (CUMH). It is located at CUMH and is the only such centre in Ireland.

Gestational Trophoblastic Disease (GTD) is a rare disease, and registration of all patients with GTD is recommended as a minimum standard of care. The GTD centre provides monitoring and advice to patients and clinicians on the care of patients with Gestational Trophoblastic Disease.

GTD is the most curable of all gynaecologic malignancies. It represents an oncologic success story attributable primarily to early disease recognition, chemotherapy regimens, and accurate and reliable assessment of disease status with sensitive assays for the measurement of human chorionic gonadotropin (hCG) levels. Its importance as a disease status cannot be overstated to the general gynaecologist, who is initially responsible for the diagnosis and management of GTD as well as the timely registration of the patient at the National Gestational Trophoblastic Disease Registry, Monitoring & Advisory Centre and referral to a gynaecological oncologist.

The GTD Centre is led by Dr John Coulter, Consultant Obstetrician and Gynaecologist and includes a team of specialist doctors, nurses and administrative staff. Patients from all the maternity

hospitals in Ireland are registered with the National GTD Centre following diagnosis of gestational trophoblastic disease and their management is then coordinated from CUMH.

Dr John Coulter and the National Gestational Trophoblastic Disease Centre (GTD) at CUMH were delighted to be recognised at the 2021 Health Service Excellence Awards.

The team received the *Excellence in Quality Care Award* recognised for the establishment of the national centre, to provide excellence in care to all women in Ireland diagnosed with a molar pregnancy, the most common type of gestational trophoblastic disease (GTD) that occurs in 1 in 600 pregnancies in Ireland. Until recently, the management of this rare disease has been inconsistent in Ireland, with many patients travelling to the UK for treatment.

Since 2017, the National Gestational Trophoblastic Disease Centre has managed over 500 patients around Ireland with a 100% cure rate in patients requiring chemotherapy with no transfer of a patient to another country. This includes 112 complete and 281 partial moles, 4 choriocarcinomas and 3 atypical placental nodules. 20 patients with persistent or recurrent disease have been treated with chemotherapy with 100% cure rate. A 2021 patient survey revealed 99% satisfaction with the service and professionalism of the team.

Professor John R. Higgins, Clinical Director, Ireland South Women & Infants Directorate said: "Congratulations to Dr Coulter and the team at GTD. The service the centre is providing is unique in Ireland and I am delighted to see GTD get the recognition that it deserves."

**Table 7: Count of Mole Classification**

Mole Classification	2017	2018	2019	2020	2021	Grand Total
<b>CHM</b>	12	31	32	50	44	<b>169</b>
<b>Choriocarcinoma</b>	-	1	2	1	1	<b>5</b>
<b>PHM</b>	35	80	81	88	89	<b>373</b>
<b>PSN (Placental Site Nodule)</b>	-	-	-	3	1	<b>4</b>
<b>PSTT</b>	-	1	-	-	-	<b>1</b>
<b>Suspicion of Molar Pregnancy</b>	-	-	2	5	2	<b>9</b>
<b>Grand Total</b>	<b>47</b>	<b>113</b>	<b>117</b>	<b>147</b>	<b>137</b>	<b>561</b>

# Specialist Perinatal Mental Health Service (SPMHS)



## Background and Context

Perinatal mental health problems are those that arise during pregnancy and in the postnatal period (up to 12 months).

### Epidemiology

- 10-15% of women suffer from mild to moderate postnatal depression.
- 3% of women suffer from moderate to severe mental health illness.
- Similar number with anxiety.
- 2/1000 women delivered are likely to suffer from a postnatal psychosis.
- 3% with Post Traumatic Stress Disorder.
- Adjustment or Acute Stress reactions/disorders are even more common.

There is a wide range of mental health morbidity that can occur during the perinatal period and timely access to a specialist service is of the utmost importance.

Dr Deirdre Muller Neff, Consultant Perinatal Psychiatrist is the Clinical Lead for the Specialist Perinatal Mental Health Service (SPMHS) in Ireland South Women & Infants Directorate. The Specialist Perinatal Mental Health Service is being developed in line with the National Model of Care for SPMHS launched in November 2017.

The delivery of specialist perinatal mental health services is via a hub and spoke model. Within the Directorate, CUMH is the hub site where the multidisciplinary team are based.

## Staffing

**Table 8.0: Complete SPMHS Multidisciplinary Team, Model of Care**

Consultant Perinatal Psychiatrist	Deirdre Muller Neff
Senior Registrar	Dr Thomas Ryle
Clinical Nurse Specialist	Rachel O'Donoghue
Clinical Nurse Specialist	TBC
Mental Health Midwives	Breda Bird & Louise Chawke
Senior Mental Health Social Worker	Alison Bonar
Senior Occupational Therapist	Eithne Lynch
Senior Clinical Psychologist	Dr Freda Wynne
Administrative Officer	Gavin Doyle

The above table includes the current full SPMHS team complement as of November 2021.





**Figure 6: Specialist Perinatal Mental Health Team staffing**

**Table 8.1: Headline numbers/clinical activity  
January to December 2021**

Referrals received from OPD and Inpatient areas	841
---	-----

This table accounts for new referrals received from OPD and inpatient areas from January 2021 to December 2021. This does not account for referrals that were referred from GP's nor those triaged or assessed and deemed not suitable for the SPMHS. i.e., more appropriate for Medical Social Work or signposted to relevant support service based on need.

Referrals to the SPMHS are received from a variety of sources including booking and antenatal clinics, ED CUMH, private rooms, Community Mental Health Teams, GPs and private psychiatrists.

Referrals are triaged by the SPMHS at a weekly MDT meeting to ensure the most appropriate member of the team assesses the patient in the first instance.

Once a patient is accepted to the SPMHS, a variety of interventions are offered including, but not limited to, psychoeducation, medication review, pre-conception counselling and on-going assessment of need. Clinical team members continue to work with women based on need and a typical caseload per team member is 35-40 at any given time.

The SPMHS provides a timely and responsive service. Urgent or emergency presentations (i.e., unscheduled care) are seen within 48 hours following a risk assessment. To date, the vast majority of urgent referrals are seen on the same day.

The role of the Mental Health Midwife is to promote parity of esteem between mental and physical health

difficulties during the perinatal period. Mental Health Midwives (MH), alongside their health promotion and educational roles, assess and follow up women presenting with a wide variety of mild to moderate mental health difficulties.

The Mental Health Midwife has a crucial role in ensuring routine screening, and early identification of women with mental health difficulties is carried out in booking and antenatal clinics.

## Development of the hub and spoke model across the Directorate

To date in Ireland South, there is one spoke MH Midwife based in UHW – Mary Frisby, and in TippUH – Janice O'Donoghue and in UHK – Zodwa Lenihan.

The SPMHS hub teams accept referrals for second opinions from Community Mental Health Teams (CMHTs) and liaison psychiatrists for women attending for antenatal care in the spoke hospitals. Any urgent concerns in relation to a perinatal mental health issue arising in the spoke hospital can be discussed with the consultant perinatal psychiatrist in the hub team.

Further development and integration between the hub and spokes planned for 2022 include monthly meetings which are organised by the SPMHS hub team. The focus of these meeting is education in perinatal mental health presentations. These meetings are for health professionals directly involved in perinatal mental health in the spoke hospitals – liaison psychiatry, and spoke MH Midwives.

## Education and Training

Education and training is a core component of the Specialist Perinatal Mental Health Service given our interface with a wide variety of healthcare professionals.

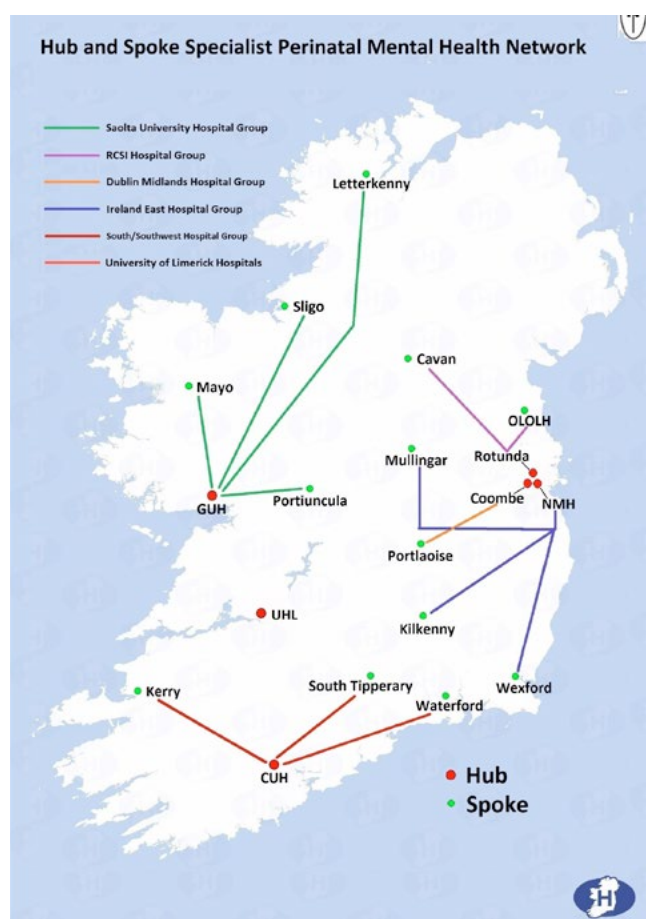
The SPMHS in CUMH began rolling educational sessions for midwives in OPD and the wards in CUMH in September 2020. These sessions were delivered in small group settings to take social distancing into account, but more importantly to facilitate and encourage interactive learning.

Peer teaching has also taken place whereby the team have presented on various topics of interest as well as guest speakers that provided us with information on their areas of interest in CUMH and in UCC.

The SPMHS produced a video for online parent education in CUMH outlining the importance of Mental Health in Pregnancy and highlighting our service available here in CUMH.

Our team have also facilitated education sessions for Intern Student Midwives in PREP as well as sessions for newly appointed staff as part of the Induction Programme.

Future priorities for education include plans to provide education sessions for community midwifery and community mental health teams, GPs and Public Health Nurses. We also intend to support the education of the student midwives here in CUMH as part of their midwifery programme.



The consultant psychiatrist SPMHS has provided teaching to NCHDs working in psychiatry with an emphasis on psychopharmacology in the perinatal period. Dr Muller Neff also presented a talk on prescribing in the perinatal period for the RCPI Medicines in Pregnancy and Lactation Study Day.

## Research

Research areas that have been completed to date include a qualitative study examining the impact of COVID-19 on the experience of perinatal OCD and a research project examining the outcome of referrals not accepted to the SPMHS.

## Key challenges in SPMHS across the Directorate

The resumption of the service occurred in the context of COVID-19, which has impacted on the development of the service in a number of areas such as therapeutic work, including but not limited to the development of group work by clinical team members and educational initiatives.

An on-going challenge for the team has been limited access to rooms to allow for the development of specialist clinics, for example, mental health midwife clinics or clinical nurse specialist clinics. The team also plan on developing a rapid access clinic that would be held weekly to ensure that urgent referrals from a variety of sources would be seen within 1 to 2 weeks. This has not been possible to date due to lack of clinical space to facilitate this clinic.

With the addition of further clinical staff to the team in 2022, the SPMHS plans on extending the service to include referrals up to 12 months post-delivery, further develop therapeutic interventions including group work and establish Rapid Access Clinics which function to provide rapid access to comprehensive mental health assessment and treatment. This prevents the escalation of an urgent situation to an emergency situation and aims to minimise the morbidity associated with more complex mental health presentations (for example admission to a mental health unit during pregnancy or post-delivery).

The SPMHS look forward to the on-going development of the service across the Directorate.





# CUMH Pharmacy Service

The CUH Pharmacy Department provides clinical pharmacy and dispensary services across the CUH campus including CUMH, with the primary aim of safe, effective and economical use of medications for our hospital inpatients.

Dispensary services include the purchasing, supply, dispensing and delivery of medications, intravenous fluids, and parenteral nutrition. Dispensary services are provided by a team of pharmacists, pharmaceutical technicians and porters.

In addition to dispensary services, dedicated pharmacy support to CUMH in 2021 was provided by a Chief Pharmacist for Maternity Services, an Antimicrobial Stewardship Pharmacist, a Clinical Informatics MN-CMS Pharmacist and a Senior Pharmaceutical Technician.

The Chief Pharmacist, (Maternity Services) in conjunction with the Senior Pharmaceutical Technician, has responsibility for CUMH pharmacy stock supply and management. A technician-led pharmacy stock service was provided to the Neonatal Unit and the 5 adult wards (antenatal, postnatal and gynaecology). This ensures a stock of medication and intravenous fluids is readily available and reduces nursing and midwifery stock management time.

## Pharmacy service challenges 2021

- Service delivery in 2021 was impacted by the COVID-19 pandemic, which challenged all departments to maintain services in a safe and efficient manner. Particular challenges for the Pharmacy service included stock availability issues (also impacted by Brexit); staff absences due to COVID-19 illness; and additional infection prevention and control measures to ensure safe frontline service delivery. As members of the CUMH multidisciplinary COVID-19 Committee, CUMH pharmacists contributed to the implementation of national guidelines and the review of local practices to manage the impact of COVID-19.
- The HSE cyberattack on 14 May 2021 severely impacted online systems including the EHR. This required a return to paper medication kardexes for an extended period of time, with increased pharmacy support required for prescriber and end users. Access to online prescribing supports and tools were not available during this period. CUMH Pharmacy staff were central to safe medication management during this challenging time.

## Antimicrobial stewardship

The CUMH Antimicrobial Stewardship Pharmacist provides specialist information and support to the multidisciplinary team on the optimal management of antimicrobial therapy for our adult and neonatal inpatients. In 2021, education and training for medical, nursing and midwifery staff was delivered largely online and through the utilisation of training videos on specific topics. Some small group in-person training was delivered on specialised topics including Therapeutic Drug Monitoring of antimicrobials.

Through a collaborative project with the UHK Antimicrobial Stewardship Pharmacist, the CUMH Antimicrobial Guidelines were further developed and made accessible on the MicroGuide® App for smartphones. The MicroGuide® App was launched at the ISWID Grand Rounds in September 2021 by the CUMH Consultant Microbiologist and CUMH Antimicrobial Stewardship Pharmacist.

CUMH participated in the annual National Antimicrobial Point Prevalence Survey in September 2021 with excellent compliance with the CUMH Antimicrobial Guidelines recorded. The European Antibiotic Awareness Day took place 18 November 2021 and was marked in CUMH with a display stand in the CUMH lobby and an online antimicrobial quiz for staff.

