# MATERNITY SERVICES ANNUAL REPORT 2015

## South/South West Hospital Group

UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

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# Foreword

It is a great pleasure to welcome what is now our second consolidated annual report on maternity services in the South/South West Hospital Group which sets out service and performance data for 2016. Once again, I want to stress the importance of making this data available to our practitioners in the maternity service including our colleagues in general practice and to members of the public who use it. These data and those in recent past years will provide baseline information on which the new directorate will build improvement in the years to come.

The year just past has also seen an important milestone in the publication for the first time of an integrated National Maternity Strategy* that gives due weight to the views of women and acknowledges the need for clinical control over budgets. We warmly welcome its recommendations and the values that inform them. Speaking particularly about hospital groups, the strategy envisages: "that through the establishment of maternity networks within hospital groups, and the sharing of expertise within those networks, the operational resilience of smaller units can be strengthened and such units can be supported to provide safe quality services."

The establishment of a group clinical directorate will be the vehicle for building such operational resilience in the South/South West Group.

It is my pleasure to acknowledge the continuing work and dedication of our staff who deliver maternity services in our four units in Waterford, Clonmel, Cork and Tralee, of the managers who support them and the primary care practices who provide general medical care for the women who use them. I offer my grateful thanks to you all.

**Professor Geraldine McCarthy**
Chairperson of the South/South West Hospital Group
and Professor Emeritus, University College Cork.

*Creating a Better Future Together: National Maternity Strategy 2016-2026


South Tipperary
General Hospital
University Hospital
Kerry
University Hospital
Waterford
Cork University
Maternity Hospital

# Introduction

The South/South West Hospital Group serves a population of over 800,000 people and every day more than 8,800 staff contribute to our results in cure, care, research and education.

2015 was a year that saw the emergence of the South/South West Hospital group as a corporate management entity over nine hospitals and the initiation of a more integrated approach to the delivery of acute services. This has still some way to go but there are already signs that our hospitals and consultants are beginning to build new linkages that can only prove beneficial for our patients. In maternity services our neonatologists are leading the way in making the group structure a reality. They are doing everything possible to give concrete expression to the principle that the biggest maternity hospital in the group must act as a provider of last resort care for premature deliveries no matter where in the region they occur.

The year under review also saw the commencement of an internal risk review of maternity services in all four of our maternity units, now completed. The draft report has been presented to the Leadership Team and is now under discussion within the group.

In November 2015 the Leadership Team approved proposals to establish a regional directorate for maternity services. This is due to commence in February 2017 and will accelerate the strengthening of clinical governance, resource management and risk reduction under a new regional clinical director.

Both of these developments align our maternity services with the national maternity strategy (Creating a Better Future Together: National Maternity Strategy 2016-2026) and break new ground nationally in the development of clinically led integrated services.

There are four maternity units in our group, namely Cork University Maternity Hospital, University Hospital Waterford, University Hospital Kerry and South Tipperary General Hospital.

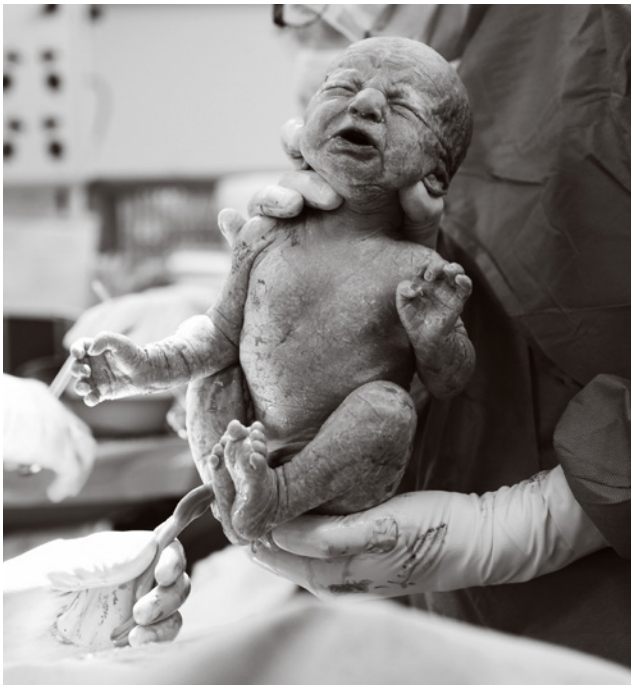
In 2015 there were 12,343 mothers who delivered 12,620 babies in SSWHG maternity units which translates to an average of 34 births per day across the group. This represents approximately 19% of all births in the Republic of Ireland. This figure is down marginally from 2014 and slightly less than the national drop in births of 2.3% from 67,462 (2014) to 65,909 (2015).

Admissions to our neonatal units include many of the most demanding cases we care for. Under new national standards, neonates at 28 weeks or less must be transferred to the regional centre. This is to be welcomed even though it puts more pressure on our neonatology unit at CUMH and increases the necessity for rapid and effective cooperation between our neonatal units.

It is too soon to identify significant trends in the figures presented here as this is only the second consolidated maternity services report. Nevertheless, it is worth noting that this year's tables contain more information than before in a number of areas. Data on perinatal mortality provides more detailed information across the group (tables 2.5 – 2.18 are entirely new and for the first time we have case review data from each unit).

The information on gynaecology must still be considered a work in progress and future years will show more data from all our units. The enormous waiting lists for gynaecology services in Cork represent our biggest clinical risk.

Sincere gratitude is offered to the staff of the four Maternity Units in providing the data for this report. Their commitment and time to this process is greatly appreciated.



Cork University Maternity Hospital

South Tipperary General Hospital

University Hospital Kerry

University Hospital Waterford

# Our Hospitals

## Cork University Maternity Hospital

Cork University Maternity (CUMH) Hospital 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 2015, CUMH delivered 8,113 babies and over 14,000 patient contacts were recorded in gynaecology and colposcopy clinics.

CUMH maternity services comprises of:

- 12 bedded delivery suite
- 87 bedded postnatal ward
- 31 bedded antenatal ward
- 24 bedded gynaecology ward (16 gynaecology and 8 other)
- Stand alone outpatients department for antenatal, gynaecology, urodynamics, colposcopy & midwifery led scanning department.

Maternity Services at CUMH support the education of undergraduate Nursing & Midwifery Students from University College Cork (UCC).

Medical students from UCC also gain clinical experience as part of their placement and this lends to an interdisciplinary teaching environment. Facilities at CUMH allow students to participate in lectures with study space and video conferencing facilities to link with their colleagues at other sites.

The educational team of the Centre for Midwifery Education, CUMH is committed to the development and provision of programmes of education and training for registered Midwives and Nurses, to support service delivery. All programmes support the on-going maintenance of clinical competence and promote evidence based care.

## South Tipperary General Hospital

South Tipperary General Hospital (STGH) opened in 2008. This hospital provides acute hospital services for the population of County Tipperary. In 2015, STGH delivered 1,062 babies and 6,277 patient contacts were recorded in gynaecology and colposcopy clinics.

