Rotunda Hospital Dublin: clinical report: 1st January 2005 to 31st December 2005.

Rotunda Hospital
Dublin

CLINICAL REPORT
2005

Dr R Gleeson
Dr W Boyd
Dr G Connolly

ANAESTHESIA
Dr J Gardiner
Dr B Blunnie
Dr J Loughrey
Dr M Bowen
Dr E Carton

ROYAL COLLEGE OF SURGEONS IN IRELAND UNIT
Professor R Harrison/Professor Fergal Malone
Dr P Byrne

ONSULTANT PATHOLOGIST
Dr J.E. Gillan
Dr D Devaney
Dr C Adida

CONSULTANT CARDIOLOGIST
Dr N Mahon

CONSULTANT COLORECTAL SURGEON
Dr A Brannigan

:ONSULTANT MICROBIOLOGIST
'rofessor M Cafferkey

CONSULTANT ENDOCRINOLOGIST
Dr R Firth Dr M Byrne
Dr B Kinsley

CONSULTANT CHEMICAL PATHOLOGIST
Dr P Mayne

CONSULTANT RADIOLOGIST
Professor J.G. Mc Nulty

CONSULTANT INFECTIOUS DISEASES
Dr J Lambert

PAEDIATRIC RADIOLOGIST
Dr S Ryan

CONSULTANT GASTROENTEROLOGIST
Dr P Mc Mathuna

CONSULTANT PSYCHIATRIST
Dr J Sheehan

CONSULTANT ORTHOPAEDIC SURGEON
Mr F Mc Manus

CONSULTANT PAEDIATRIC HAEMATOLOGIST
Dr M Cotter

CONSULTANT OPTHALMOLOGIST
Dr M O'Keeffe

CONSULTANT NEPHROLOGIST
Professor J.J.Walshe

OCCASIONAL CONSULTANTS FOR SPECIAL PURPOSES

Prof T Gorey	Prof R Fitzgerald	Mr R O'Connell
Dr D Sugrue	Mr T Corrigan	Mr K O'Malley
Dr H McCann	Dr O Smith	Mr T Creagh

CLINICAL REPORT

1st January 2005 - 31st December 2005

Master
Michael Geary
MD, MRCOG, FRCPI, DCH

Elected August 2001

INDEX

Dublin Maternity Hospitals Combined Clinical Data

1. TOTAL MOTHERS ATTENDING	Totals 2005
Mothers who have delivered babies weighing >500 grams	6695
Mothers who have delivered babies weighing <500 grams (including miscarriages)	732
Hydatidiform Moles *	22
Ectopic Pregnancies	69
Total Mothers Delivered	**7518**

*This figure includes complete & Partial Hydatidform Moles

2. MATERNAL DEATHS	Totals 2005
Maternal Deaths	0

3. BIRTHS	Totals 2005
Singletons	6694
Twins	220
Triplets	0
Quadruplets	0
Total Babies Delivered weighing> 500 grams	**6804**

4. OBSTETRIC OUTCOME	
Spontaneous Vaginal Delivery	59.0%
Forceps	3.6%
Ventouse	12.0%
Caesarean Section	25.6%
Induction of Labour	19%

5. PERINATAL DEATHS	
Antepartum Deaths	43
Intrapartum Deaths	3
Stillbirths	46
Early Neonatal Deaths	21
Late Neonatal Deaths	3
Congenital Anomalies	21

6. PERINATAL MORTALITY RATES

Overall Perinatal Mortality Rate per 1,000 Births	9.8
Perinatal Mortality Rate Corrected For Lethal Congenital Anomalies	6.8
Perinatal Mortality Rate Including Late Neonatal Deaths	10.3
Perinatal Mortality Rate Excluding Unbooked Cases	7.9
Corrected Perinatal Mortality Rate Excluding Unbooked Cases	5.4

7. AGE OF WOMEN

	Primips	Multips	Total Mothers Delivered>500g
<20 yrs	365	42	407
20-24 yrs	756	450	1206
25-29 yrs	740	803	1543
30-34 yrs	829	1241	2070
35-39 yrs	306	932	1238
40+ yrs	51	180	231
Total	**3047**	**3648**	**6695**