The CUMH Antimicrobial Stewardship Pharmacist is a member of the CUMH Infection Prevention Control Committee and the CUMH Antimicrobial Stewardship Committee.



## Clinical Informatics

The Clinical Informatics MN-CMS Pharmacist has a dual role as local expert for medication-related issues on the electronic health record (EHR) and as a core member of the National MN-CMS Medications Workstream.

Locally, the Clinical Informatics Pharmacist supports the multidisciplinary team through education and training and responds to queries and suggestions related to medications functionality on the EHR. In 2021, induction training for new staff and optimisation training for existing staff was delivered.

The national role on the MN-CMS Medications Workstream includes collaboration on the development and expansion of system functionality and clinical decision support. This allows optimisation of system functionality to enhance medication safety and patient care.

## Neonatal Unit pharmacy service

In 2021, a clinical pharmacy service was provided to the Neonatal Unit (NNU) by the Chief Pharmacist (Maternity Services), supported by pharmacists from the CUH Paediatrics clinical pharmacy team. This service focused primarily on the NICU, where our most premature and unwell infants are cared for. A clinical pharmacist attends the daily NICU ward round, reviewing all medications and providing specialist information on the prescribing and administration of intravenous and oral medications. The clinical pharmacist supports the multidisciplinary

team in the prescription of individualised neonatal parenteral nutrition and is responsible for coordinating with the parenteral nutrition manufacturers on the ordering, stability review and delivery of individualised parenteral nutrition.

## Medication Safety & Education and Training

All CUMH pharmacists are members of the multidisciplinary CUMH Medication Safety Committee and contribute to the advancement of medication safety culture in CUMH. All pharmacists contributed to the very successful ISWID Medication Safety Study Day in April 2021.

Pharmacists presented at a number of Study Days in 2021, including the Maternity Critical Care Module and the Postgraduate Diploma in Neonatal Nursing. They also provided NCHD induction training and ward based educational updates for frontline staff.

## Future Developments

Clinical pharmacy services for adult patients in CUMH have previously been dispensary-based. Additional resourcing for the CUMH Pharmacy service was allocated by ISWID in 2021 with the appointment of a Senior Pharmacist (Obstetrics & Gynaecology) in October 2021 and a Basic Grade Pharmacist (Obstetrics & Gynaecology) in December. These two new posts will allow the development of ward-based clinical pharmacy



**Above:** Pictured at the CUMH Medication Safety Awareness stand: Kate Finch, Antimicrobial Pharmacist; Dr Liam O'Connell, Consultant Neonatologist; Emma Cummins, Clinical Midwife Manager; Joan Ryan, Chief Pharmacist CUMH and Claire Everard, Quality & Patient Safety Manager.

services for obstetrics and gynaecology inpatients in 2022. The clinical pharmacists will focus in particular on medicines reconciliation, inpatient medications review, and the provision of medicines information on medication safety in pregnancy and lactation. These very welcome additional resources will ensure increased frontline pharmacy support for the multidisciplinary team.

## Ireland South Medication Safety Study Day: A Focus on Shared Learning

On 30 April, 2021, the CUMH Medication Safety Committee hosted the online Ireland South Women & Infants Directorate Medication Safety Study Day: *A Focus on Shared Learning*. This multidisciplinary study day attracted interest from across the four maternity units, with over 170 attendees registering and upwards of 80 online for the live session. The live session was facilitated by Dr Liam O'Connell, Consultant Neonatologist at CUMH and Co-Chair of the CUMH Medication Safety Committee. Medication Safety Awareness stands were displayed in CUMH and in UHK in association with the Study Day. Seven guest speakers presented on a range of topics relevant to medication safety, followed up by a Q&A session. The presentations were viewable for one month after the live event and feedback from attendees was very positive both on the day and in the weeks after.

The study day was made possible through a CiSA award (UCC College of Medicine and Health interdisciplinary Seed Awards) received by PhD candidate Laura Gleeson, to support an initiative to improve awareness and knowledge of medication safety issues within the Ireland South Women & Infants Directorate. Sincere thanks to Laura and to Prof. Stephen Byrne, UCC, for their input in ensuring the success of the day.

## Pharmacy Service to CUMH 2021: Staffing

- **Chief Pharmacist (Maternity Services):** Joan Ryan
- **CUMH Antimicrobial Stewardship Pharmacist:** Susan Potter, Kate Finch (Maternity Leave Cover)
- **Clinical Informatics MN-CMS Pharmacist:** Elmarie Cottrell
- **Senior Pharmaceutical Technician:** Suzie Copps, Lydia Murphy (Maternity Leave Cover)
- **Senior Pharmacist (Obstetrics & Gynaecology):** Alana Dineen (from October 2021)
- **Basic Grade Pharmacist (Obstetrics & Gynaecology):** Helen O'Neill (from December 2021)
- **CUH Clinical Pharmacists (Paediatrics) who provided NICU clinical pharmacy cover:** Marianne O'Callaghan, Alana Dineen (Jan-Oct), Marie Kinnane (Jan-June), Triona O'Sullivan (from June), Béibhinn O'Leary (from October)





# Staffing across Ireland South Women & Infants Directorate

**Table 10: Overall staff numbers for Ireland South in 2021**

Staff	Ireland South	CUMH	UHK	TippUH	UHW
Consultants (Ob & Gynae)	35.00	22.00	4.00	4.00	5.00
Consultant Neonatologists	9.00	8.00	0	0	1.00
NCHDs	102.00	55.00	16.00	14.00	17.00
Nurses/Midwives	710.97	475.89	78.52	52.56	104.00
HSCP	34.05	22.25	3.00	3.8	5.00
Admin	99.23	71.78	11.10	6.16	10.19
<b>Total</b>	<b>990.25</b>	<b>654.92</b>	<b>112.62</b>	<b>80.52</b>	<b>142.19</b>

\*Consultants and NCHD numbers are based on headcount. All other areas are WTE

HSCPs	Ireland South	CUMH	UHK	TippUH	UHW
Dietetics	5.00	3.00	0.50	0.50	1.00
Occupational Therapy	0.60	0.60	0	0	0
Pharmacy	5.50	3.60	0.50	0.40	1.00
Physiotherapy	13.15	7.75	1.00	1.90	2.50
Social Work	8.30	5.80	1.00	1.00	0.50
Speech & Language Therapy	1.50	1.50	0	0	0
<b>Total</b>	<b>34.05</b>	<b>22.25</b>	<b>3.00</b>	<b>3.80</b>	<b>5.00</b>

## Health and Social Care Professions (HSCPs)

Health and Social Care Professions (HSCPs) are a diverse group of professionals. In Ireland South Women & Infants Directorate, the following six professions provide direct services to mothers and their infants: dietetics, occupational therapy, pharmacy, physiotherapy, social work and speech and language therapy. One profession nominates a standing member of the Executive Management Committee. Maria Leahy, Acting Manager of Social Work Services, CUH/CUMH has been a representative HSCP member since 2018.

While a number of these professions are dedicated to maternity services, the majority provide services to both maternity service users as well as patients in the general hospital setting.

Health and social care professionals play a key part in the care provided to families, ensuring that babies get the best start in life and that mothers and families are supported and empowered to improve their health and wellbeing.

The Directorate has prioritised the development of HSCP services and has recruited a number of additional staff for 2021. While it will take some time to fully resource all professions to enable the provision of an optimal service, this is a huge step forward and an exciting time for HSCPs in Ireland South.

## CUMH Staff 2021

### Consultants in Obstetrics and Gynaecology

- Professor John R. Higgins, Clinical Director
- Professor Barry O'Reilly
- Professor Keelin O'Donoghue
- Professor Richard Greene
- Dr Alison DeMaio
- Dr Aoife Morris
- Dr Barbara Kerkhoff
- Dr Cathy Burke
- Dr Dan McKenna
- Dr Deirdre Hayes Ryan
- Dr Fergus McCarthy
- Dr John Coulter
- Dr Karen McNamara
- Dr Minna Geisler
- Dr Mairead O'Riordan
- Dr Matt Hewitt
- Dr Moya McMenamin
- Dr Mudathir Abdelmaboud
- Dr Nóirín Russell
- Ms Orfhlaith O'Sullivan
- Dr Richard Horgan
- Dr Suzanne O'Sullivan

### Consultants in Neonatology

- Dr Brendan Murphy
- Dr Peter Filan
- Professor Eugene Dempsey
- Dr Brian Walsh
- Dr Liam O'Connell
- Dr Mmoloki Kenosi, Locum Consultant Neonatologist
- Dr Jojanneke DeRoest, Locum Consultant Neonatologist
- Dr Andreea Pavel (locum)

### Senior Midwifery and Nursing Staff

- Katie Bourke, Director of Midwifery
- Rosaline O'Donovan, Assistant Director of Midwifery
- Úna Cahill, Assistant Director of Midwifery
- Claire O'Halloran, Assistant Director of Midwifery
- Maire Crowley, Assistant Director of Midwifery
- Nicole Coakley, Assistant Director of Midwifery
- Paula Murphy, Assistant Director of Midwifery
- Fiona Kirby, Midwifery Practice Development Coordinator

### Clinical Midwife/Nurse Managers 3

- Celine O'Keeffe
- Deirdre Moriarty
- Fidelma Harrington
- Frances Healy
- Lorraine O'Connor
- Lucille Bradfield
- Mary Fitzgerald
- Mary Quaid
- Monica O'Regan
- Niamh Spillane
- Nilima Pandit
- Kate Lyons
- Riona Cotter
- Dara Philpott

## TippUH Staff

### Consultants in Obstetrics and Gynaecology

- Dr Vijayashree Hiremath, Clinical Lead, Consultant Obstetrician and Gynaecologist
- Dr Attia Al Fathid, Consultant Obstetrician and Gynaecologist
- Dr Mostaffa Abdalla, Consultant Obstetrician and Gynaecologist
- Dr Manal Younis, Consultant Obstetrician and Gynaecologist

### Senior Midwifery and Nursing Staff

- Sinéad Heaney, Director of Midwifery
- Mary O'Donnell, Clinical Midwife Manager 3

## UHK Staff

### Consultants in Obstetrics and Gynaecology

- Dr Paul Hughes, Clinical Lead, Consultant Obstetrician and Gynaecologist
- Dr Mary McCaffrey, Consultant Obstetrician and Gynaecologist
- Dr Savita Lalchandani, Consultant Obstetrician and Gynaecologist
- Dr Magid Abubakar, Consultant Obstetrician and Gynaecologist

### Senior Midwifery & Nursing Staff

- Sandra O'Connor, Director of Midwifery
- Mary Stack Courtney, Clinical Midwife Manager III

## UHW Staff

### Consultants in Obstetrics & Gynaecology

- Dr Eddie O'Donnell, Clinical Lead, Consultant Obstetrician and Gynaecologist
- Dr Azriny Khalid, Consultant Obstetrician and Gynaecologist
- Dr John Bermingham, Consultant Obstetrician and Gynaecologist
- Dr John Stratton, Consultant Obstetrician and Gynaecologist
- Dr Mairead Butler, Consultant Obstetrician and Gynaecologist

### Senior Midwifery and Nursing Staff

- Paula Curtin, Director of Midwifery
- Janet Murphy Assistant Director of Nursing & Midwifery
- Maria Murtagh, Clinical Midwifery Manager 3
- Janet Murphy, Advanced Midwife Practitioner
- Una Walsh, CMS Ultrasound
- Anne Fanning, CMS Ultrasound
- Helen Patmore, Midwifery Scanning Early Pregnancy Unit
- Rachel Cashin, Midwifery Scanning Early Pregnancy Unit
- Elaine Roche, CMM2 Ambulatory Gynaecology
- Jill Whelan, CMS Bereavement & Loss
- Linda O'Callaghan, Clinical Placement Coordinator Midwifery
- Mary Frisby, CMM2, Perinatal Mental Health
- Lorraine Harrison, Nora Lyng, Margaret Lyster, Brid Galvin, Greta Power, Aoife Keenahan, Vanessa Behan, CMM2 Shift leaders, Delivery Suite
- Victoria Byrne, CMM2 IHCMS
- Grace Walsh, CMM2 Postnatal
- Celine O'Connor, CMM2 Antenatal and Gynaecology
- Margaret Coe, CMM2
- Martina Wynne, CMM1 OPD
- Julie Moriarty, CNM2 NICU SCBU
- Audrey Comerford, CNM1 NICU SCBU
- Katrin Hessler, CNM1 NICUSCBU
- Brigita Moore, CNM2 Colposcopy
- Kelly Logue, CNM2 Colposcopy
- Elizabeth Kinsella, CNM2 Colposcopy
- Joanne Dineen, SN Colposcopy
- Sinead Boyle, C/ANP SATU
- Ann Folan, CNS SATU

# Education, Research and Innovation

## Department of Obstetrics and Gynaecology, UCC

The Department of Obstetrics and Gynaecology aims to lead the development of teaching and research in obstetrics and gynaecology in Ireland and to become a centre of excellence internationally. This academic agenda is fully integrated with the delivery of clinical care in Cork University Maternity Hospital, and the maternity units in Tipperary University Hospital, University Hospital Waterford and University Hospital Kerry thus providing a high-quality academic service

across a broad range of clinical, educational and research activities.

The department is located on the fifth floor of Cork University Maternity Hospital. It provides formal undergraduate teaching to UCC medical students. The department also provides postgraduate and continuous professional development opportunities in Ireland South Women & Infants Directorate.