STGH Maternity Services comprises of:
- 2 bedded delivery suite and obstetric theatre
- 28 bedded maternity ward
- 10 bedded gynaecology ward
- Stand-alone outpatients department for antenatal, gynaecology, urodynamics, colposcopy & midwifery led scanning department.

Maternity Services at STHG support the education of undergraduate Medical students from University College Cork and University of Limerick and undergraduate Nursing & Midwifery students from University College Cork.

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

## University Hospital Kerry

University Hospital Kerry (UHK) opened in 1984. The hospital provides acute general hospital services to the population of Co. Kerry. In 2015, UHK delivered 1,406 babies and 2,739 patient contacts were recorded in gynaecology clinics.

UHK maternity services comprises of:
- 4 bedded delivery suite
- 24 bedded postnatal/gynaecology ward
- 9 bedded antenatal ward
- Stand-alone outpatients department for antenatal, gynaecology, urodynamics, & midwifery led scanning department.

Maternity Services support the education of undergraduate Nursing Students from the Institute of Technology Tralee (ITT).

Medical students from UCC also gain clinical experience as part of their placement and this lends to an interdisciplinary teaching environment. Facilities at CUMH allow students to participate in lectures with study space and video conferencing facilities to link with their colleagues at other sites.

## University Hospital Waterford

University Hospital Waterford (UHW) opened in 1952 (Ardkeen Hospital). Is one of the busiest regional hospitals in the Country. In 2015, UHW delivered 2,039 babies and 6,783 patient contacts were recorded in gynaecology and colposcopy clinics.

UHW Maternity Services comprises of:
- 4 bedded delivery suite with a 3 bedded 1 stage room
- Obstetric theatre on delivery suite with a recovery room
- 24 bedded postnatal ward
- 32 bedded antenatal gynaecology ward that houses the early pregnancy unit and a specifically nominated bereavement room
- Stand-alone outpatients department for antenatal, gynaecology, urodynamics, colposcopy & midwifery led scanning department.

Maternity Services at UHW support the education of undergraduate Midwifery Students from the University of Limerick (UL) and undergraduate Nursing Students from Waterford Institute of Technology (WIT) as well as elective placements of Postgraduate Midwifery Students from Cork (UCC) & Dublin to the Integrated Hospital and Community Midwifery Service (IHCMS) to complete the midwifery and nursing education programme in Waterford.

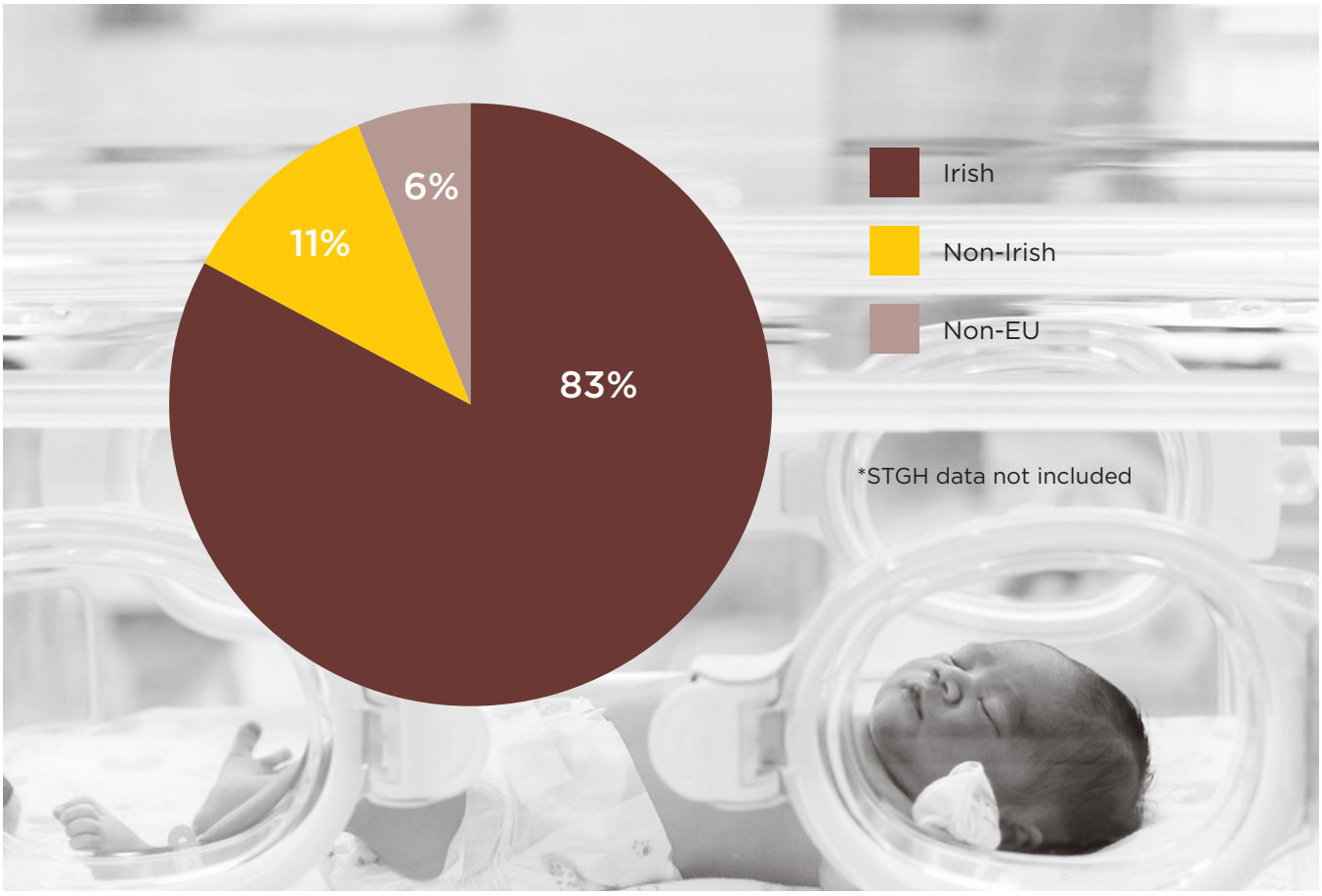
Medical students from University College Cork (UCC) and Royal College of Surgeons Ireland (RCSI) also gain clinical experience as part of their placement and this lends to an interdisciplinary teaching environment. Facilities allow students to participate in lectures with study space and video conferencing facilities to link with their colleagues at other sites.