8. PARITY

	Totals 2005	% from Total Mothers Delivered >500g
Para 0	3047	45.5%
Para 1	1973	29.5%
Para 2-4	1567	23.4%
Para 5+	108	1.6%
Total	**6695**	**100%**

9. COUNTRY OF BIRTH & NATIONALITY

	2004	2005
Irish	4816 (73.2%)	4755 (71%)
Eu European	274 (4.2%)	412 (6.2%)
Other Nationality	1430 (21.7%)	1363 (20.3%)
Unknown	62 (0.9%)	165 (2.5%)
Total	**6582**	**6695**

10. SOCIO-ECONOMIC GROUP

Socio Group	2004	%	2005	%
1	247	3.7%	277	4.1%
2	1197	18.2%	1223	18.2%
3	1136	17.3%	1091	16.3%
4	443	6.7%	428	6.4%
5	358	5.4%	383	5.7%
6	172	2.6%	183	2.7%
7	2684	40.8%	2386	35.6%
8	0	0%	0	0.0%
9	2	0.03%	1	0.01%
10	343	5.2%	709	10.6%
	6582	**100%**	**6695**	**100%**

11. BIRTH WEIGHT

Weights	Totals 2005
500 - 999 gms	36
1,000 - 1,499	69
1,500 - 1,999	100
2,000 - 2,499	254
2,500 - 2,999	1,011
3,000 - 3,499	2,216
3,500 - 3,999	2,143
4,000 - 4,499	813
4,500 - 4,999	145
>5,000	17
Total	**6804**

12. GESTATIONAL AGE

	Primips	Multips	Totals 2005
<26 weeks	14	2	16
26 - 29 weeks + 6 days	32	18	50
30 - 33 weeks + 6 days	51	33	84
34 - 36 weeks + 6 days	152	142	294
37 - 41 weeks + 6 days	2676	3362	6038
42 + weeks	122	91	213
Total	**3047**	**3648**	**6695**

13. PERINEAL TRAUMA AFTER ALL VAGINAL DELIVERIES (Numbers & Percentages)

	Primips	Multips	Totals 2005
Episiotomy & Extended Episiotomy	548 (11.0%)	118 (2.4%)	666 (13.4%)
First Degree Laceration	214 (4.3%)	347 (7.0%)	561 (11.3%)
Second Degree Laceration	722 (14.5%)	666 (13.4%)	1388 (27.8%)
Third Degree Anal Sphincter/Mucosa	66 (1.3%)	17 (0.3%)	83 (1.7%)
Fourth Degree	6 (0.1%)	1 (0.0%)	7 (0.1%)
Other (Lacerations/Grazes not requiring sutures)	423 (8.5%)	655 (13.1%)	1078 (21.6%)
Intact	244 (4.9%)	958 (19.2%)	1202 (24.1%)
Totals	**2223 (40.5%)**	**2762 (59.5%)**	**4985 (100%)**

14. THIRD DEGREE TEARS *

	Primips	Multips	Totals
Occurring Spontaneously	15	14	29
Associated with Episiotomy	13	1	14
Associated with Forceps	18	1	19
Associated with Ventouse	29	2	31
Associated with Ventouse & Forceps	4	0	4
Associated with O.P. position	8	1	9

15. PERINATAL MORTALITY IN ANTEPARTUM NORMALLY FORMED INFANTS

	Primips	Multips	Totals
Hypoxia	5	5	10
IUGR	0	0	0
Cord Accident	3	6	9
Infection	0	0	0
Abruption	6	7	13
Twin to Twin Transfusion	0	0	0
Unexplained	1	2	3
Total	**15**	**20**	**35**

Autopsy Totals		
Autopsy Rate	27/35	77.1%
Total Autopsy Rate including all Stillbirths	31/46	67.4%

16. PERINATAL MORTALITY IN CONGENITALLY MALFORMED INFANTS

	Primips	Multips	Totals
Neural Tube Defects	0	1	1
Other CNS Lesions	0	0	0
Cardiac	0	0	0
Renal	4	1	5
Chromosomal	1	7	8
G.I.	0	0	0
Multiple	0	3	3
Other	2	2	4
Totals	**7**	**14**	**21**

17. NEONATAL DEATHS

	Primips	Multips	Totals
Congenital	3	7	10
Prematurity	3	0	3
Infection	2	2	4
Hypoxia	3	1	4
Unexplained	0	0	0
Totals	**11**	**10**	**21**