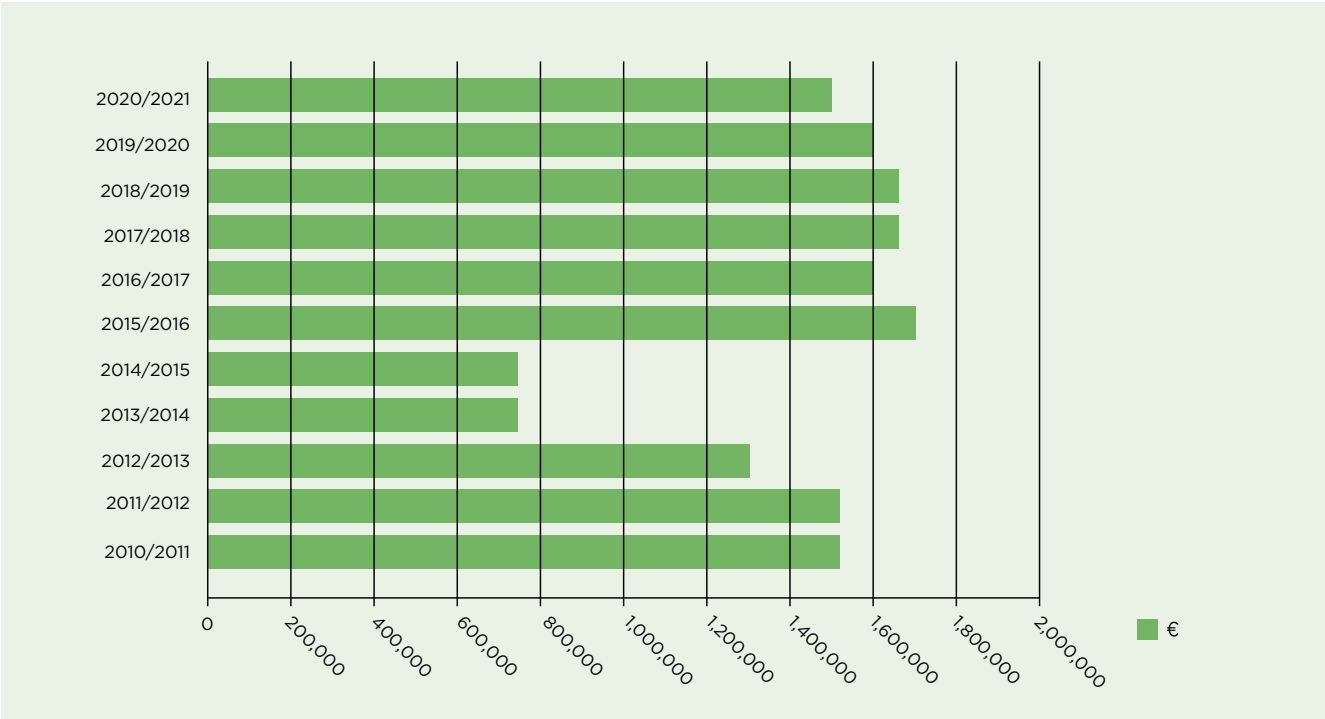


Figure 7: Research Income in the Department of Obstetrics and Gynaecology, 2010-2021





## Response to COVID-19

The delivery of teaching and examinations for fourth-year medical and final-year medical students was altered significantly due to the onset of the COVID-19 global pandemic in 2020.

The teaching for 2021/2022 fourth and final-year medical students was in its second year of a hybrid online and in-person small group teaching with strict scheduling of students to wards, floors and areas to ensure efficient contact tracing if needed. Students and staff were now much more familiar and confident with this approach.

Canvas, the online learning environment, continued to be an important resource for students. Tutorials from many of our consultants are readily available for students to study on the platform as well as quizzes to help students test their knowledge.

The final year obstetrics and gynaecology exam (incorporating clinical and written questions) took the form of an OSCE exam held in one day, with various stations set up for the students in the Brookfield Health Science Complex (BHSC). All safety measures were adopted – face masks, hand hygiene and social distancing. Consultant examiners came from across the Directorate to support this effort.

## Awards

Due to COVID-19, the Anu Research meeting was cancelled, and the Anu Research Medal was not awarded for 2021. The Anu Undergraduate Gold Medal in Obstetrics and Gynaecology and the Anu Undergraduate Scholar Medal in Obstetrics and Gynaecology awarded to students who outperformed in their written and oral examinations were not awarded this year due to the COVID-19 pandemic and the changed format of exams. We look forward to resuming these traditions once safe to do so.

## PhD Graduates

Deirdre Hayes Ryan was awarded her PhD for her thesis “PARROT Ireland: Placental growth factor in Assessment of women with suspected pre-eclampsia to reduce maternal morbidity: a Stepped Wedge Cluster Randomised Control Trial Research Study Protocol”.

Aude Claire Morillon was awarded her PhD for her thesis “Applications of Metabolomics to Study the Pathophysiology of Adverse Pregnancy Outcomes”.

Liz Considine was awarded her PhD for her thesis “The development of a molecular biomarker-based screening test to predict spontaneous preterm birth in pregnancy”.

## An Introduction to Clinical Pastoral Education for Healthcare Professionals

The UCC CPD short course ‘An introduction to Clinical Pastoral Education for healthcare professionals’ was run successfully again in 2021. Now in its fourth year, this 10 week short programme is run from the Department of Obstetrics and Gynaecology by Dr Daniel Nuzum. The course continues to be popular with a wide range of healthcare professionals and is now provided exclusively online. Based on the principles of Clinical Pastoral Education which Daniel provides through CUH and CUMH for training professionals in pastoral ministry and healthcare chaplaincy, this shortened programme for other healthcare professionals has proved popular for personal and professional growth in healthcare practice. The areas covered in the short course include:

1. Introduction to action/reflection model of learning.
2. What is spirituality?
3. Personal, pastoral and professional identity.
4. Communication, listening and responding skills.
5. Intra-personal and Interpersonal skills, empathy, self-care and teamwork.
6. Introduction to grief and loss.
7. Introduction to Reflective Practice.
8. Scope and impact of the pastoral role including boundaries, confidentiality and privacy.
9. Spiritual Care, what is it? Who does it? Spiritual pain; assessment and referral in clinical practice.
10. Integrating the course components into clinical practice.

This course provides healthcare professionals with an opportunity to focus on the relational aspects of clinical practice and healthcare as well as an opportunity to explore self-care and wellbeing in clinical practice and has received consistently positive feedback from participants.

## The National Perinatal Epidemiology Centre (NPEC)

The mission of the National Perinatal Epidemiology Centre (NPEC) is to collaborate with Irish maternity services to translate clinical audit data and epidemiological evidence into improved maternity care for families in Ireland. The NPEC has a national focus, working in collaboration with all 19 of Ireland’s maternity units: it audits and reviews the practice of the Irish maternity services with a view to deriving learning and make recommendations based on that learning.

The NPEC is a team of midwives, researchers, administrators, and clinicians and is directed by Professor Richard Greene. The NPEC produces annual national clinical audit reports on perinatal mortality in Ireland, maternal morbidity in Ireland, home births in Ireland, neonatal care of very low birth weight babies in Ireland, and therapeutic hypothermia in Ireland, subject areas that constitute key indicators of quality of maternity and neonatal care.

The Lourdes Hospital Inquiry report of 2007 recommended that an electronic record of every maternity in Ireland be maintained: to this end the NPEC, and its Director has been instrumental in the development of the Maternal Newborn Clinical Management System (MN-CMS).

The Centre continues to build on its existing portfolio of audits and research. Every time a mother gives birth in Ireland, the important interventions, the good outcomes and the complications are recorded and analysed at a national specialist centre. Unusual trends are easily and quickly observed and most importantly acted on.

The NPEC makes recommendations in its annual audit reports. However, it recognises that recommendations are ineffective if they are not implemented. To ensure that it's recommendations are acted upon, and that learning is achieved from its audits at both hospital level and national level, the

NPEC works with the National Office of Clinical Audit (NOCA) and more recently, the National Centre for Clinical Audit (NCCA).

The NPEC has always strategically aimed to close the audit loop and since the establishment of the National Women and Infants Health Programme (NWIHP) in January 2017, a number of the NPEC recommendations have progressed. The NPEC works in collaboration with NWIHP and acknowledges the key relationship that has developed between the two organisations.

At local hospital level, the NPEC provides customised feedback to individual hospitals on how they compare and what areas of their care they might review in the context of benchmarking against the national average. To this end, it publishes annual individual hospital reports and presents its findings at individual hospitals. The NPEC actively encourages the use of data in the units and appreciates the importance of working with the units to ensure they know their data and understand how this data can be used in their units.

Data is submitted to the NPEC throughout the year in Perinatal Mortality, Severe Maternal Morbidity, Very Low Birth Weight Audit, Home Births, Robson Ten Group Classification System, Neonatal Therapeutic Hypothermia and Maternal Death Enquiry.

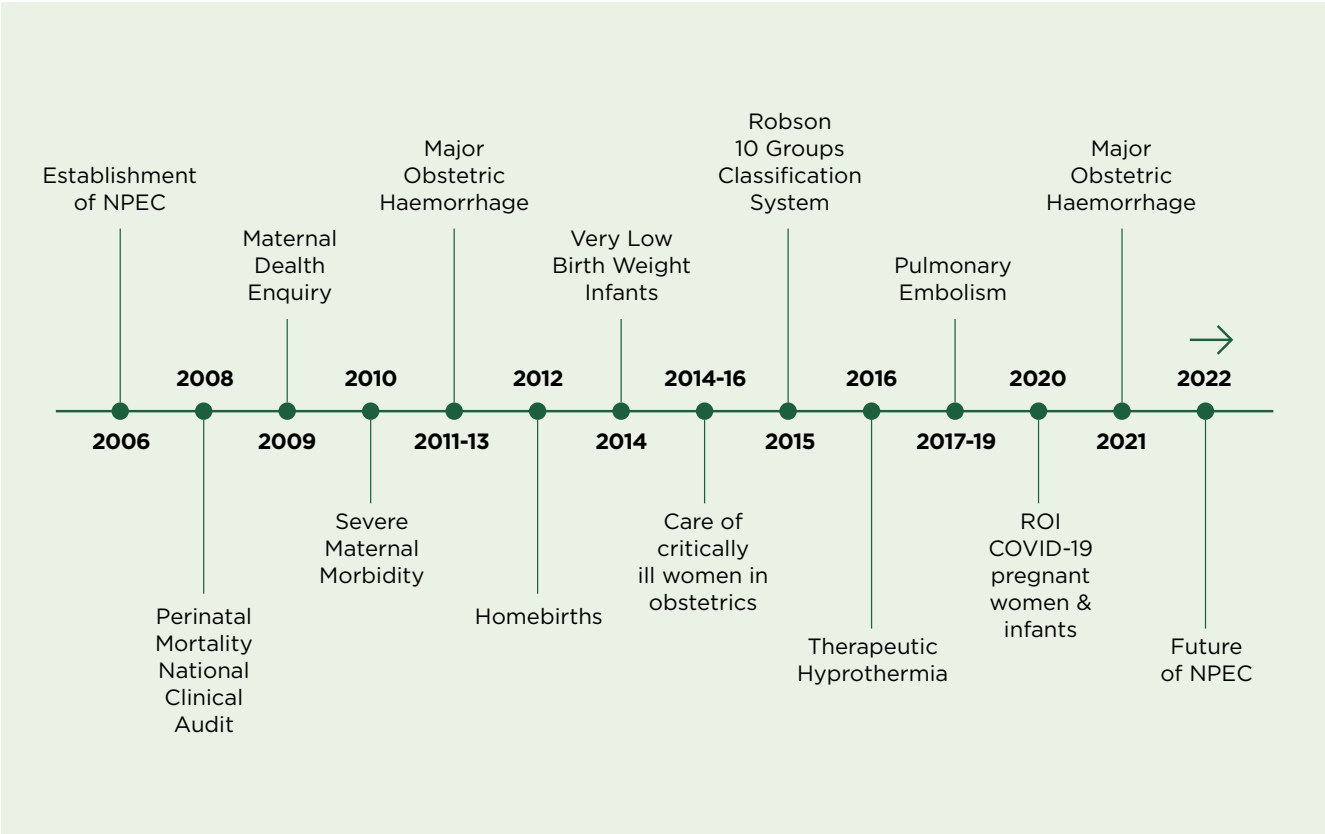


Figure 8: The NPEC timeline

## Report Outputs:

O'Hare MF, Manning E, Corcoran P, Greene RA on behalf of MDE Ireland. Confidential Maternal Death Enquiry in Ireland, Report for 2016–2018. Cork: MDE Ireland, December 2021.

Meaney S, Byrne A, Corcoran P, Greene RA on behalf of the Designated Midwifery Officers. Planned Home Births in Ireland Triennial Report 2018–2020; HSE National Home Birth Service provided by Self-Employed Community Midwives. Cork: Health Service Executive, 2021.

Leitao S, Corcoran P, Keane J, Twomey A, Murphy BP, Greene RA, on behalf of NICORE Republic of Ireland. Very Low Birth Weight Infants in the Republic of Ireland Annual Report 2019. Cork: National Perinatal Epidemiology Centre, 2021.

Meaney S, McGinley J, Corcoran P, McKenna P, Filan P, Greene RA, Murphy J on behalf of Neonatal Therapeutic Hypothermia Working Group. Neonatal Therapeutic Hypothermia in Ireland, Annual Report 2019. Cork: National Perinatal Epidemiology Centre, 2021.

## Health Innovation Hub Ireland (HIHI)

Health Innovation Hub Ireland is a national government backed initiative supported by Enterprise Ireland and the Health Service Executive (HSE). Through its unique academic and clinical partnership (UCC, NUIG, TCD, MTU and the associated Hospital Groups), HIHI supports Irish based companies to their product development by enabling unique clinical feedback and piloting.

HIHI also supports the development of new ideas and products through its ideation activity stimulating the development of needs driven solutions and assessing and supporting further development. Underpinning these activities, HIHI delivers educational tools and programmes to stimulate a culture of innovation within our healthcare system and to support healthtech sector growth in Ireland. Together, these activities support the Irish economy, ensuring start-ups and established companies grow, scale and remain in Ireland, and this in turn supports the healthcare system by providing access to innovative technologies that lead to better patient outcomes.

## INFANT

INFANT is a leading translational Research Centre in maternal and child health. INFANT's mission is to deliver pioneering translational research to improve health outcomes in pregnancy, birth, newborn and early childhood phases of growth and development.

INFANT is hosted by University College Cork (UCC) and is co-located with clinical partners Cork University Hospital and Cork University Maternity Hospital (CUH/CUMH). INFANT's state-of-the-art co-located facilities serve the centre's research goals and support multi-disciplinary and trans-disciplinary collaboration between the university, and hospitals.

The INFANT strategy is to strive for scientific excellence and disruptive innovation in our quest to become a leading Institute of Maternal and Child Health of international renown. We have a clear vision of how we will achieve this, enabling us to deliver scientific excellence, innovation, and societal and economic impact now and for the next generation.