# Obstetric Report

## Maternal and Delivery Characteristics

| Table 1.0: Frequency (N) of maternities and births 2015 and the preceding year | | | | | |
|---|---|---|---|---|---|
| | **SSWHG** | CUMH | STGH | UHK | UHW |
| **Mothers delivered 2015** | **12,343** | 7,903 | 1,054 | 1,389 | 1,997 |
| ***Mothers delivered 2014*** | ***12,473*** | *7,878* | *1,434* | *1,087* | *2,074* |
| **Babies born >500g 2015** | **12,620** | 8,113 | 1,062 | 1,406 | 2,039 |
| ***Babies born >500g 2014*** | ***12,746*** | *8,071* | *1,454* | *1,102* | *2,119* |

**Figure 1.1: Distribution of maternal and delivery characteristics - Nationality**



| Table 1.1a: Distribution of maternal characteristics 2015 | | | | | |
|---|---|---|---|---|---|
| **Parity** | **SSWHG Frequency** N (%) (N=12,343) | CUMH Frequency N (%) (N=7,903) | STGH Frequency N (%) (N=1,054) | UHK Frequency N (%) (N=1,389) | UHW Frequency N (%) (N=1,997) |
| Nulliparous | **4,619 (37.42)** | 3,112 (39.38) | 351 (33.30) | 482 (34.70) | 674 (33.75) |
| Multiparous | **7,724 (62.58)** | 4,791 (60.62) | 703 (66.70) | 907 (65.30) | 1,323 (66.25) |

| Table 1.1b: Distribution of delivery characteristics 2015 | | | | | |
|---|---|---|---|---|---|
| **Gestations** | **SSWHG Frequency** N (%) (N=12,343) | CUMH Frequency N (%) (N=7,903) | STGH Frequency N (%) (N=1,054) | UHK Frequency N (%) (N=1,389) | UHW Frequency N (%) (N=1,997) |
| Singleton | **12,074 (97.95)** | 7,700 (97.43) | 1,046 (97.43) | 1,372 (98.78) | 1,956 (97.95) |
| Twin | **261 (2.08)** | 196 (2.48) | 8 (0.76) | 17 (2.42) | 40 (2.00) |
| Triplet | **8 (0.06)** | 7 (0.09) | 0 | 0 | 1 (0.05) |

| Table 1.2: Distribution of spontaneous and instrumental vaginal births for all infants, 2015 | | | | | |
|---|---|---|---|---|---|
| | **SSWHG** N (%) (N=12,620) | CUMH N (%) (N=8,113) | STGH N (%) (N=1,062) | UHK N (%) (N=1,406) | UHW N (%) (N=2,039) |
| **Vaginal delivery (% Total)** | **8,560 (67.83)** | **5,464 (67.35)** | **663 (62.43)** | **926 (65.86)** | **1,507 (73.91)** |
| Spontaneous vaginal | **6,345 (74.12)** | 3,930 (71.92) | 508 (76.62) | 715 (77.22) | 1,192 (79.10) |
| Ventouse | **1,722 (20.12)** | 1,160 (21.23) | 126 (19.00) | 167 (18.03) | 269 (17.85) |
| Forceps | **359 (4.19)** | 257 (4.70) | 21 (3.17) | 41 (4.43) | 40 (2.66) |
| Combined instrumental | **82 (0.96)** | 78 (1.43) | 4 (0.60) | 0 | 0 |
| Vaginal breech | **52 (0.61)** | 39 (0.71) | 4 (0.60) | 3 (0.32) | 6 (0.39) |

| Table 1.3: Incidence of caesarean delivery for all maternities, 2015 | | | | | |
|---|---|---|---|---|---|
| | **SSWHG Frequency** N (%) (N=12,343) | CUMH Frequency N (%) (N=7,903) | STGH Frequency N (%) (N=1,054) | UHK Frequency N (%) (N=1,406) | UHW Frequency N (%) (N=1,997) |
| Caesarean delivery | **3,868 (31.34)** | **2,503 (31.67)** | **391 (37.09)** | **467 (33.21)** | **507 (25.39)** |
| Elective | **1,909 (49.35)** | 1,223 (48.86) | 192 (49.10) | 219 (46.90) | 275 (54.24) |
| Emergency | **1,959 (50.65)** | 1,280 (51.14) | 199 (50.90) | 248 (53.10) | 232 (45.76) |

Elective and emergency figures are calculated on the total number of caesarean deliveries

| Table 1.4: Incidence of maternal high dependency unit admission and hospital readmission | | | | | |
|---|---|---|---|---|---|
| **Admission Status** | **SSWHG Frequency** N (%) (N=12,343) | CUMH Frequency N (%) (N=7,903) | STGH Frequency N (%) (N=1,054) | UHK Frequency N (%) (N=1,406) | UHW Frequency N (%) (N=1,998) |
| Admission to HDU | **566 (4.58)** | 549 (6.95) | 13 (1.23) | 1 (0.07) | 3 (0.15) |
| Readmission after delivery | **299 (2.42)** | 251 (3.17) | 0 | 0 | 48 (2.4) |

## Maternal Mortality

There were two maternal mortalities recorded in 2015.

Mortality A was the case of a patient who died at home from cardiac disease during the mid-trimester of the pregnancy. (Classification: Indirect Maternal Death)

Mortality B was the case of a patient diagnosed during pregnancy with lung carcinoma stage IV. The patient died five weeks postnatally. (Classification: Coincidental maternal death)

## Perinatal Mortality

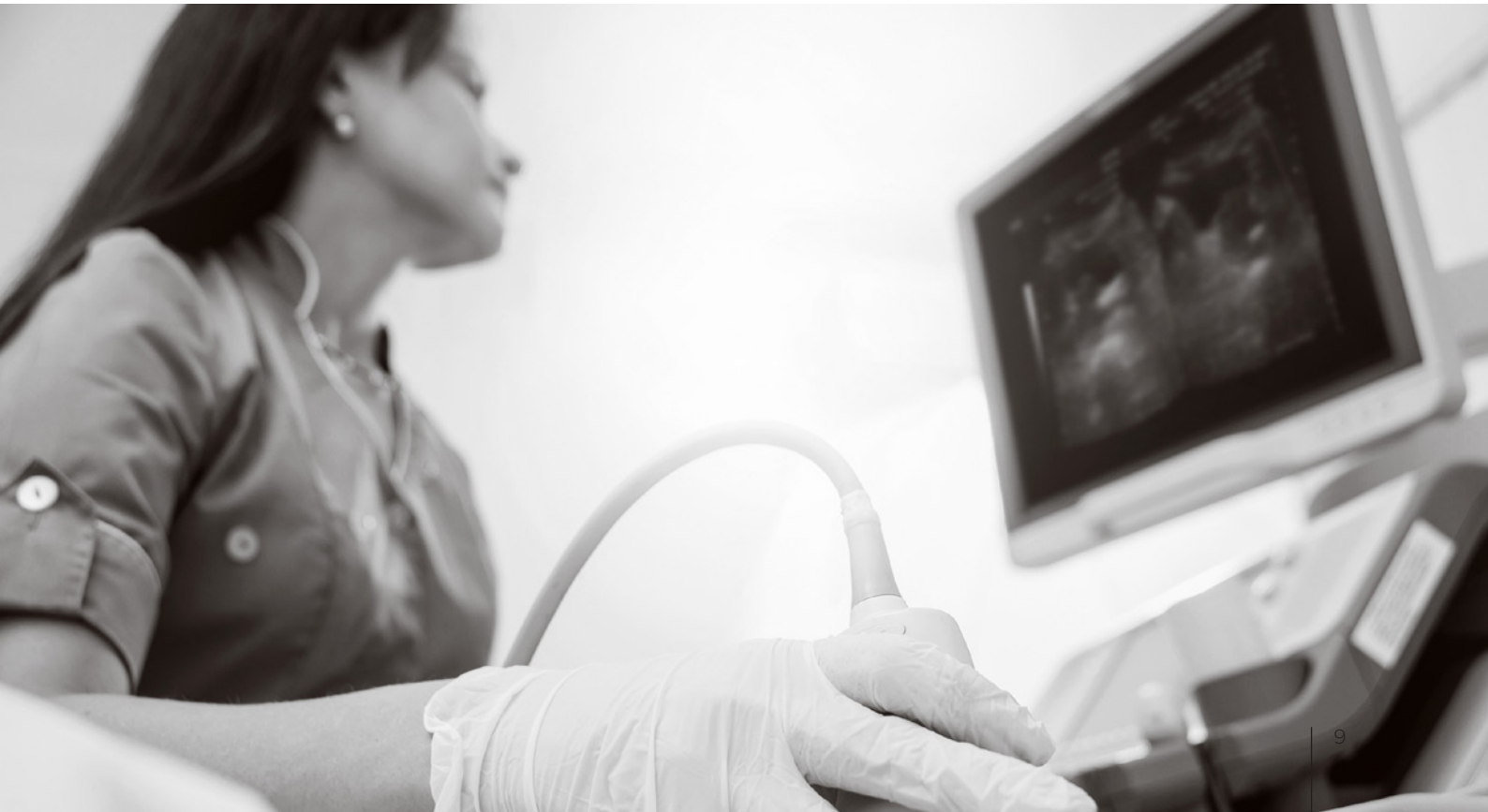
**Table 2.0: Perinatal deaths**

| Perinatal deaths | SSWHG (N=12,620) | CUMH (N=8,113) | STGH (N =1,062) | UHK (N= 1,406) | UHW (N=2,039) |
|---|---|---|---|---|---|
| Antepartum deaths | 54 | 35 | 3 | 5 | 11 |
| Intrapartum deaths | 5 | 3 | 0 | 0 | 2 |
| Stillbirths | 59 | 38 | 3 | 5 | 13 |
| Early neonatal deaths | 25 | 20 | 1 | 3 | 1 |
| Late neonatal deaths | 4 | 4 | 0* | 0 | 0 |
| Infant deaths | 3 | 3 | 0* | 0 | 0 |

*NOTE LATE NEONATAL DEATH AND INFANT DEATH WERE UNKNOWN FOR STGH

** **Stillbirth:** Baby delivered without signs of life from 24 weeks gestation or with a birthweight ≥500g.[1]
**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.

[1] Stillbirths Registration Act, 1994.
**As used by the National Perinatal Epidemiology Centre



| Table 2.1: Perinatal mortality rates | | | | | |
|---|---|---|---|---|---|
| | SSWHG (N=12,620) | CUMH (N=8,113) | STGH (N =1,062) | UHK (N= 1,406) | UHW (N=2,039) |
| Overall perinatal mortality rate per 1000 births | **6.66** | 7.14 | 3.77 | 5.69 | 6.87 |
| Perinatal mortality rate corrected for congenital anomalies | **4.20** | 4.81 | 2.82 | 2.84 | 3.43 |
| Stillbirth rate per 1000 births | **4.68** | 4.68 | 2.82 | 3.56 | 6.38 |
| Stillbirth rate corrected for congenital anomalies | **3.64** | 4.19 | 1.88 | 2.13 | 3.43 |
| Early neonatal death rate per 1000 births | **1.98** | 2.47 | 0.94 | 2.13 | 0.49 |
| Early neonatal death rate corrected for congenital anomalies | **0.55** | 0.62 | 0.94 | 0.71 | 0 |

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

# CUMH Case Reviews

| Table 2.2: CUMH Stillbirths (n=38) | |
|---|---|
| **Cause** | **Totals** |
| Congenital anomalies | 4 |
| Placental abruption | 3 |
| Placental (all causes) | 17 |
| Cord | 3 |
| Fetal | 3 |
| Infection | 6 |
| Unexplained / Unclassified | 2 |

| Table 2.3: CUMH case review – Intrapartum deaths (n=3) | | | | |
|---|---|---|---|---|
| **Parity** | **Gestation (Wks.)** | **Mode of delivery** | **BW (g)** | **Conclusion** |
| 0 | 22+1 | SVD | 520 | Extreme prematurity with preterm labour associated with group B streptococcus acute chorioamnionitis |
| 0 | 26 | SVD | 740 | Amnion infection syndrome and extreme prematurity |
| 0 | 34+2 | Emergency CS (in labour) | 2200 | Placental abruption |

| Table 2.4: CUMH case review – Antepartum deaths (n=35) | | | | |
|---|---|---|---|---|
| Parity | Gestation (Wks.) | Mode of delivery | BW (g) | Conclusion |
| 0 | 33+4 | SVD | 2020 | Trisomy 21 with non-immune hydrops |
| 2 | 29+1 | SVD | 840 | Placental – fetal vascular pathology – fetal vascular obstruction |
| 1 | 35+1 | SVD | 2120 | Placental abruption |
| 1 | 33+0 | Emergency CS (multiple pregnancy) | 1960 | Severe ventriculomegaly (Twin 2) |
| 1 | 40+2 | SVD | 3410 | Placental - villous developmental anomalies – severe diffuse DVI |
| 1 | 25+2 | SVD | 700 | Unexplained |
| 2 | 29+6 | Breech | 1100 | Placental – fetal vascular pathology – fetal vascular obstruction |
| 0 | 21+0 | SVD | 550 | Turner syndrome with non-immune hydrops |
| 0 | 32+0 | SVD | 1640 | Umbilical cord occlusion – acute umbilical vein thrombosis |
| 3 | 38+2 | Elective CS | 2610 | Umbilical cord occlusion – true cord knot |
| 1 | 26+3 | Emergency CS | 1020 | Amnion infection syndrome (Strep pneumoniae) in a setting of PPROM |
| 0 | 34+1 | Breech | 960 | Trisomy 21, placental fetal vascular pathology |
| 0 | 39+3 | SVD | 2750 | Placental - villous developmental anomalies – severe DVI and amnion infection syndrome |
| 1 | 28+0 | Breech | 860 | Placental – fetal vascular pathology – fetal vascular obstruction and cord hypercoiling |
| 2 | 23+2 | Breech | 660 | Amnion infection syndrome (E Coli) in a setting of PPROM |
| 1 | 32+0 | SVD | 1700 | Placental abruption |
| 0 | 40+1 | SVD | 3620 | Placental - villous developmental anomalies – severe DVI and amnion infection syndrome |