### Some key achievements for INFANT during 2021 were:

- **Funding** - secured over €3.82M of new funding in 2021 from exchequer and non-exchequer sources including Horizon Europe, HRB, ICAT (Irish Clinical Academic Training Programme), Enterprise Ireland, and National Dairy Council).
- **Publications** - INFANT published over 92 peer-reviewed journal publications in 2021 - with a number of key breakthroughs published in high-impact journals such as BMJ Journals, The Journal of Pediatrics, JAMA, JCEM, Molecular Psychiatry, American Journal of Clinical Nutrition, Neuropsychopharmacology, Nature Microbiology.
- **PhD Graduates** - INFANT had 7 PhD graduates in 2021.
  - PhD/MD Registrations - INFANT had 29 postgraduate (PhD/MD) students registered during 2021 across all disciplines.
  - Research Leadership - 2021 was a very significant year in enhancing INFANT research leadership. INFANT welcomed Dr Fergus McCarthy, Dr Jane English, and Dr Ali Khashan to the Centre's Principal Investigator team. INFANT was also delighted to appoint 8 Lead Investigators in 2021 - Dr Mairead O'Riordan, Dr John O'Toole, Dr Elaine McCarthy, Dr Juan Trujillo, Dr Brian Walsh, Dr Aine Hennessy, Dr Mark O'Sullivan, Dr Colin Hawkes.
  - 6 Principal Investigators were appointed as Editors or Associate Editors for international journals
  - 8 INFANT Principal Investigators were members or leaders of 14 national and international organisations that influence research, clinical practice and policy.
- **Adjunct Professorships** - INFANT and UCC appointed Prof. Francesco Pisani from the Department of Medicine and Surgery, Neuroscience Section, Head of the Child Neuropsychiatric Unit, Hospital - University of Parma. Collaboration to date includes visual analysis of EEG and seizure annotation.



- **Clinical Trials Network** - The Irish Network for Children's Clinical Trials - in4kids, led by INFANT's Prof Geraldine Boylan and Trinity College Dublin's Prof Eleanor Molloy, was successfully funded in 2021.
- **Global Health** - Researchers at INFANT, in partnership with Kilimanjaro Clinical Research Institute, have created a ground-breaking digital delivery register for reproductive health in low-resource settings in Northern Tanzania. The digital register, Kilimanjaro Ultra 2020, could help reduce maternal and perinatal mortality rates in developing countries.
- **Spinouts** - INFANT launched a spin-out company, Liltoda Ltd, led by Professor Deirdre Murray, which focuses on harnessing the power of gaming technology for the early detection of infant brain injury.
- **Awards** - The Pregnancy Loss Research Group, led by INFANT PI, Prof Keelin O'Donoghue, won UCC Research Team of the Year 2021.
- **Awards** - INFANT won "Best Application of AI in an Academic Research Body" at the AI Awards for the work of its researchers who are developing AI-based technologies for the automated detection of brain injuries in newborns.

## Pregnancy Loss Research Group

The Pregnancy Loss Research Group (PLRG) is led by Professor Keelin O'Donoghue and is based at CUMH. The group encompasses a multidisciplinary team of doctors, researchers, scientists, midwives, nurses, social workers, pathologists and chaplains alongside medical, Masters and Doctoral students, working collaboratively with the common goal - to provide support and information to parents bereaved by early and late pregnancy loss, promote their emotional, psychological, spiritual and physical well-being, as well as improving professional practice and clinical care, influencing health-care policy and facilitating research in all areas of pregnancy loss and perinatal mortality.

The PLRG leads national research, and the development of resources and evidence-based advice and interventions, to prevent pregnancy loss and improve health care (quality) and health and social outcomes for women, babies and their families. Its research focuses on all types of pregnancy and infant loss, including first and second trimester miscarriage, ectopic pregnancy, molar pregnancy, stillbirth, termination of pregnancy, neonatal death and pregnancy after loss. Research activities are funded by a range of organisations, including the Health Research Board, Irish Research Council



and Science Foundation Ireland. Partnerships/ collaborations are integral to the PLRG's work, and include national and international academic institutions, public bodies/agencies, and non-governmental/support organisations.

The Pregnancy Loss Research Group was formally established in 2012 and meets monthly at CUMH. Research from the group has been presented at a wide variety of international conferences around the world. Members of the group have also been involved in a large number of national and international publications as well as national guidelines and reports.

Website: [www.ucc.ie/en/obsgyn/plrg/](http://www.ucc.ie/en/obsgyn/plrg/)

Twitter: [@PregnancyLossIE](https://twitter.com/PregnancyLossIE)

### Key achievements during 2021 include:

- The PLRG was awarded UCC Best Team of the Year 2021, at ceremony held in June 2022.



- In March 2021, Professor Keelin O'Donoghue was appointed as the new Clinical Lead for Guideline Development (Maternity & Gynaecology). <https://www.rcpi.ie/faculties/obstetricians-and-gynaecologists/national-clinical-guidelines-in-obstetrics-and-gynaecology/>

- Professor O'Donoghue continued to lead the development of the National Standards for Bereavement Care Following Pregnancy Loss and Perinatal Death in all 19 Irish maternity units on behalf of the HSE's National Women and Infants Health Programme. Professor O'Donoghue and Riona Cotter authored a report on the implementation of the Standards, which was published in July 2021. <https://www.hse.ie/eng/about/who/acute-hospitals-division/woman-infants/bereavement-care/implementation-national-standards-for-bereavement.pdf>
- Professor O'Donoghue continued in her role on the National Screening Advisory Committee at the Department of Health <https://www.gov.ie/en/publication/cOd9f8-about-the-national-screening-advisory-committee/>
- Professor O'Donoghue was also a member of the HIQA Advisory Board for the National Maternity Bereavement Experience Survey <https://yourexperience.ie/maternity-bereavement/about-the-survey/>

### Funding and award successes

- Professor O'Donoghue was awarded philanthropic funding for a PhD studentship investigating the evaluation and implementation of a national perinatal mortality review tool for Ireland. The project commenced in January 2022.
- Caroline Joyce received an Irish Research Council Employment-Based Programme Postgraduate Scholarship for her doctoral studies on the identification of biomarkers for the diagnosis, management and follow-up of women with gestational trophoblastic disease. Supervisor: Professor O'Donoghue. <https://www.infantcentre.ie/2021/09/01/infant-student-secures-irc-scholarship/> <https://www.infantcentre.ie/caroline-joyce/>
- Professor O'Donoghue as Principal Investigator was awarded funding under the Irish Research Council New Foundations Awards, in partnership with the Irish Hospice Foundation, for the PLATFORM (Pregnancy Loss knowledge trAnslATion FOR iMpact) Project which aims to enhance the translation of pregnancy loss research into policy and practice. <https://www.ucc.ie/en/obsgyn/plrg/plrgresearchactivity/theplatformproject/>
- Dr Margaret Murphy received funding from Fulbright Ireland to facilitate an online course in Pregnancy After Loss for healthcare professionals.
- Professor O'Donoghue received an Irish Research Council Research Ally Prize in December 2021.

- Dr Daniel Nuzum was awarded an All-Ireland Institute of Hospice & Palliative Care (AIHPC) Palliative Care Education Fellowship for Online Learning Resources Development Awards.

## Research project updates

- Caroline O'Connor joined the Group in January 2021 to undertake a PhD, funded by the Irish Research Council, entitled 'The MILESTONE Study: Multiple pregnancy: An investigation of the risk factors and outcomes in the Republic of Ireland'. Supervisors: Professor O'Donoghue and Dr Sara Leitao.

<https://www.infantcentre.ie/2022/05/24/phd-profile-caroline-oconnor/>

<https://www.ucc.ie/en/obsgyn/plrg/plrgresearchactivity/themilestonestudy/>

- The RE: CURRENT Team welcomed a third Postdoctoral Researcher – Dr Caragh Flannery – to work on the economic costs of recurrent miscarriage and models of care. RE: CURRENT Project updates:

No. 4, February 2021: [https://mailchi.](https://mailchi.mp/0103245f1c93/recurrent-project-update-4-feb-2021)

[mp/0103245f1c93/recurrent-project-update-4-feb-2021](https://mailchi.mp/0103245f1c93/recurrent-project-update-4-feb-2021)

No. 5, June 2021: [https://mailchi.](https://mailchi.mp/63a99c088bb3/recurrent-project-update-5-jun-21)

[mp/63a99c088bb3/recurrent-project-update-5-jun-21](https://mailchi.mp/63a99c088bb3/recurrent-project-update-5-jun-21)

No. 6, September 2021: [https://mailchi.mp/](https://mailchi.mp/fcb985532c57/recurrent-project-update-6-sept-21)

[fcb985532c57/recurrent-project-update-6-sept-21](https://mailchi.mp/fcb985532c57/recurrent-project-update-6-sept-21)

No. 7, November 2021: [https://mailchi.mp/](https://mailchi.mp/d9e256ed41aa/recurrent-project-update-7-nov)

[d9e256ed41aa/recurrent-project-update-7-nov](https://mailchi.mp/d9e256ed41aa/recurrent-project-update-7-nov)

- Dr Stacey Power-Walsh graduated with her PhD in July 2021 for her thesis entitled: 'Experiences of pregnancy with major fetal anomalies'. Supervisors: Professor Keelin O'Donoghue and Dr Sarah Meaney.
- Dr Aenne Helps submitted her PhD thesis for examination: 'Study of methods, systems, recommendations and bereaved parents' involvements in perinatal death reviews, inquiries and audits'. Supervisors: Professor O'Donoghue, Dr Sara Leitao, and Professor Richard Greene.

## Collaborations

- Members of the group (Professor O'Donoghue, and Dr Margaret Murphy) continued to collaborate in the Ethics, Law and Pregnancy in Ireland Network (ELPIN) which was funded by the Wellcome Trust in 2019 and is based at University College Cork.

[www.ucc.ie/en/elpin/workshops/](http://www.ucc.ie/en/elpin/workshops/)

- Dr Margaret Murphy collaborated on a study, led by researchers at the University of Bristol, to develop of a core outcome set, and identify of outcome measurement tools, to improve care and research for care after stillbirth. <https://www.bristol.ac.uk/translational-health-sciences/research/awhu/clinical-trials/ichoose/>

## COVID-19

- Professor Keelin O'Donoghue and Dr Brendan Fitzgerald continued international research collaborations working on COVID-19 in Pregnancy. <https://doi.org/10.5858/arpa.2021-0586-SA>
- Dr Laura Linehan led a paper on SARS-CoV-2 placentalitis <https://doi.org/10.1016/j.placenta.2021.01.012>
- Professor O'Donoghue also continued to contribute to international resource centres and databases for COVID-19.
- Professor O'Donoghue was lead author on the national guideline 'COVID-19 Infection: Guidance for Maternity Services', published in May 2021. <https://rcpi-live-cdn.s3.amazonaws.com/wp-content/uploads/2021/11/COVID19-pregnancy-040521.pdf>
- Professor O'Donoghue was interviewed on RTÉ Radio 1-Morning Ireland, 05 March 2021: Pregnant women urged to attend visits as normal and raise any concerns. Available at: <https://www.rte.ie/radio/radio1/clips/21917894/>
- Professor Keelin O'Donoghue and Dr Margaret Murphy continued to collaborate with the Stillbirth Centre of Research Excellence on COCOON: Continuing care in COVID-19 Outbreak: A global survey of New and expectant parent experiences. This Global research study aims understand the challenges and concerns of parents who are pregnant or have recently given birth during the COVID-19 pandemic outbreak, including parents who have experienced stillbirth or neonatal death. [www.stillbirthcre.org.au/our-research/global-research-study-maternity-care-during-covid-19/](http://www.stillbirthcre.org.au/our-research/global-research-study-maternity-care-during-covid-19/)

## Training programme

- The TEARDROP (Teaching, Excellent, pArent, peRinatal, Deaths- related, inteRactions, tO, Professionals) multidisciplinary bereavement training programme began in 2019, led by the PLRG, did not run in 2021 due to the COVID-19 pandemic; however, the 'Development and evaluation of TEARDROP - a perinatal bereavement care training programme for healthcare professionals' was published in Midwifery.

## Television documentary

- Professor O'Donoghue and Orla O'Connell (Clinical Midwife Specialist in Bereavement & Loss) featured in the Síle Seoige's miscarriage documentary "Deireadh Tochta" on TG4 in April 2021. The Programme was nominated for a Royal Television Society Ireland Television Award in 2022. <https://www.tg4.ie/en/player/home/?pid=6245710102001&series=S%C3%ADle+Seoige%3A+Deireadh+Tochta&genre=Faisneis>



## Dissemination activities

- Members of the group authored 29 peer-reviewed journal articles published in the international literature throughout 2021.
- Dr Daniel Nuzum and Professor Keelin O'Donoghue co-authored a chapter on Perinatal Palliative Care in the Oxford Textbook of Palliative Care for Children. Dr Nuzum, Professor O'Donoghue and Caoimhe Ní Éalaithe also co-authored chapters in 'Birth and the Irish' (Pregnancy loss: A silent loss & challenging birth; Birth when life is short) published by Wordwell Books. Dr Margaret Murphy co-authored a chapter on stillbirth in the Oxford Handbook for Systems-Thinking in Global Health.
- Dr Margaret Murphy co-authored a book 'Different Baby, Different Story: Pregnancy and Parenting after Loss', published by Rowman & Littlefield Publishers.
- The Group published two policy briefs: (1) Clinical practice guidelines for recurrent miscarriage in high-income countries: a systematic review ([https://www.researchgate.net/publication/352831721\\_Policy\\_Brief\\_Clinical\\_practice\\_guidelines\\_for\\_recurrent\\_miscarriage\\_in\\_high-income\\_countries\\_a\\_systematic\\_review](https://www.researchgate.net/publication/352831721_Policy_Brief_Clinical_practice_guidelines_for_recurrent_miscarriage_in_high-income_countries_a_systematic_review)); (2) The definition of stillbirth in Ireland: A rationale for change.
- The Group continued to maintain and develop its affiliated websites: [pregnancyandinfantloss.ie](https://pregnancyandinfantloss.ie) and [corkmiscarriage.com](https://corkmiscarriage.com).