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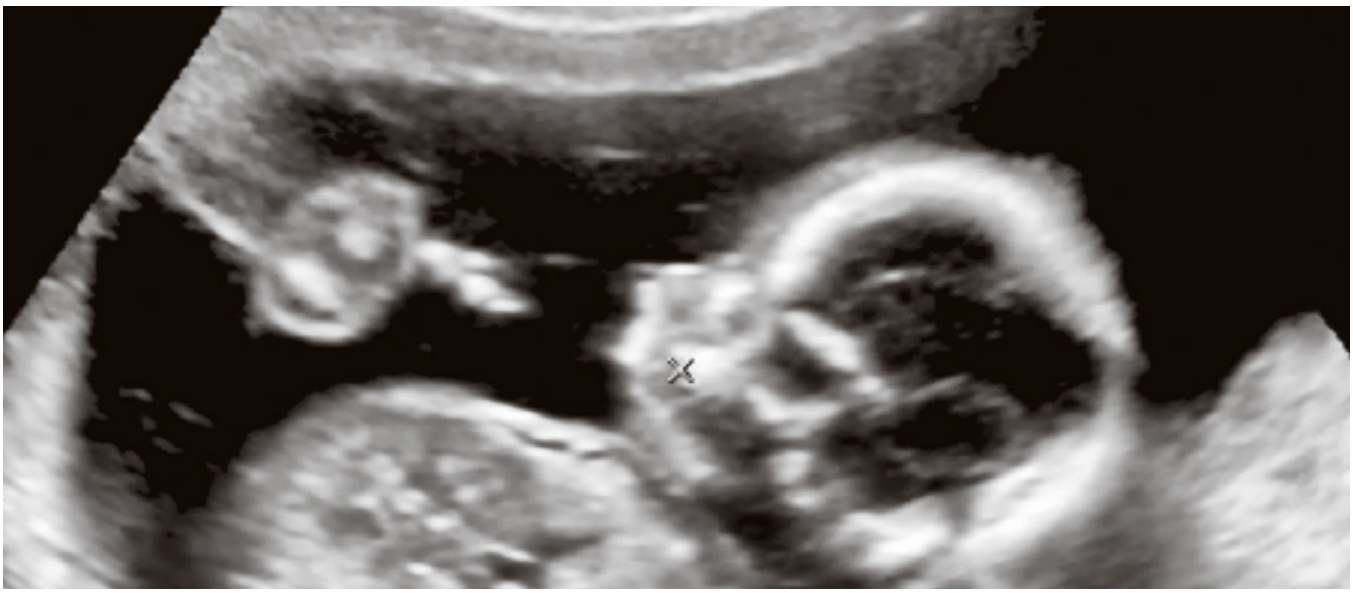


| Table 2.4 continued: CUMH case review – Antepartum deaths (n=35) | | | | |
|---|---|---|---|---|
| **Parity** | **Gestation (Wks.)** | **Mode of delivery** | **BW (g)** | **Conclusion** |
| 1 | 32+5 | SVD | 2120 | Placental – maternal vascular pathology - Placental insufficiency caused by maternal vascular obstruction |
| 34 | 28+0 | SVD | 170 | Placental – maternal vascular pathology - Placental insufficiency with severe early onset fetal growth restriction in twin 2 of DCDA pair |
| 0 | 24+6 | SVD | 480 | Amnion infection syndrome in a setting of PPROM |
| 0 | 40+9 | SVD | 3820 | Placental - CVUE |
| 2 | 25+3 | SVD | 800 | Feto-maternal haemorrhage |
| 2 | 33+4 | Breech | 1940 | Placental – fetal vascular pathology – fetal vascular obstruction |
| 0 | 34 +0 | Elective CS (multiple pregnancy) | 280 | Stage III TTTS in MC pair in DCTA triplets; IUFD Donor twin (triplet 2) after LASER |
| 3 | 25+1 | SVD | 700 | Amnion infection syndrome (Strep angiosus) |
| 1 | 30+6 | Breech | 1490 | Unexplained |
| 0 | 35+5 | Emergency CS (multiple pregnancy) | 140 | Complications of monochorionic placentation (growth restriction, velamentous CI) in MC pair of DCTA triplets (Triplet 1) |
| 0 | 35+5 | Emergency CS (multiple pregnancy) | 180 | Complications of monochorionic placentation in MC pair of DCTA triplets (co-twin IUFD) (Triplet 2) |
| 1 | 29+2 | Emergency CS (multiple pregnancy) | 260 | Placental – maternal vascular pathology - Placental insufficiency caused by maternal vascular obstruction |
| 3 | 36+4 | Elective CS | 2450 | Placental – fetal vascular pathology – fetal vascular obstruction, cord hypercoiling |
| 1 | 24+6 | Breech | 690 | Placental – fetal vascular pathology – fetal vascular obstruction, cord hypercoiling |
| 1 | 26+0 | Elective CS (multiple pregnancy) | 150 | Placental – maternal vascular pathology - maternal vascular obstruction, infarction, intervillous thrombosis |
| 2 | 29+0 | Breech | 760 | Placental – maternal vascular pathology - Placental insufficiency caused by maternal vascular obstruction |
| 1 | 34+0 | Elective CS (multiple pregnancy) | 1300 | Placental – maternal vascular pathology - Placental insufficiency caused by maternal vascular obstruction |
| 1 | 28+0 | SVD | 780 | Umbilical cord occlusion – umbilical artery thrombosis with umbilical cord stricture |

**Comments:**

Of the 6 women delivered by CS, 3 had at least 1 previous CS delivery and 7 women were pregnant with twins or triplets. Of the 35 infants, 7 weighed under 500g with gestational ages ranging from 24 to 35 weeks. In 3 of 4 pregnancies where there was a major fetal anomaly, this had been antenatally diagnosed. Of the two cases where the final cause of stillbirth was unexplained, one was fully investigated but parents declined post-mortem examination in the other.

Three (booked) cases were referred to the Coroner for investigation; one woman who delivered in the GP surgery at 25 weeks, another who was delivered by emergency CS in the setting of PPROM and suspected chorioamnionitis at 26 weeks, and another inpatient whose infant died intrapartum at 26 weeks.

| Table 2.5: CUMH Early neonatal deaths (n=20) | |
|---|---|
| **Cause** | **Totals** |
| Congenital anomalies | 15 |
| Prematurity | 2 |
| Asphyxia | 1 |
| Pulmonary Hypoplasia | 1 |
| Haemolytic Disease of the Newborn with hydrops fetalis | 1 |

| Table 2.6: CUMH case review – Early neonatal deaths (n=20) | | | | |
|---|---|---|---|---|
| **GA** | **BW (g)** | **Age (days)** | **Cause of Death** | **Place** |
| 39 | 2860 | 1 | Potter Sequence | NNU CUMH |
| 38 | 3300 | 1 | Trisomy 18 | NNU CUMH |
| 37 | 2100 | 1 | Trisomy 18 | 4 S CUMH |
| 36 | 2290 | 1 | Potter Sequence | DS CUMH |
| 36 | 1550 | 1 | Potter Sequence | DS CUMH |
| 27 | 1450 | 1 | 69 XXX | NNU CUMH |
| 34 | 1940 | 1 | Pulmonary Hypoplasia +Gastroschisis | DS CUMH |
| 36 | 2260 | 1 | Potter Syndrome | NNU CUMH |
| 33 | 3360 | 1 | Thanataphoric Skeletal Dysplasia | NNU CUMH |
| 27 | 850 | 1 | Acrocallosal Syndrome | DS CUMH |
| 32 | 1940 | 4 | Trisomy 21 with Hydrops Fetalis | NNU CUMH |
| 33 | 2220 | 1 | Pulmonary Hypoplasia a/w PPROM | NNU CUMH |
| 34 | 2030 | 1 | Hypochondrogenesis | NNU CUMH |
| 23 | 560 | 7 | Extreme Prematurity | NNU CUMH |
| 39 | 4640 | 1 | Hypoxic Ischemic Encephalopathy | NNU CUMH |
| 33 | 2700 | 1 | Hemolytic Disease of Newborn | NNU CUMH |
| 23 | 550 | 1 | Extreme Prematurity | NNU CUMH |
| 37 | 2160 | 1 | Potter Syndrome+ 22q deletion | DS CUMH |
| 30 | 900 | 1 | Trisomy 13 | DS CUMH |
| 31 | 1030 | 1 | Anencephaly | DS CUMH |

DS – Delivery Suite
NNU – Neonatal Unit

| Table 2.7: CUMH case review – Late neonatal deaths (n=4) | | | | |
|---|---|---|---|---|
| **GA** | **BW (g)** | **Age (days)** | **Cause of Death** | **Place** |
| 23+5 | 650 | 14 | Extreme Prematurity | NICU CUMH |
| 24+6 | 800 | 10 | Gastroschisis | CWIUH |
| 37+5 | 2400 | 24 | Alveolar Capillary Dysplasia | GOSH - UK |
| 40 | 3340 | 22 | No cause identified | A+E -CUH |

NICU – Neonatal Intensive Care Unit
CWIUH – Coombe Women & Infants University Hospital
GOSH – UK -Great Ormond Street Hospital

| Table 2.8: CUMH case review – Infant deaths (n=3) | | | | |
|---|---|---|---|---|
| GA | BW (g) | Age (days) | Cause of Death | Place or Transferred to |
| 27 | 860 | 55 | Intestinal Atresia | CUH – Temple St |
| 23+5 | 580 | 30 | NEC | NICU CUMH |
| 40+6 | 4140 | 52 | Marfan's Syndrome | NICU CUMH |

NICU – Neonatal Intensive Care Unit

## STGH Case Reviews

| Table 2.9: STGH Stillbirths (n=3) | |
|---|---|
| Cause | Totals |
| Congenital anomalies | 1 (plus parvovirus) |
| Placental abruption | 0 |
| Placental (all causes) | 0 |
| Cord | 0 |
| Fetal | 0 |
| Infection (GBS) | 2 (GBS) |
| Unexplained / Unclassified | 0 |

| Table 2.10: STGH case review – Antepartum deaths (n=3) | | | | |
|---|---|---|---|---|
| Parity | Gestation (Wks.) | Mode of delivery | BW (g) | Conclusion |
| P0+0 | 23+1 | Vaginal Breech | 672 | HVS + Placenta, GBS Pos |
| P0+0 | 35+ | SVD | 1590 | Parvovirus, B19 ICG, Chromosomal Abnormalities (Stillborn) |
| P1+0 | 39 | SVD | 2970 | Group B Strep (Stillborn) |

| Table 2.11: STGH case review – Early neonatal deaths (n=1) | | | | |
|---|---|---|---|---|
| GA | BW (g) | Age (days) | Cause of Death | Place of death |
| 24+5 | 650 | < 1 | Severe pulmonary prematurity IBH | CUMH |

# UHK Case Reviews

| Table 2.12: UHK – Stillbirths (n=5) | |
|---|---|
| **Cause** | **Totals** |
| Congenital anomalies | 2 |
| Placental abruption | 0 |
| Placental (all causes) | 0 |
| Cord | 0 |
| Fetal | 0 |
| Infection (GBS) | 0 |
| Unexplained / Unclassified | 3 |

| Table 2.13: UHK case review – Antepartum deaths (n=5) | | | | |
|---|---|---|---|---|
| **Parity** | **Gestation (Wks.)** | **Mode of delivery** | **BW (g)** | **Conclusion** |
| 1+1 | 33+2 | SVD | 2100 | No Reason |
| 6+1 | 36 | SVD | 1460 | Trisomy 16 |
| 1 | 29+6 | Breech Extraction | 1360 | Unexplained |
| 3+3 | 30+3 | SVD | 1290 | Neu-Laxova Syndrome |
| 1 | 41+3 | SVD | 4180 | Chorioamnionitis |

| Table 2.14: UHK case review – Early neonatal deaths (n=3) | | | | |
|---|---|---|---|---|
| **GA** | **BW (g)** | **Age (days)** | **Cause of Death** | **Place of death** |
| 29 | 940 | 1 | Amniotic Band Syndrome | UHK |
| 39+4 | 4500 | 4 | Severe Hypoxia Ischemic Encephalopathy | CUMH |
| 33+2 | 1002 | <1 | Anencephaly | UHK |

# UHW Case Reviews

| Table 2.15: UHW – Stillbirths (n=13) | |
|---|---|
| **Cause** | **Totals** |
| Congenital anomalies | 6 |
| Placental abruption | 2 |
| Placental (all causes) | 2 |
| Cord | 1 |
| Fetal | 0 |
| Infection (GBS) | 0 |
| Unexplained / Unclassified | 2 |

| Table 2.16: UHW case review – Intrapartum deaths (n=2) | | | | |
|---|---|---|---|---|
| **Parity** | **Gestation (Wks.)** | **Mode of delivery** | **BW (g)** | **Conclusion** |
| 0+0 | 38+5 | Assisted Breech | 2800G | Potters Syndrome |
| 3+0 | Term+14 | SVD | 2920G | Trisomy 18 |

| Table 2.17: UHW case review – Antepartum deaths (n=11) | | | | |
|---|---|---|---|---|
| **Parity** | **Gestation (Wks.)** | **Mode of delivery** | **BW (g)** | **Conclusion** |
| 1+1 | 28+1 | Emergency C Section | 985 | Abruption |
| 1+2 | 34+2 | SVD | 1130 | Twin2 RIP 22 + WEEKS |
| 1+0 | 25+4 | SVD | 715 | Hydrops fetalis |
| 0+1 | Term+2 | SVD | 3200 | Unexplained |
| 2+0 | 26+4 | SVD | 765 | Trisomy 13 |
| 3+2 | 25+3 | SVD | 900 | Impaired placental perfusion |
| 5+0 | 37+6 | Emergency C Section | 2570 | IUGR |
| 4+1 | Term+11 | Emergency C Section | 4020 | Hypercoiling of cord with fatal hypoxia |
| 2+1 | 29+6 | SVD | 920 | Anacephaly |
| 0+0 | 28+6 | SVD | 1025 | Abruption |
| 1+1 | 25+4 | SVD | 610 | Prematurity |

| Table 2.18: UHW case review – Early neonatal deaths (n=1) | | | | |
|---|---|---|---|---|
| **GA** | **BW (g)** | **Age (days)** | **Cause of Death** | **Place of death** |
| 34+5 | 1895 | 5 mins | Potters Syndrome | DS UHW |