## Newsletters/News items

- INFANT. INFANT PI and Pregnancy Loss Research Group Lead, Professor Keelin O'Donoghue, wins Irish Research Council Research Ally Prize, 3 December 2021. Available at <https://www.infantcentre.ie/2021/12/03/infant-pi-and-pregnancy-loss-research-group-lead-professor-keelin-odonoghue-wins-irish-research-council-research-ally-prize/>
- INFANT. Pregnancy Loss Research from Ireland Well-Represented at Upcoming ISA-ISPID Conference, 9 November 2021. Available at <https://www.infantcentre.ie/2021/11/09/pregnancy-loss-research-from-ireland-well-represented-at-upcoming-isa-ispid-conference/>
- Nuzum D. CUMH Remembers 2021. UltraNews eNewsletter of Ireland South Women & Infants Directorate, Winter 2021. Available at [https://irelandsouthwid.cumh.hse.ie/image-bank/news-image-bank/final-ultranews-enews\\_winter-2021.pdf](https://irelandsouthwid.cumh.hse.ie/image-bank/news-image-bank/final-ultranews-enews_winter-2021.pdf)
- College of Medicine and Health, University College Cork. Professor Keelin O'Donoghue co-authors report on Implementation of National Bereavement Standards across all 19 Maternity

Units. CoMH eNEWS Issue 41, College of Medicine and Health, UCC, December 2021. Available at [https://www.ucc.ie/en/media/academic/medicineandhealth/2019documents/newsletter/standardnewsletter/CoMHeNewsNo41\\_December2021.pdf](https://www.ucc.ie/en/media/academic/medicineandhealth/2019documents/newsletter/standardnewsletter/CoMHeNewsNo41_December2021.pdf)

- INFANT. New Survey Examines the Care Experiences of Women and Their Partners Who Have Had Recurrent Miscarriages, 22 September 2021. Available at <https://www.infantcentre.ie/2021/09/22/new-survey-examines-the-care-experiences-of-women-and-their-partners-who-have-had-recurrent-miscarriages/>
- INFANT. INFANT Student Secures IRC Scholarship 1 September 2021. Available at <https://www.infantcentre.ie/2021/09/01/infant-student-secures-irc-scholarship/>
- INFANT. Professor Keelin O'Donoghue Co-Authors Report on Implementation of National Bereavement Standards Across All 19 Maternity Units, 18 August 2021. Available at <https://www.infantcentre.ie/2021/08/18/professor-keelin-odonoghue-co-authors-report-on-implementation-of-national-bereavement-standards-across-all-19-maternity-units/>
- O'Donoghue K. Student Research Stories: Pregnancy Loss Research Group (PLRG). UltraNews eNewsletter of Ireland South Women & Infants Directorate, Summer 2021. Available at <https://irelandsouthwid.cumh.hse.ie/image-bank/news-image-bank/ultranews-2021-summer-newsletter.pdf>
- College of Medicine and Health, University College Cork. Bereavement Standards: From Implementation to Oversight. UltraNews eNewsletter of Ireland South Women & Infants Directorate, Spring 2021. Available at <https://irelandsouthwid.cumh.hse.ie/news-events-at-cumh/ultranews-newsletters/ultranews-spring-2021.pdf>
- College of Medicine and Health, University College Cork. Postgraduate Scholarship for Caroline O'Connor, Midwife CUMH. UltraNews eNewsletter of Ireland South Women & Infants Directorate, Spring 2021. Available at <https://irelandsouthwid.cumh.hse.ie/news-events-at-cumh/ultranews-newsletters/ultranews-spring-2021.pdf>

## Media coverage

- Kelleher L. Stillbirth raises risks of c-sections in future. Irish Independent, 03 October 2021. Available at: <https://www.independent.ie/irish-news/health/stillbirth-raises-risks-of-c-sections-in-future-40911388.html>
- McDonnell C, O'Callaghan H, Stevens J. Miscarriage in Ireland: "I am so sorry, but your baby has no

heartbeat". Irish Examiner, 11 June 2021. Available at <https://www.irishexaminer.com/lifestyle/healthandwellbeing/arid-40311575.html>

- Griffin N. Vaccine priority for pregnant women welcomed by health professionals. Irish Examiner, 28 April 2021. Available at <https://www.irishexaminer.com/news/arid-40276187.html>
- Brennan M. Síle Seoige: There is still this veil of secrecy that surrounds miscarriage. Irish Examiner, 07 April 2021. Available at <https://www.irishexaminer.com/lifestyle/people/arid-40259723.html>
- O'Loughlin M. Síle Seoige's heartache to brave recovery: Engagement to fiancé Damien, son Cathal and miscarriage pain. RSVP Live, 07 April 2021. Available at <https://www.rsvplive.ie/news/celebs/gallery/sile-seoiges-heartache-brave-recovery-23869677>
- Digital Desk Staff. Síle Seoige talks openly about miscarriage in new documentary. Breaking News, 04 April 2021. Available at <https://www.breakingnews.ie/ireland/sile-seoige-talks-openly-about-miscarriage-in-new-documentary-1106549.html>
- Thejournal.ie. Covid Placentalitis: what we know about the condition that may have caused four stillbirths in Ireland. thejournal.ie, 05 March 2021. Available at <https://www.thejournal.ie/covid-placentalitis-pregnant-women-coronavirus-stillbirth-5373160-Mar2021/>
- Griffin N. Call for pregnant women to be moved up vaccine list amid new Covid-19 concerns. Irish Examiner, 05 March 2021. Available at <https://www.irishexaminer.com/news/arid-40238792.html>
- Griffin C, Clarke V. Cork obstetrician says pregnancy complications linked to Covid-19 are 'very uncommon'. Irish Examiner, 05 March 2021. Available at <https://www.irishexaminer.com/news/arid-40238300.html>

## Research from the Pregnancy Loss Research Group was presented at the following Conferences in 2021

- Junior Obstetrics and Gynaecology Society Annual Scientific Meeting, 26 November 2021 (Online).
- Irish Society of Gynaecological Oncology (ISGO) Annual Meeting, Cork, 12 November 2021.
- ISA-ISPID 2021: Driving change in Stillbirth, SIDS and Infant Death, 11-13 November 2021 (Online).
- XXIII FIGO World Congress of Gynecology and Obstetrics, 21-28 October 2021 (Online).

- The Society for Reproductive and Infant Psychology 41st Annual Conference 8-10 September 2021 (Online).
- European Health Psychology Society Conference, 23-27 August 2021(Online)
- 37th Virtual Annual Meeting of the European Society of Human Reproduction and Embryology, 26 June-01 July 2021 (Online).
- Stillbirth Summit: Star Legacy Foundation, 23- 24 June 2021 (Online).
- RCOG World Congress 2021, 09-12 June 2021 (Online).
- 25th International Conference on Prenatal Diagnosis and Therapy, 06-08 June 2021 (Online).
- 18th Annual Psychology Health and Medicine Conference, 12-14 May 2021 (Online).
- Society for Maternal and Fetal Medicine 41st Annual Meeting, 27-30 January 2021 (Online).
- NPEC Study Day, 22 January 2021 (Online).

## In addition, Professor O'Donoghue gave a variety of invited talks:

- "Annual Clinical Report – a discussion and review". Saolta Executive Healthcare Group, 08 December 2021 (Online).
- "Investigation of Recurrent Miscarriage". Association of Clinical Biochemists in Ireland (ACBI) 43rd Annual Conference, 12 November 2021 (Online).
- "Implementation of National Bereavement Standards". National Women and Infants Health Programme Webinar Series, 29 October 2021 (Online).
- "Antenatal Screening for Fetal Anomaly". National Screening Advisory Committee, Department of Health, 20 May 2021.
- "COVID-19 in Pregnancy: Clinical Guidance". Webinar: Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland, Dublin, 5 May 2021.
- Considering the Review and Consultation Process of the Health (Regulation of Termination of Pregnancy) Act – Panel Discussion. Ethics, Law and Pregnancy in Ireland Network (ELPIN) workshop, 19 February 2021 (Online).
- "Fetal Medicine in Ireland". All Party Oireachtas Group on Sexual and Reproductive Health, 27 January 2021.

## School of Nursing

Located in the Brookfield Health Sciences Complex, the School of Nursing & Midwifery offers three midwifery registration programmes in partnership with the Ireland South Women & Infants Directorate; a 4-year BSc (Hons) Midwifery, an 18-month post-registration Higher Diploma in Midwifery and the Advanced Midwifery Practice programme (MSc Advanced Practice Nursing/Midwifery) which was approved by the NMBI in 2021. All students are supported by the midwifery academic staff Dr Rhona O'Connell, Dr Geraldine McLoughlin, Dr Margaret Murphy, and Ms Agnes Phelan. The CUMH is the main site for the practice experience of UCC midwifery students, and for the first time in 2021, midwifery students went on placement in the Maternity Unit at UHK.

This was a very successful venture, and the students valued this experience.

The first two cAMPs commenced their AMP programme under the supportive care pathway for maternity care. In addition, two cANPs commenced in the area of urogynaecology.

The CUMH also accepts BSc General Nursing students and Public Health Nursing students for their required maternity placements.

This was another difficult year for students as COVID-19 did not wane. Online education continued until June 2021 and while UCC re-opened for face-to-face classes in September, much teaching remained online with a hybrid approach used. Clinical skills teaching was with reduced numbers but easier to manage than in the previous year. This was not optimal for the student experience of university life.

Student midwives are supported in practice by the midwifery practice development officer, clinical placement coordinators, postgraduate clinical coordinators, allocations liaison officer and link lecturers. A postgraduate skills facilitator for the Higher Diploma programme is supported by the School. Midwives are valued as they provide preceptor support to students to ensure that their midwifery competencies are achieved.

Students throughout the health services contributed to health care needs while, despite vaccinations becoming available, the pandemic continued to impact their practice experience. This was mainly due to staff absences and the need for the support team to cover midwifery shortages.

Though the teaching space in CUMH was limited, in 2020-2021 the School provided postgraduate and continuing education including the MSc Midwifery

and Continuing Professional Development (CPD) modules delivered with the support of CUMH midwives and doctors. The Maternity Critical Care module was delivered as a hybrid module, Nursing Management of the Neonate was delivered online by the neonatal team and the Parentcraft module was delivered in UCC with the assistance of midwives from CUMH.

## Student Achievements 2021

### Completed BSc (Hons) in Midwifery 2017 – 2021

Niamh Burns, Eimear Casserly, Ruby Hayes, Niamh Healy, Tamara Horan, Arisha Mohammed, Holly Nagle, Sarah O'Connor, Eimear O'Grady, Orla O'Mahony, Niamh O'Sullivan, Ailin Power, Sinead Roche, Deirdre Walsh.

### Completed Higher Diploma in Midwifery March 2021

Siobhan Canning, Roisin Carroll, Siobhan Clancy, Amaia Coca Bandres, Salvador Espinar Higuera, Sara Fulgencio Prior, Maedbh Gleeson, Maddalen Iturriagagoitia, Aileen Jinks, Gobnait Kelleher, Clara Lamming, Kate Louise Murphy, Vanessa O'Farrell, Bronah O'Sullivan, Claire O'Sullivan, Deirdre O'Sullivan, Julie O'Sullivan, Karen O'Sullivan, Almudena Piñero Suárez, Ramachandran Rajendiran, Kathy Robinson, Marion Roche, Gincy Shine Panicker.

### MSc Midwifery 2021

Blanca Fernandez, Eleftheria Psarraki, Natasha Lee.

### Doctorate in Nursing (DN) 2021

Dr Nilima Pandit

Thesis: A study to assess the relationship of resilience, self-efficacy and social support among mothers who experienced stillbirth.

### HH Stewart Medical Scholarship in Midwifery Award 2021

3rd Prize - Tamara Horan BSc Midwifery, UCC.

### COMH Quercus Awards 2020/21 results

BSc (Midwifery) 1: Natalie Moore

BSc (Midwifery) 2: Jessica Hurley

BSc (Midwifery) 3: Ciara O'Connor

### National NMBI student midwife debate November 2021

We would like to congratulate Nicole Maher, BSc Midwifery 2020 intake, for representing the Midwifery student body in UCC at the NMBI Annual National Student Midwife debate which was held online in 2021.

The motion for the debate was: *This house believes that midwifery is still not recognised as a separate and distinct profession in the Healthcare community.*



## Centre of Midwifery Education

The Centre of Midwifery Education (CME) is based in CUMH and is committed to the development and provision of programmes of education and training for registered midwives, nurses and the multidisciplinary team to support service delivery and be responsive to continuous service development. All education programmes support the development and ongoing maintenance of clinical competence and promote evidence-based care.

UHW and TippUH have access to continuing education through the Nursing and Midwifery Planning and Development Unit (NMPDU) in Kilcreene, Kilkenny and the Regional Centre for Nurse and Midwifery Education (RCNME) based at University Hospital Waterford. A range of the programmes provided by CME are open to staff in UHK and TippUH.

### CME Activity and Achievements

- In January 2021, during the COVID-19 pandemic, two members of the CME team, who are qualified instructors of Basic Life Support and Anaphylaxis, were redeployed to UCC for a number of weeks. These staff collaborated with other instructors to provide training to General Practitioners and Practice Nurses in the community, in preparation for COVID-19 vaccination clinics.
- As per recommendations advised by the COVID-19 committee in CUMH, face-to-face education was discontinued in the CME, apart from mandatory education and COVID-19 education sessions. The CME team provided shorter education sessions in the clinical areas and education programmes considered suitable for online education. These sessions were provided via WebEx. Online education sessions included Preceptorship and Induction programmes for new midwives, nurses and maternity healthcare assistants. The Midwifery Specialist Coordinator role in the CME incorporates the promotion and coordination of education programmes.
- CME staff in CUMH collaborated with CNME staff in UHK in 2021, to organise a joint online Preceptorship programme, which proved very successful. Programme recordings were also available for staff during this time.
- CME staff were involved in a number of training courses during 2021, in conjunction with the roll out of the Classroom Learning and Management System (CLMS). All staff attended a Virtual Learning online course and extensive training on the CLMS, which was introduced to CUMH in January 2021. This platform enables all CUMH staff to register for programmes delivered by the Centre of Midwifery Education using an automated booking process. It also enables CME staff to track numbers booked for programmes, record



attendance and help national reporting across all nursing and midwifery programmes. Using the classroom management system, participants are able to complete an online evaluation of each programme undertaken and generate an electronic and printable certificate of completion.

- New classroom IT equipment was installed in both CME classrooms in December 2020. In early 2021, an updated camera and audio equipment were added to the IT system, which has significantly enhanced facilitation of education programmes and is also a vital component for virtual classrooms and online meetings.
- A member of the CME team was on the National Preceptorship working group, which was responsible for developing the Preceptorship in Practice module on HSeLanD, launched in 2021.