DS – Delivery Suite

## Perinatal pathology

| Table 2.19: Autopsy Rate | | | | | |
|---|---|---|---|---|---|
| | **SSWHG Frequency N(%)** | CUMH Frequency N(%) | STGH Frequency N(%) | UHK Frequency N(%) | UHW Frequency N(%) |
| Stillbirths | 37 (62.7%) | 28 (73.7%) | 3 (100%) | 4 (80%) | 2 (15.4%) |
| Early Neonatal Deaths | 7 (28%) | 3 (22.7%) | 1 (100%) | 3 (100%) | 0 (0%) |

Overall autopsy rate for Stillbirths and Early Neonatal Deaths is 52.4%

# Gynaecology Services Report

General and specialist Gynaecology care is provided throughout the SSWHG. The clinics are provided at the four main hospital units the South Infirmary Victoria University Hospital and at anumber of as outreach clinics. The following clinics/services are provided throughout the area;

- General Gynaecology & Telephone Follow Up
- Urogynaecology
- Gynaecological Oncology
- Colposcopy
- Paediatric/Adolescent Gynaecology
- Infertility
- Ambulatory Gynaecology
- Postmenopausal Bleeding
- Hereditary Gynaecological Cancers
- Perineal
- Pre-Operative Assessment
- Endometriosis
- Hysteroscopy
- Postmenopausal Bleeding Clinic
- Continence Advice
- Smear Clinics

**Table 3.0: Gynaecology Outpatient Activity**

| | SSWHG | CUMH | STGH | UHK | UHW |
|---|---|---|---|---|---|
| **Total Outpatient activity incl. Colposcopy figures** | 29,139 | 15,957 | 5,129 | 1,882 | 6,171 |

**Table 3.1: Gynaecology Operative procedures**

| | SSWHG | CUMH | STGH | UHK | UHW |
|---|---|---|---|---|---|
| **Total Procedures** | 5,304 | 2,687 | 1,148 | 857 | 612 |

*Includes SIVUH activity

**Table 3.2: CUMH Gynaecology outpatient and inpatient waiting numbers**

| | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|
| **Awaiting Gynaecology Outpatient Appointment** | 2944 | 3298 | 4554 | **4125 (36% >1 year)** |
| **Awaiting Gynaecological Surgery** | 564 | 780 | 641 (38.5% >8/12) | **638 (41% >8/12)** |

# Staff

| Table 4.0: Overall SSWHG Staff Numbers | | | | | |
|---|---|---|---|---|---|
| | **Overall SSWHG** | CUMH | STGH | UHK | UHW |
| Consultants* | 26.5 | 16.5 | 3 | 4 | 3 |
| Midwives | 592.62 | 394.5 | 42.62 | 52 | 103.5 |
| NCHDs | 67 | 26 | 12 | 13 | 16 |

*includes Cons Ob/Gyn 12.5 wte (17), neonatologists 4

# Research and Innovation

UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

HSE
Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

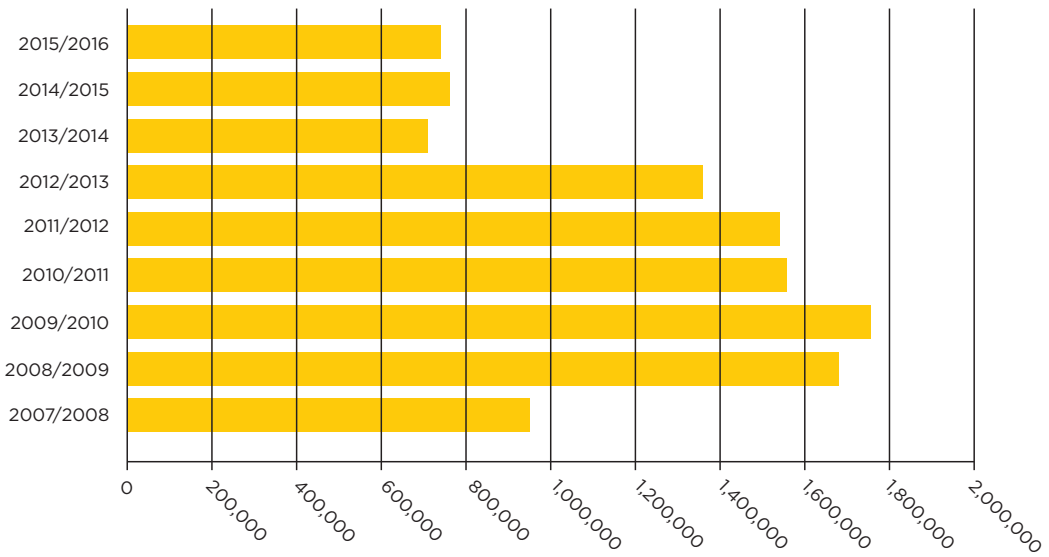
SSWHG support the education of both undergraduate and postgraduate medical, midwifery and nursing students. This leads to an interdisciplinary teaching and learning environment.

## Department of Obstetrics and Gynaecology, UCC

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 a unique postgraduate programme namely the MSc in Obstetrics and Gynaecology programme aimed at clinical trainees in the specialty. The aim of the department is 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, thus providing a high quality academic service across a broad range of clinical, educational and research activities.

**Figure 1.2: Research Income in the Department of Obstetrics and Gynaecology, 2007-2016**

*Does not include income from INFANT



## NPEC

The National Perinatal Epidemiology Centre is based in the UCC Anu Research Centre in Cork University Maternity Hospital. The overall objective of the Centre is to collaborate with Irish maternity services to translate clinical audit data and epidemiological evidence into improved maternity care for families in Ireland.

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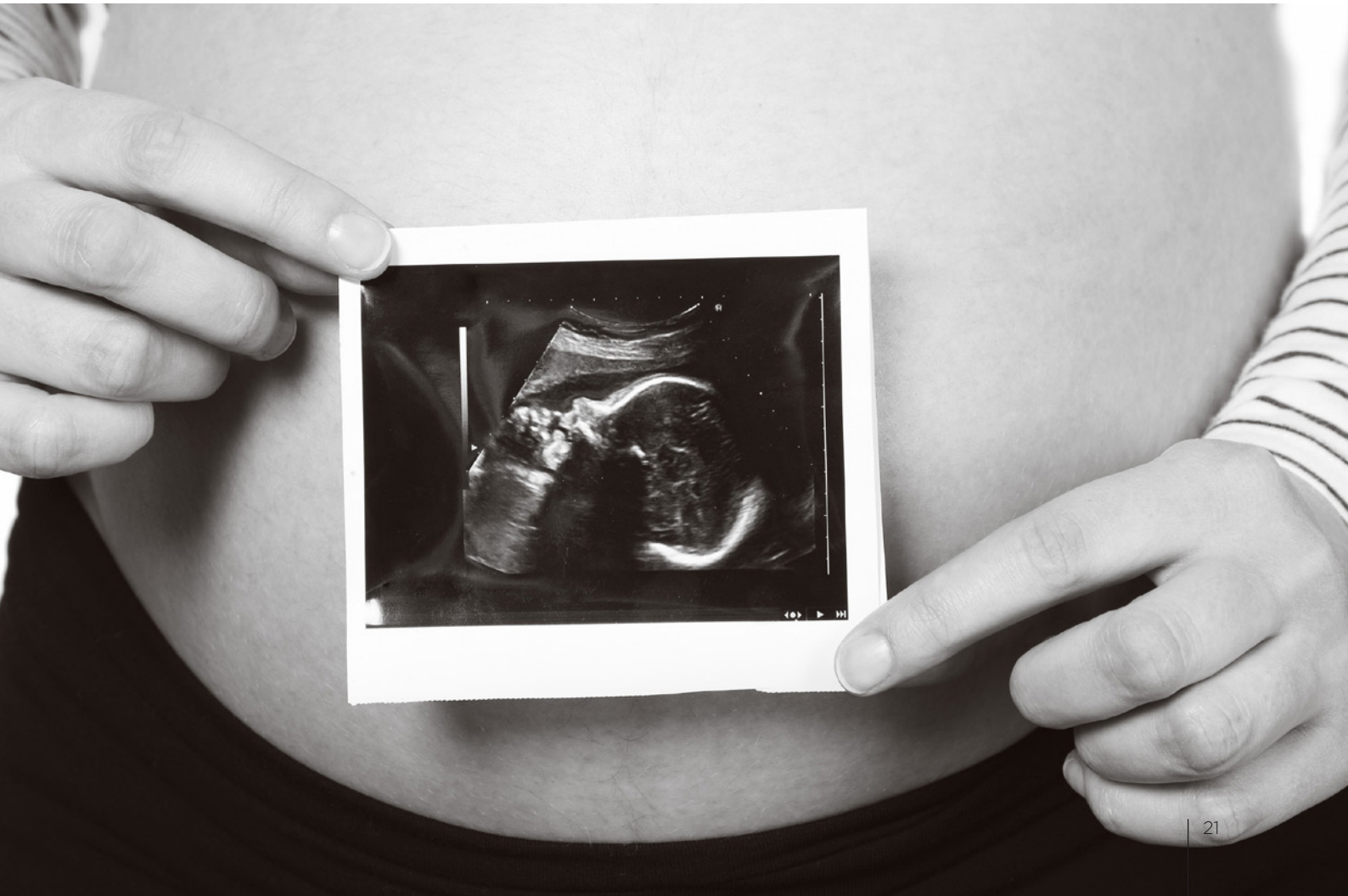
## INFANT

INFANT (Irish Centre for Fetal and Neonatal Translational Research) is Ireland's first and only perinatal research centre and seeks to address the largely unmet global clinical need for innovation in the perinatal domain. Based in Cork University Maternity Hospital, INFANT is founded upon over a decade of world class collaborative research and a diverse array of national and international academic and industry partnerships.

In just its third year, INFANT has undergone a period of exponential growth. By aligning with national research priorities and by nurturing an industry-facing ethos reflecting relevant roadmaps, we have developed an active grant portfolio of almost Đ29 million. During this phase of rapid growth, research commenced in new thematic research areas, including maternal and infant nutrition. INFANT provides a platform for perinatal clinical trials and has a proven track record in global trial co-ordination, protocol development, study monitoring, secure data management, regulatory compliant data banking and biobanking processes, electronic database design and bioinformatics. The Centre operates to the highest ethical, quality and regulatory standards and is in partnership with the HRB-funded Clinical Research Facility in Cork.



As we move forward into our fourth year we will be focusing on consolidation and in supporting the established and new themes within INFANT. Overall, 2015 was a year of exceptional success and growth. INFANT secured very significant competitively awarded funding from SFI, HRB, and Wellcome Trust among others, for new projects, a number of which involve new industry partners. INFANT also leveraged support from UCC to secure significant SFI infrastructural funding to develop and enhance its capacity in biobanking, and long term neurodevelopmental follow-up (the "Baby Lab") which will be located in the new Paediatrics build at the CUH, and integrated Data Hub. These will deliver a sound foundation for progress in 2016 and beyond. Other exciting initiatives from 2015 include our Global Health Research programme and further integration of our clinical trials platform.

The INFANT strategy is to strive for scientific excellence and disruptive innovation in our quest to become the world's leading centre for translational perinatal research. We have a clear vision of how we will achieve this and it is perfectly aligned with national research priorities, continuously informed by industry roadmaps. This work will enable us to deliver scientific excellence, innovation and societal and economic impact now and for the next generation.

## University College Cork School of Nursing & Midwifery

Located in the Brookfield Health Sciences Complex, the School offers two registerable midwifery programmes in partnership with the Cork University Maternity Hospital; a 4 year BSc in Midwifery and an 18 month post registration Higher Diploma in Midwifery. The BSc in Midwifery has 20 students in each year of the programme and the Higher Diploma in Midwifery has 32 students in each intake. There are currently 76 undergraduate and 21 postgraduate student midwives in the service. Student midwives are supported in practice by the Midwifery Practice Development Officer, Clinical placement Co-ordinators, Postgraduate Clinical Co-ordinator, Allocations Liaison Officer and Link Lecturers. Midwives provide preceptor support to students to ensure that their midwifery competencies are achieved. Midwifery lecturers support students in practice settings and contribute to the PROMPT and NRP multidisciplinary training sessions.

The School offers continuing education for midwives including an MSc Midwifery and two Continuing Professional Development (CPD) modules in conjunction with the Cork University Maternity Hospital.

## Department of Neonatology

The Neonatal Research Centre was opened in 2009 and this facility is located directly adjacent to the neonatal unit and provides office and desk space for seven research staff. In collaboration with the Neonatal Brain Research Group (NBRG) UCC and the newly established INFANT Centre, the development of the research centre remains a major advance for the research activities of the Department of Neonatology, bringing science and technology closer to the cot side. The INFANT Centre at University College Cork is hosted by the UCC Department of Obstetrics and Gynaecology at Cork University Maternity Hospital and consists of multidisciplinary researchers with outstanding academic, clinical and research track records. These researchers collectively aim to deliver novel screening and diagnostic tests and innovative therapeutic strategies for adverse pregnancy and neonatal outcomes.

## Selection of publications from staff across the SSWHG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