The following education programmes on offer in the CME in 2021 included:

- Midwifery/Nursing Induction Two Day Programme
- Moving and Handling Programme
- Newborn Bloodspot Screening Training
- Open Disclosure
- Perineal Repair
- PPE Ward Training
- Preceptorship
- PROMPT 3
- Prostin Workshop
- Respiratory Pathway Support Training
- Seasonal Influenza Peer Vaccination Programme
- Neonatal Resuscitation Programme
- Baby Security Training
- Classroom Equipment Training
- Coronavirus and PPE Video and Demonstration Session
- HCA 1 Day Induction Programme
- Anaphylaxis
- Maternity Critical Care
- K2 Perinatal Training Programme TTT

All programmes provided by the CME carry Continuing Education Units (CEUs) from the Nursing and Midwifery Board of Ireland (NMBI) and some hold academic accreditation.

## Practice Development, CUMH

The Practice Development Unit coordinates and supports all activities related to midwifery and nursing requirements and standards and practice throughout CUMH. Much of the Practice Development Team's work is done through a variety of committees and groups within Ireland South Women & Infants Directorate with key clinical stakeholders from the clinical site at CUMH, UCC and the Multidisciplinary Team across the Directorate.

New and qualified midwives and nurses are supported by clinical skills facilitators in each of the clinical areas at CUMH.

All new staff members are supported with ongoing education as well as the support of staff in Centre of Midwifery Education based at CUMH.

## Practice Development Appointments during 2021

- 0.5 WTE Allocations Liaison Officer with the responsibility to oversee BSc midwifery student placements as per NMBI requirements and standards.
- 0.5 WTE Clinical Placement Coordinator to support student midwife placements.
- WTE postgraduate clinical coordinator for the support and coordination of the Higher Diploma in midwifery programme.
- WTE Clinical Skills Facilitator to support staff in Theatre and Gynaecology ward.

## Practice Development activity and achievements

- In 2021, the new Higher Diploma in Midwifery Requirements and Standards was successfully implemented to a group of 24 students who completed their training. Seventeen members of this group are now working as midwives in CUMH.
- In 2021 a further new group of 20 Higher Diploma student midwives commenced their training.
- 120 nursing students, 91 midwifery BSc students and 13 Public Health Nurses were supported on placement in CUMH, to ensure a consistent and learning environment. Due to the pandemic, supernumerary placements were suspended for two weeks in January. The Practice Development team ensured that students had all the necessary assessments completed prior to commencing placements and had their COVID-19 APP completed prior to attending placement.
- The Practice Development Coordinator assisted in the Medication Safety Study Day on April 30th, 2021, which was streamed across Ireland South Women & Infants Directorate.
- In May 2021 for the first time, midwifery students from CUMH shared midwifery placements within Ireland South Directorate in University Hospital Kerry (UHK).
- Successful flu peer vaccination programme: There was a 67% successful uptake of the flu vaccine

supported by the Practice Development Team in coordination with the Infection Prevention Control, CNS.

- 217 multidisciplinary staff trained in the Neonatal Resuscitation Programme (NRP). These CUMH staff comprised 40 student midwives, 28 NCHDs and 149 RGNs/RMs/RSCNs. Training continued with COVID-19 guidelines in place where smaller workshops were facilitated. New equipment for NRP was updated for training which included Panda machines throughout the birthing suite and NNU with the roll out of piped oxygen throughout clinical areas.
- In September 2021, the BSc Midwifery Class of 2017 successfully qualified. A small celebratory gathering took place socially distant in UCC, adhering to social distancing. Fourteen students from this class graduated, 9 of whom have taken up posts in CUMH.
- Nurse/Midwife Prescribers are supported by the Practice Development Coordinator. In 2021 there were 2 successful candidates who undertook the prescribing programme in collaboration with UCC and one commenced the programme in collaboration with UCD.

### The Practice Development Team:

- Supported the screening of staff and visitors to CUMH during the COVID-19 pandemic.
- Assisted in rollout of the COVID-19 vaccination during 2021.
- From March 2021 utilising ongoing skills, the PD

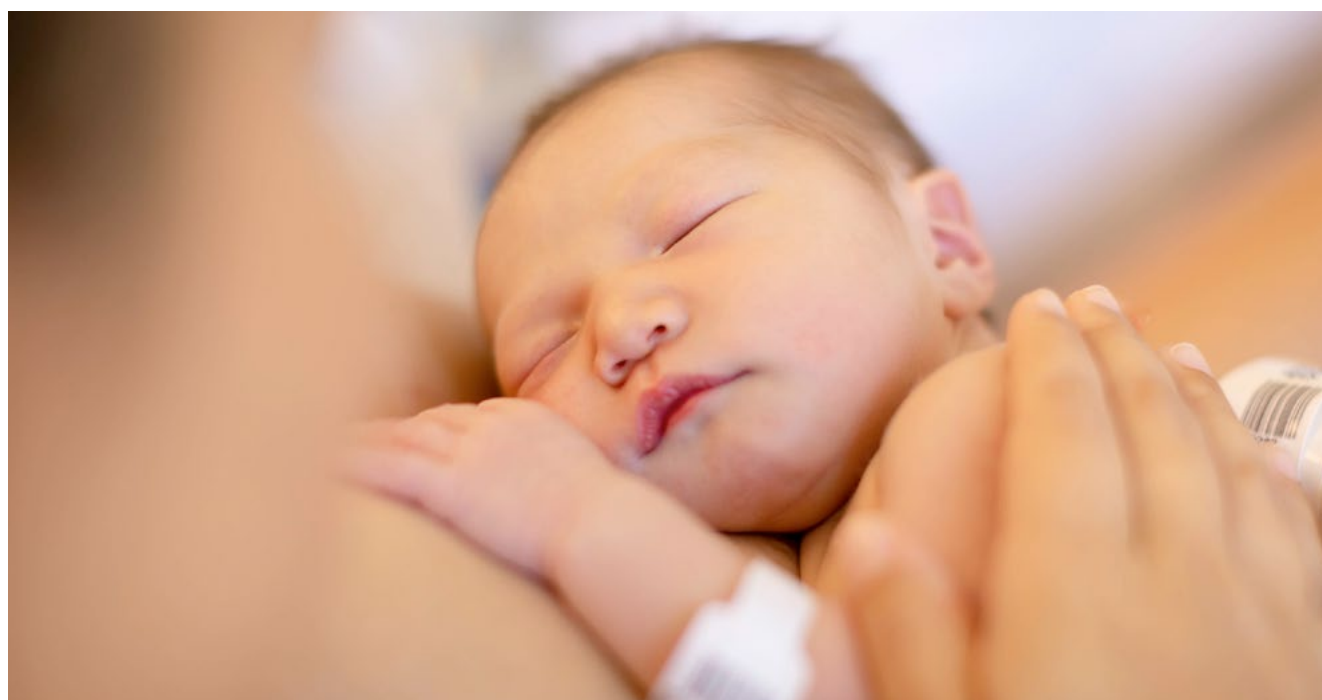
team supported the CME staff in clinical training for PPE, respiratory care in the clinical setting in line with COVID 2020.

- Assisted with COVID-19 pathway on the wards with support of drills in collaboration with the CME team.
- Emergency obstetric drills were facilitated on the wards by the clinical skills facilitators early in the year.
- Supported the Clinical Team during the cyberattack.

### Audits conducted during Q3 and Q4 2021 included:

- Review of the clinical environment ahead of the NMBI visit in Q1 2022. New learning outcomes ahead of the visit were being developed alongside this work.
- In-service database and K2 fetal monitoring to ensure staffs keeps up to date with skills.
- Successful implementation of the Policy Procedure Protocol Group (PPPG) continued throughout the year with a specific focus on streamlining PPPGs in collaboration across the four sites in the Ireland South Women & Infants Directorate.
- Metrics data collection continued with the quality improvement action plans which is ongoing for the practice development team.

Thanks to the commitment and hard work of all Practice Development Team members in providing a quality culture of learning to support students and qualified midwives and nurses during 2021.





# Appendix: Selected Publications

## SELECTION OF PUBLICATIONS FROM STAFF 2021

Bianchi DW, Khosrotehrani K, Way SS, MacKenzie TC, Bajema I, O'Donoghue K. Forever connected: The lifelong biological consequences of fetomaternal and maternofetal microchimerism. *Clinical Chemistry*. 2021;67(2):351-362. <https://doi.org/10.1093/clinchem/hvaa304>.

Boyd S, O'Donoghue K, Meaney S. Early pregnancy in the Emergency Department and the effect of COVID-19. *British Journal of Obstetrics and Gynaecology*. 2021;128(S2):208-209. [https://doi.org/10.1111/1471-0528.15\\_16715](https://doi.org/10.1111/1471-0528.15_16715).

Boyd S, Meaney S, O'Donoghue K. Early pregnancy in the Emergency Department; presentation, management, outcome and the effect of COVID-19. *Human Reproduction* 2021; 36 (Suppl 1): 406.

Burke B, O'Donoghue K. Implementation of new cytogenetic testing regimens in pregnancy loss at a tertiary maternity hospital in Cork, Ireland. *International Journal of Gynaecology & Obstetrics*. 2021;155(S2). <https://doi.org/10.1002/ijgo.13886>.

Cody F, Mullers S, Flood K, Unterscheider J, Daly S, Geary M, Kennelly M, McAuliffe F, O'Donoghue K, Hunter A, Morrison J, Burke G, Dicker P, Tully E, Malone F; Perinatal Ireland Research Consortium. Correlation of maternal body mass index with umbilical artery Doppler in pregnancies complicated by fetal growth restriction and associated outcomes. *International Journal of Gynaecology & Obstetrics*. 2021 Aug;154(2):352-357. doi: 10.1002/ijgo.13586. Epub 2021 Feb 12. PMID: 33420732.

Escañuela Sánchez T, Meaney S, O'Donoghue K. Stillbirth and risk factors: an evaluation of Irish and UK websites. *Journal of Communication in Healthcare*. 2021;14(1):68-77. <https://doi.org/10.1080/17538068.2020.1807887>.

Escañuela Sánchez T, Linehan L, Byrne M, O'Donoghue K, Meaney S. Facilitators and barriers to seeking and engaging with antenatal care in high-income countries: a meta-synthesis. Society for Maternal and Fetal Medicine 41st Annual Meeting 27-30 January 2021. *American Journal of Obstetrics & Gynecology* 2021; 224 (2), S256.

Fitzpatrick, P., Byrne, H., Russell, N., O'Reilly, S., Doherty, L., McKenna, P. and Mooney, T., 2021, June. No international consensus on cervical screening interval cancer audit and open disclosure. In *BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY* (Vol. 128, pp. 61-62). 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILEY.

Gutman A, Harty T, O'Donoghue K, Greene R, Leitao S. Perinatal mortality audits and reporting of perinatal deaths: systematic review of outcomes and barriers. XXIII FIGO World Congress of Gynaecology and Obstetrics 21-28 October 2021 (Online). *International Journal of Gynaecology & Obstetrics International Journal of Gynaecology & Obstetrics International Journal of Gynaecology & Obstetrics*. 2021;155(Suppl. 2):127-532. P0291.

Hayes-Ryan D, Meaney S, Fitzgerald AP, O'Mahony E, Normile C, Kenny LC, O'Donoghue K. A prospective study of placental growth factor in twin pregnancy and development of a dichorionic twin pregnancy specific reference range. *British Journal of Obstetrics and Gynaecology*. 2021;128(2):411-419. <https://doi.org/10.1111/1471-0528.16518>.

Hayes-Ryan D, O'Donoghue K, McCarthy C, Totorika A, Meaney S. A comparative study of two immunoassays of maternal placental growth factor. *Scandinavian Journal of Clinical and Laboratory Investigation*. 2021;81(3):167-172. <https://doi.org/10.1080/00365513.2021.1908589>.

Hayes-Ryan D, Khashan AS, Hemming K, Easter C, Devane D, Murphy DJ, Hunter A, Cotter A, McAuliffe FM, Morrison JJ, Breathnach FM, Dempsey E, Kenny LC, O'Donoghue K; PARROT Ireland trial group. Placental growth factor in assessment of women with suspected pre-eclampsia to reduce maternal morbidity: a stepped wedge cluster randomised control trial (PARROT Ireland). *BMJ*. 2021 Aug 13;374:n1857. doi: 10.1136/bmj.n1857. PMID: 34389547.

Helps Å, Leitao S, Gutman A, Greene R, O'Donoghue K. National perinatal mortality audits and resultant initiatives in four countries. *European Journal of Obstetrics & Gynecology and Reproductive Biology*. 2021;267:111-119. <https://doi.org/10.1016/j.ejogrb.2021.10.012>.

Helps Å, Leitao S, O'Byrne L, Greene R, O'Donoghue K. Governance of maternity services: Effects on the management of perinatal deaths and bereavement services. *Midwifery*. 2021;101:103049. <https://doi.org/10.1016/j.midw.2021.103049>.

Hennessy M, Dennehy R, Meaney S, Linehan L, Devane D, Rice R, O'Donoghue K. Clinical practice guidelines for recurrent miscarriage in high-income countries: a systematic review. *Reproductive BioMedicine Online*. 2021;42(6):1146-1171. <https://doi.org/10.1016/j.rbmo.2021.02.014>.

Joyce CM, Deasy S, Abu H, Lim YY, O'Shea PM, O'Donoghue K. Reference values for C-reactive protein and procalcitonin at term pregnancy and in the early postnatal period. *Annals of Clinical Biochemistry*. 2021;58(5):452-460. <https://doi.org/10.1177/00045632211005807>.

Kelly K, Meaney S, Leitao S, O'Donoghue K. A review of stillbirth definitions: A rationale for change. *European Journal of Obstetrics & Gynecology and Reproductive Biology*. 2021;256:235-245. <https://doi.org/10.1016/j.ejogrb.2020.11.015>.

Leitao S, Helps A, Cotter R, O'Donoghue K; TEARDROP PLRG working group. Development and evaluation of TEARDROP - a perinatal bereavement care training programme for healthcare professionals. *Midwifery*. 2021;98:102978. <https://doi.org/10.1016/j.midw.2021.102978>.

Linehan L, Hennessy M, O'Donoghue K. Infertility and subsequent recurrent miscarriage: Current state of the literature and future considerations for practice and research [version 1; peer review: 1 approved with reservations]. *HRB Open Research*. 2021;4:100. <https://doi.org/10.12688/hrbopenres.13397.1>.

Linehan L, O'Donoghue K, Dineen S, White J, Higgins JR, Fitzgerald B. SARS-CoV-2 placentitis: An uncommon complication of maternal COVID-19. *Placenta*. 2021;104: 261-266. <https://doi.org/10.1016/j.placenta.2021.01.012>.

Lutfi A, Carey M, O'Sullivan OE. *Scheduled gynaecological surgery during the COVID-19 pandemic in Cork, Ireland*. (2021) Category – Pandemic and Impact of Covid/ Infectious Diseases. *BJOG: Int J Obstet Gy*. 2021;128:185-213. [https://doi.org/10.1111/1471-0528.15\\_16715](https://doi.org/10.1111/1471-0528.15_16715).

McCarthy C, Meaney S, Rochford M, O'Donoghue K. Risk perception on the labour ward: A mixed methods study. *Journal of Patient Safety and Risk Management*. 2021;26(2):56-63. <https://doi.org/10.1177/25160435211002428>.

McCarthy CM, O'Sullivan S, Corcoran P, Eogan M, Bennett D, Horgan M, O'Donoghue K. Medicine, media and the law: The effect on training in obstetrics and gynaecology. *European Journal of Obstetrics & Gynecology and Reproductive Biology*. 2021;257:35-41. <https://doi.org/10.1016/j.ejogrb.2020.12.004>.

McConnell R, Meaney S, O'Donoghue K. Influence of cost on contraceptive choices amongst university students. *Irish Medical Journal*. 2021;114(6):P376. <https://imj.ie/influence-of-cost-on-contraceptive-choices-amongst-university-students/>.

Mooney, T., Fahy, L., Murphy, C., Russell, N., Mason-Mohan, C. and Fitzpatrick, P., 2021, June. Effect of cervical screening crisis on colposcopy referrals in Republic of Ireland. In *BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY* (Vol. 128, pp. 250-250). 111 RIVER ST, HOBOKEN 07030-5774, NJ USA: WILE.

Murphy M, Savage E, O'Donoghue K, Leary JO, Leahy-Warren P. Trying to conceive: An interpretive phenomenological analysis of couples' experiences of pregnancy after stillbirth. *Women and Birth*. 2021;34(5):e475-e481. <https://doi.org/10.1016/j.wombi.2020.10.016>.

Nuzum D, Fitzgerald B, Evans MJ, O'Donoghue K. Maternity healthcare chaplains and perinatal post-mortem support and understanding in the United Kingdom and Ireland: An exploratory study. *Journal of Religion and Health*. 2021;60(3):1924-1936. <https://doi.org/10.1007/s10943-020-01176-4>.

O'Connor C, Leitao S, O'Donoghue K. A protocol for a systematic review of clinical practice guidelines for the antenatal management of dichorionic diamniotic twin pregnancy [version 1; peer review: 1 approved]. *HRB Open Research*. 2021;4:115. <https://doi.org/10.12688/hrbopenres.13418.1>.

O'Shaughnessy E, Leitao S, Russell N, O'Donoghue K. Termination of pregnancy services: a year in review in a tertiary maternity hospital. *BMJ Sexual & Reproductive Health*. 2021;47:231-232. <http://dx.doi.org/10.1136/bmj.srh-2021-201049>.

O'Shaughnessy E, O'Donoghue K, Leitao S. Termination of pregnancy: Staff knowledge and training. *Sexual & Reproductive Healthcare*. 2021;28:100613. <https://doi.org/10.1016/j.srh.2021.100613>.

Power S, Meaney S, O'Donoghue K. Fetal medicine specialist' experiences of providing a new service of termination of pregnancy for fatal fetal anomaly: a qualitative study. *British Journal of Obstetrics and Gynaecology*. 2021;128:676-684. <https://doi.org/10.1111/1471-0528.16502>.

Power S, O'Donoghue K, Meaney S. Critical discourse analysis on the influence of media commentary on fatal fetal anomaly in Ireland. *Health*. May 2021. <https://doi.org/10.1177/13634593211015279>.

Power S, O'Donoghue K, Meaney S. Experiences of volunteers supporting parents following a fatal fetal anomaly diagnosis. *Qualitative Health Research*. 2021;31(5):835-846. <https://doi.org/10.1177/1049732320987834>.

Roseingrave R, Murphy M, O'Donoghue K. Pregnancy after stillbirth: maternal and neonatal outcomes and health service utilization. *Am J Obstet Gynecol MFM* 2022 Jan;4(1):100486. doi: 10.1016/j.ajogmf.2021.100486. Epub 2021 Sep 20. PMID: 34547534. DOI:10.1016/j.ajogmf.2021.100486.

San Lazaro Campillo I, Meaney S, Harrington M, McNamara K, Verling AM, Corcoran P, O'Donoghue K. Assessing the concordance and accuracy between hospital discharge data, electronic health records, and register books for diagnosis of inpatient admissions of miscarriage: A retrospective linked data study. *Journal of Obstetrics and Gynaecology Research*. 2021;47:1987-1996. <https://doi.org/10.1111/jog.14785>.

San Lazaro Campillo I, Meaney S, Sheehan J, Rice R, O'Donoghue K. Reproductive health knowledge about miscarriage: A cross-sectional study of university students. *Maternal and Child Health Journal*. 2021;25(2):282-292. <https://doi.org/10.1007/s10995-020-03017-y>.

Servante J, Swallow G, Thornton JG, Myers B, Munireddy S, Malinowski AK, Othman M, Li W, O'Donoghue K, Walker KE. Haemostatic and thromboembolic complications in pregnant women with COVID-19: a systematic review and critical analysis. *BMC Pregnancy Childbirth*. 2021;21:108. <https://doi.org/10.1186/s12884-021-03568-0>.

## BOOK CHAPTERS

Barrington K, Dempsey E. Pharmacological Therapies III. Cardiovascular Therapy and Persistent Pulmonary Hypertension of the newborn. In *Assisted Ventilation of the Newborn*. 7th edition. Editors Jay P. Goldsmith, Edward Karotkin, Gautham Suresh and Martin Keszler 2021.

Dempsey E. Practical Procedures in Neonatology and Paediatrics. In *Building Blocks in Paediatrics*. Nicholson and Dunne 2021.

Ni Laoire Á, Nuzum D, O'Reilly M, Twomey M, O'Donoghue K, Devins M. Perinatal palliative care. In Hain R, Rapoport A, Meiring M, Goldman A, eds. *Oxford Textbook of Palliative Care for Children*, 3rd ed. Oxford University Press; 2021:325-331. <https://doi.org/10.1093/med/9780198821311.003.0029>.

Walsh BH, Inder TE. Intraventricular Hemorrhage in the Neonate. In Polin, Fox, and Abman SH (Eds) *Fetal and Neonatal Physiology* 6th Edition. Philadelphia, PA. Elsevier. 2021.

## SELECTION OF PEER REVIEWED ARTICLES

Ashoori M, Dempsey EM, McDonald FB, O'Toole JM. Sparse-Denoising Methods for Extracting Desaturation Transients in Cerebral Oxygenation Signals of Preterm Infants. *Annu Int Conf IEEE Eng Med Biol Soc*. 2021 Nov;2021:1010-1013. doi:10.1109/EMBC46164.2021.9630560. PMID: 34891459.

Beamer E, O'Dea MI, Garvey AA, Smith J, Menéndez-Méndez A, Kelly L, Pavel A, Quinlan S, Alves M, Jimenez-Mateos EM, Tian F, Dempsey E, Dale N, Murray DM, Boylan GB, Molloy EJ, Engel T. Novel Point-of-Care Diagnostic Method for Neonatal Encephalopathy Using Purine Nucleosides. *Front Mol Neurosci*. 2021 Sep 9;14:732199. doi: 10.3389/fnmol.2021.732199. PMID: 34566578; PMCID: PMC8458851.

Bruckner M, Wolfsberger CH, Dempsey EM, Liem KD, Lemmers P, Alderliesten T, Alarcon A, Mintzer J, de Boode WP, Schmölzer GM, Pichler G; ESPR Special Interest Group "Near InfraRed Spectroscopy" (NIRS). Normal regional tissue oxygen saturation in neonates: a systematic qualitative review. *Pediatr Res*. 2021 Oct 20. doi: 10.1038/s41390-021-01786-y. Epub ahead of print. PMID:34667270.

Bussmann N, Franklin O, McCallion N, McNamara PJ, El-Khuffash A. The impact preload on left ventricular three-plane deformation measurements in extremely premature infants. *Early Hum Dev*. 2021 Feb;153:105291. doi:10.1016/j.earlhumdev.2020.105291. Epub 2020 Dec 8. PMID: 33310351.

Bussmann N, Smith A, Breatnach CR, McCallion N, Cleary B, Franklin O, McNamara PJ, El-Khuffash A. Patent ductus arteriosus shunt elimination results in a reduction in adverse outcomes: a post hoc analysis of the PDA RCT cohort. *J Perinatol*. 2021 May;41(5):1134-1141. doi: 10.1038/s41372-021-01002-z. Epub 2021 Mar 8. PMID: 33686119.

Dempsey EM, Barrington KJ, Marlow N, O'Donnell CPE, Miletin J, Naulaers G, Cheung PY, Corcoran JD, El-Khuffash AF, Boylan GB, Livingstone V, Pons G, Macko J, Van Laere D, Wiedermannova H, Straňák Z; HIP consortium. Hypotension in Preterm Infants (HIP) randomised trial. *Arch Dis Child Fetal Neonatal Ed*. 2021 Feb 24:fetalneonatal-2020-320241. doi: 10.1136/archdischild-2020-320241. Epub ahead of print. PMID: 33627329.

Dias ML, O'Connor KM, Dempsey E, O'Halloran KD, McDonald FB. Targeting the toll-like receptor pathway as a therapeutic strategy for neonatal infection. *Am J Physiol Regul Integr Comp Physiol*. 2021 Oct 6. doi:10.1152/ajpregu.00307.2020. Epub ahead of print.

El-Khuffash A, Bussmann N, Breatnach CR, Smith A, Tully E, Griffin J, McCallion N, Corcoran JD, Fernandez E, Looi C, Cleary B, Franklin O, McNamara PJ. A Pilot Randomized Controlled Trial of Early Targeted Patent Ductus Arteriosus Treatment Using a Risk Based Severity Score (The PDA

RCT). *J Pediatr*. 2021 Feb;229:127-133. doi: 10.1016/j.jpeds.2020.10.024. Epub 2020 Oct 16. PMID:33069668.

Finn BP, Bussmann N, Beechinor T, Dempsey EM. Hemodynamic considerations in preterm infants born at less than 25 weeks gestation. *Semin Perinatol*. 2021 Nov 10:151544. doi: 10.1016/j.semperi.2021.151544. Epub ahead of print. PMID:34949479.

Garvey AA, Pavel AM, Murray DM, Boylan GB, Dempsey EM. Does Early Cerebral Near-Infrared Spectroscopy Monitoring Predict Outcome in Neonates with Hypoxic Ischaemic Encephalopathy? A Systematic Review of Diagnostic Test Accuracy. *Neonatology*. 2021 Nov 22:1-9.

Garvey AA, Pavel AM, O'Toole JM, Walsh BH, Korotchkova I, Livingstone V, Dempsey EM, Murray DM, Boylan GB. Multichannel EEG abnormalities during the first 6 hours in infants with mild hypoxic-ischaemic encephalopathy. *Pediatr Res*. 2021 Apr 20. doi: 10.1038/s41390-021-01412-x. Epub ahead of print. PMID: 33879847.

Hayes-Ryan D, Khashan AS, Hemming K, Easter C, Devane D, Murphy DJ, Hunter A, Cotter A, McAuliffe FM, Morrison JJ, Breathnach FM, Dempsey E, Kenny LC, O'Donoghue K; PARROT Ireland trial group. Placental growth factor in assessment of women with suspected pre-eclampsia to reduce maternal morbidity: a stepped wedge cluster randomised control trial (PARROT Ireland). *BMJ*. 2021 Aug 13;374:n1857. doi: 10.1136/bmj.n1857. PMID: 34389547; PMCID: PMC8361324.

Healy DB, Dempsey EM, O'Toole JM, Schwarz CE. In-Silico Evaluation of Anthropomorphic Measurement Variations on Electrical Cardiometry in Neonates. *Children (Basel)*. 2021 Oct 18;9(10):936. doi: 10.3390/children9100936. PMID:34682202; PMCID: PMC8534923.

Healy DB, Ryan CA, Ross RP, Stanton C, Dempsey EM. Clinical implications of preterm infant gut microbiome development. *Nat Microbiol*. 2022 Jan;7(1):22-33. doi: 10.1038/s41564-021-01025-4. Epub 2021 Dec 23.



- Kgosidialwa O, Bogdanet D, Egan AM, O'Shea PM, Newman C, Griffin TP, McDonagh C, O'Shea C, Carmody L, Cooray SD, Anastasiou E, Wender-Ozegowska E, Clarson C, Spadola A, Alvarado F, Noctor E, Dempsey E, Napoli A, Crowther C, Galjaard S, Loeken MR, Maresh M, Gillespie P, de Valk H, Agostini A, Biesty L, Devane D, Dunne F; INSPIRED Research Group. A core outcome set for the treatment of pregnant women with pregestational diabetes: an international consensus study. *BJOG*. 2021 Jul 4. doi: 10.1111/1471-0528.16825. Epub ahead of print. PMID:34218508.
- Mooney C, O'Boyle D, Finder M, Hallberg B, Walsh BH, Henshall DC, Boylan GB, Murray DM. Predictive modelling of hypoxic ischaemic encephalopathy risk following perinatal asphyxia. *Heliyon*. 2021 Jun 29;7(7):e07411. PMID: 34278022.
- Murphy K, Ross RP, Ryan CA, Dempsey EM, Stanton C. Probiotics, Prebiotics, and Synbiotics for the Prevention of Necrotizing Enterocolitis. *Front Nutr*. 2021 Sep 7;8:667188. doi: 10.3389/fnut.2021.667188. PMID: 34557508; PMCID: PMC8453148.
- O'Connor KM, Ashoori M, Dias ML, Dempsey E, O'Halloran KD, McDonald FB. Influence of innate immune activation on endocrine and metabolic pathways in infancy. *Am J Physiol Endocrinol Metab*. 2021 Apr 26. doi:10.1152/ajpendo.00542.2020. Epub ahead of print. PMID: 33900849.
- O'Neill R, Dempsey EM, Garvey AA, Schwarz CE. Non-invasive Cardiac Output Monitoring in Neonates. *Front Pediatr*. 2021 Jan 28;8:614585. doi:10.3389/fped.2020.614585. PMID: 33585366; PMCID: PMC7880199.
- O'Toole JM, Dempsey EM, Van Laere D. Nonstationary coupling between heart rate and perfusion index in extremely preterm infants in the first day of life. *Physiol Meas*. 2021 Feb 5. doi: 10.1088/1361-6579/abe3de. Epub ahead of print. PMID: 33545702.
- Olsen MH, Hansen ML, Safi S, Jakobsen JC, Greisen G, Gluud C; SafeBoosC-III Trial Group. Central data monitoring in the multicentre randomised SafeBoosC-III trial - a pragmatic approach. *BMC Med Res Methodol*. 2021 Jul 31;21(1):160. doi: 10.1186/s12874-021-01344-4. PMID: 34332547; PMCID: PMC8325420.
- Patangia DV, Ryan CA, Dempsey E, Stanton C, Ross RP. Vertical transfer of antibiotics and antibiotic resistant strains across the mother/baby axis. *Trends Microbiol*. 2021 Jun 22:S0966-842X(21)00128-1. doi: 10.1016/j.tim.2021.05.006. Epub ahead of print. PMID: 34172345.
- Patterson J, North K, Dempsey E, Ishoso D, Trevisanuto D, Lee AC, Kamath-Rayne BD; Newborn Brain Society Guidelines and Publications Committee. Optimizing initial neonatal resuscitation to reduce neonatal encephalopathy around the world. *Semin Fetal Neonatal Med*. 2021 Jun 22:101262. doi:10.1016/j.siny.2021.101262. Epub ahead of print. PMID: 34193380.
- Pavel AM, Rennie JM, de Vries LS, Blennow M, Foran A, Shah DK, Pressler RM, Kapellou O, Dempsey EM, Mathieson SR, Pavlidis E, Weeke LC, Livingstone V, Murray DM, Marnane WP, Boylan GB. Neonatal Seizure Management - Is the Timing of Treatment Critical? *J Pediatr*. 2021 Oct 6:S0022-3476(21)00961-6. doi: 10.1016/j.jpeds.2021.09.058. Epub ahead of print. PMID: 34626667.
- Pavel AM, Stephens CM, Mathieson SR, Walsh BH, McNamara B, McSweeney N, Boylan GB. Electroencephalography in a neonate with isolated sulfite oxidase deficiency - a case report and literature review. *HRB Open Res*. 2021 Nov 23;4:122. doi: 10.12688/hrbopenres.13442.1. eCollection 2021. PMID: 34957373.
- Rabe H, Bhatt-Mehta V, Bremner SA, Ahluwalia A, Mcfarlane R, Baygani S, Batton B, Klein A, Ergenekon E, Koplowitz LP, Dempsey E, Apele-Freimane D, Iwami H, Dionne JM; International Neonatal Consortium. Antenatal and perinatal factors influencing neonatal blood pressure: a systematic review. *J Perinatol*. 2021 Aug7. doi: 10.1038/s41372-021-01169-5. Epub ahead of print. PMID: 34365475.
- Rasmussen MI, Hansen ML, Pichler G, Dempsey E, Pellicer A, El-Khuffash A, AS, Piris-Borregas S, Alsina M, Cetinkaya M, Chalak L, Özkan H, Baserga M, Sirc J, Fuchs H, Ergenekon E, Arruza L, Mathur A, Stocker M, Otero Vaccarello O, Szczapa T, Sarafidis K, Królak-Olejnik B, Memisoglu A, Reigstad H, Rafińska-Ważny E, Hatzidaki E, Peng Z, Gkentzi D, Viellevoe R, De Buyst J, Mastretta E, Wang P, Hahn GH, Bender L, Cornette L, Tkaczyk J, Del Rio R, Fumagalli M, Papathoma E, Wilinska M, Naulaers G, Sadowska-Krawcenko I, Lecart C, Couce ML, Fredly S, Heuchan AM, Karen T, Greisen G. Extremely Preterm Infant Admissions Within the SafeBoosC-III Consortium During the COVID-19 Lockdown. *Front Pediatr*. 2021 Jul 12;9:647880. doi: 10.3389/fped.2021.647880. PMID: 34322460; PMCID: PMC8310995.
- Ryan MA, Mathieson S, Dempsey E, Boylan G. An Introduction to Neonatal EEG. *J Perinat Neonatal Nurs*. 2021 Oct-Dec 01;35(4):369-376. doi:10.1097/JPN.
- Sakpichaisakul K, Supapannachart K, El-Dib M, Szakmar E, Yang E, Walsh BH, Robinson J, Cherkerzian S, Volpe JJ, and Inder TE. Blood Gas Measures as Predictors for Neonatal Encephalopathy Severity. *J Perinatol*. 2021 Jun 24. doi: 10.1038/s41372-021-01075-w. Online ahead of print. PMID: 34168288.
- Schwarz CE, O'Toole JM, Livingstone V, Pavel AM, Dempsey EM. Signal Quality of Electrical Cardiometry and Perfusion Index in Very Preterm Infants. *Neonatology*. 2021 Sep 22:1-6. doi: 10.1159/000518061. Epub ahead of print. PMID: 34569547.
- Smith A, Bussmann N, Levy P, Franklin O, McCallion N, El-Khuffash A. Comparison of left ventricular rotational mechanics between term and extremely premature infants over the first week of age. *Open Heart*. 2021 Jan;8(1):e001458 doi: 10.1136/openhrt-2020-001458. PMID: 33504632; PMCID: PMC7843343.

Thewissen L, Naulaers G, Hendrikx D, Caicedo A, Barrington K, Boylan G, Cheung PY, Corcoran D, El-Khuffash A, Garvey A, Macko J, Marlow N, Miletin J, O'Donnell CPE, O'Toole JM, Straňák Z, Van Laere D, Wiedermannova H, Dempsey E. Cerebral oxygen saturation and autoregulation during hypotension in extremely preterm infants. *Pediatr Res*. 2021 Apr 20. doi: 10.1038/s41390-021-01483-w. Epub ahead of print. PMID: 33879849.

Thoreby CV, and Walsh BH. The Periorbital Rash of Neonatal Lupus. *J Pediatr*. 2021 Dec 2:S0022-3476(21)01162-8. doi: 10.1016/j.jpeds.2021.11.064. PMID: 34864051- Chosen for J Peds online monthly Image Quiz .

Walsh BH, El-Shibiny H, Munster C, Yang E, Inder TE, El-Dib M. Differences in standardized neonatal encephalopathy exam criteria may impact therapeutic hypothermia eligibility. *Pediatr Res*. 2021 Nov 9. Online ahead of print. PMID: 34754094 .

Walsh BH, Munster C, El-Shibiny H, Yang E, Inder TE, El-Dib M. Comparison of numerical and standard sarnat grading using the NICHD and SIBEN methods. *J Perinatol*. 2021 Aug 14. Online ahead of print. PMID: 34392307.

Walsh BH, Paul RA, Inder TE, Shimony JS, Smyser CD, Rogers CE. Surgery requiring general anesthesia in preterm infants is associated with altered brain volumes at term equivalent age and neurodevelopmental impairment. *Pediatr Res*. 2021 Apr;89(5):1200-1207. PMID: 32575110.

Wang S, Zeng S, Egan M, Cherry P, Strain C, Morais E, Boyaval P, Ryan CA, M Dempsey E, Ross RP, Stanton C. Metagenomic analysis of mother-infant gut microbiome reveals global distinct and shared microbial signatures. *Gut Microbes*. 2021 Jan-Dec;13(1):1-24. doi: 10.1080/19490976.2021.1911571. PMID:33960282; PMCID: PMC8115609.

## CLINICAL GUIDELINE

O'Donoghue K. COVID-19 Infection: Guidance for Maternity Services. Version 5.0. The Institute of Obstetricians and Gynaecologists. May 2021.

## SELECTION OF INVITED PRESENTATIONS

### Neonatology Team

Inaugural Lecture UCC. Preventing Preterm Brain Injury. Nov 2021.

Transitional Hypotension. Clinical Cardiopulmonary Physiology for the care of the sick newborn course. Nov 2021.

Baby Oscar Study Day. Trials and Tribulations. Nov 2021.

Cerebral NIRS in Neonatal Care. Cheisi Study Day. Nov 2021.

Bristol Neonatology Meeting Oct. BP and the Preterm Brain Oct 2021.

Scottish Grid Trainee Meeting. BP and the Preterm Brain. Oct 2021.

Cardiovascular adaptation and challenges for the extreme preterm infant. Beijing, Sept 2021.

EPIQ Canada. BP and the preterm Brain Sept 2021.

International Neonatal Association Conference. Enhanced monitoring in the delivery Suite. July 2021. Virtual.

International Neonatal Association Conference. Cerebral NIRS in Newborn Care. July 2021. Virtual.

Blood Pressure and the Newborn Brain. Newborn Brain Society, June 2021. Virtual

Limerick Neonatal Study Seminar- 'Current dilemmas with Mild Neonatal Encephalopathy?' November 2021.

12th International Newborn Brain Conference/ Newborn Brain Society Combined Webinar Series- 'Mild hypoxic ischaemic encephalopathy and long-term neuro-developmental outcome' March 2021.

## REPORT

O'Donoghue K, Cotter R. On the Implementation of the National Standards for Bereavement Care Following Pregnancy Loss and Perinatal Death. National Women and Infants Health Programme. Health Service Executive; 2021. <https://www.hse.ie/eng/about/who/acute-hospitals-division/woman-infants/bereavement-care/implementation-national-standards-for-bereavement.pdf>.

## FUNDING AWARDED

Neurobell: Medical device for diagnosis & monitoring of brain injuries in new-borns. PI: Enterprise Ireland, PI: O'Sullivan. Co-applicant. €584,496.

Caterpillar Study. PI: College of Medicine and Health. €10,000.

## THESIS

Helps A. Study of methods, systems, recommendations and bereaved parents' involvements in perinatal death reviews, inquiries, and audits. [Doctoral dissertation]. Cork: University College Cork; 2021.

**Table 10: Ireland South Women & Infants Directorate Grand Rounds 2021**

DATE	TOPIC/PRESENTING TEAM	PRESENTER/S
08.01.21	Ireland South Women and Infants Directorate Update for 2021	Facilitated by Professor John R. Higgins, Clinical Director
15.01.21	Vaccination and Pregnancy	Dr Matt Hewitt
29.01.21	My top 10 needs within Gynaecology and Obstetrics	Sarusha Pillay from BiInnovate Ireland
05.02.21	The Quality, Patient Safety and Risk office	Claire Everard
12.02.21	Recurrent Pregnancy Loss	Dr Ahmed Eissa
19.02.21	Dr Asifa Andleeb - literature review Dr Ellen McMahon - case presentation Dr Admed Lutfi - image of the week	Dr Asifa Andleeb Dr Ellen McMahon Dr Admed Lutfi
26.02.21	Postpartum haemorrhage in Ireland and Introduction to the Postpartum Haemorrhage Quality Improvement Initiative (PPHQII)	Dr Paul Corcoran Professor Richard Greene
05.03.21	Yellow Schedule - new visitor's app	Katie Bourke
12.03.21	Topic: 1. Mobile phones: an infection transmission risk in the neonatal hospital setting Topic: 2. PremSmart TM: An Innovative Model of Care to Optimise the Preterm Infant's Nutritional Journey from Parenteral to Enteral Nutrition	S/N Colette Cunningham Dr Ann Marie Brennan
19.03.21	Topic: 1. "Ready, Steady, Go Green!" An introduction to Ireland South Green Group Topic: 2. "Operating room Greening initiatives; the old, the new and the way forward" Topic: 3. Image of the week	Dr Cathy Burke Dr Sophie Boyd Dr Yassin Kassab
26.03.21	Topic: Cognitive Behavioural Psychotherapy for Maternity Services The presentation will give a brief outline of our new CBT service, who it's for, its efficacy, role in the Maternity Service and how to refer for same. Case Study: The application of a CBT treatment Protocol will be illustrated via a case study of a postnatal patient with PTSD arising from a traumatic delivery.	Victor Monaher
16.04.21	Connecting Innovation with Healthcare	Tanya Mulcahy (Health Innovation Hub Ireland)
23.04.21	"Case of Maternal Collapse: A Fine Balance"	UHW Dr Mairead Butler and Team
30.04.21	Defining and reporting medication safety incidents - why this matters. SARS-CoV2 Placentalitis	Medication Safety Team: Dr Liam O'Connell; Muriel Pate; Joan Ryan; Brendan Fitzgerald (CUH)
May	GRAND ROUNDS CANCELLED DUE TO HSE CYBERATTACK	
03/09/2021	Prof Higgins, Clinical Director + Maternity One South	Dr Karen McNamara Kate Lyons
10/09/2021	No Grand Rounds due to MRCPI Exams	
17/09/2021	Team Monday: CF in Pregnancy	Dr Mairead O'Riordan; Dr Ciara McCormick; Dr Sarah Kennedy; Dr Barbara Burke
24/09/2021	Team Tuesday: "Cervical Cancer screening - past, present and future" Topic: Launch of MicroGuide application	Dr Noirin Russell, Clinical Director of Cervical Check Presenter: Dr Deirdre Broderick, Microbiology Consultant and Susan Potter, Senior Antimicrobial Pharmacist
01/10/2021	Margaret O'Rourke "Psychological First Aid"	Dr Carol Tunney & Dr Margaret O'Rourke
08/10/2021	Midwifery - Breast Feeding Support	Susan O'Driscoll & Veronica Daly
15/10/2021	TippUH "For the management of ovarian cyst in adolescents"	Dr Manoharee Samaraweera; Dr Eman Stefanos
22/10/2021	Team Wednesday with Radiology Uterine Fibroid Embolisation	Dr Stephen Power
05/11/2021	Dr Deirdre Muller Neff. Specialist Perinatal Mental Health Service CUMH - Update on current service provision and information for maternity staff	Dr Deirdre Muller Neff
12/11/2021	Team Thursday: "HSE Guidance management of women with epilepsy - presentation at grand rounds" "Review of Empire Trial & Irish Epilepsy Guidelines" Contrast with other Guidelines and Image of the Week	Dr Aisling McDonnell Dr Fatima Bhutta Dr Ekemini Akpan
19/11/2021	Neonatology "Neonatologist Performed Echocardiography and its application in the NICU"	Dr Neidin Bussman
26/11/2021	National Study Day – No Grand Rounds	
03/12/2021	UHK "A Case of Ascites Post Caesarean Section"	Dr Savita Lalchandani, Dr Jessica Tate
10/12/2021	Ireland South Women & Infants Directorate - Annual Report	Prof John R. Higgins, Clinical Director
17/12/2021	No Grand Rounds – Christmas Break	