Autopsy Totals	**11/21**
Autopsy Rate	**52.3%**

18. HYPOXIC ISCHAEMIC ENCEPHALOPATHY

Grades	Unclassified	Grade 1	Grade 2	Grade 3
	2	18	4	3

19. SEVERE MATERNAL MORBIDITY

	Primips	Multips	Totals
Transfusion > 5 units	5	8	13
Emergency Hysterectomy	0	1	1
Transfer To Other Institution	2	4	6
Uterine Rupture	0	0	0
Eclampsia	5	0	5
Pulmonary Embolus	2	1	3
Other	0	0	0

20. FINANCIAL INFORMATION: Summary of Financial Position - 31 December 2005

	'000	'000
INCOMES		
Dept of Health Allocation 2005	42,863	
Patient Income	6,275	
Other	1,918	51,056
PAY		
Medical	7,373	
Nursing	15,782	
Other	16,179	39,334
NON PAY		
Surgery and dispensary charges	4,942	
Domestic charges	1,979	
Provisions and kitchen equipment	541	
Administration charges	1,644	
Computer	799	
Other	1,818	11,723
Net Deficit 2005		(-1)

* TABLE 14

Total 3rd Degree not listed as some women have a 3rd degree Tear with Both Episiotomy & Instrumental Delivery.

Table 13 has totals listed.

INTRODUCTION

Introduction

The Master

2005 marked the 261st year of unbroken service for the Rotunda Hospital. 6,695 women delivered 6,804 babies greater than 500g. The overall perinatal mortality rate was 9.8 per 1,000 and when congenital abnormalities and unbooked patients are excluded, the corrected perinatal mortality rate was 5.4 per 1,000. The Rotunda remains very focused on maintaining these excellent results and I would like to congratulate everyone involved for their contribution.

In order to match the high clinical standards of staff, the hospital has been keen to provide clinical facilities of the highest standard. The last few years has seen substantial progress on this front. The Ultrasound and Fetal Assessment Unit was significantly upgraded and exended during the year. Each scanning room is now air-conditioned and sound-proofed and provides appropriate confidentiality for our patients. The new centre for Colposcopy Services was completed and allowed the amalgamation of the colposcopy services from the Mater and Beaumont Hospitals to move onto a single site on the Rotunda campus. We were delighted to welcome an Taoiseach, Mr. Bertie Ahern to open both of these new facilities in April 2005. In addition a new Day Care Area was developed during the year to improve the patient experience.

The Hospital announced its major capital development plan of building new hospital facilities around the perimeter of Parnell Square. This is a very ambitious and exciting plan and has been prepared in collaboration with Dublin City Council. The plan is integrated in the Parnell Square Framework Plan. However since then there has been a significant development with the cabinet approved proposal to build a new Children's Hospital on the Mater campus. There has been a recommendation that a maternity hospital should be co-located on this site also. A transition group composed of members from the Department of Health & Children and HSE will be meeting with all key stakeholders during 2006 to finalise decisions in relation to this. As such, the proposed development plan for Parnell Square will be on hold until clarification materialises.

Professor Robbie Harrison retired during the year from his posts as Clinical Director of HARI and Professor of Obstetrics and Gynaecology at the RCSI. We wish him a very happy and healthy retirement. Professor Fergal Malone was appointed as the new Professor at RCSI and Dr. Edgar Mocanu was appointed Consultant Obstetrician and Gynaecologist with a specific commitment to the HARI Unit. Dr. Michael Darling was appointed Clinical Director of HARI. Other new consultants appointed during the year were Dr. Jack Lambert, Consultant in Infectious Diseases, Dr. Anne Brannigan, Consultant in Colorectal Surgery and Dr. Maria Byrne, Consultant Endocrinologist. We wish them all well in their new posts.

The Rotunda has an excellent track record in training and retaining midwives of the very highest standard. An important development during the year was the news that the Department of Health and Children approved the introduction of the Direct Entry

Midwifery Training Programme. We expect this to come on stream in 2006. There has been no progress to date on the proposal to change the traditional two-year midwifery Diploma to an eighteen-month training programme. The **DOMINO** and early transfer home scheme was introduced during the year and has become very popular with our patients, with requests to expand the service beyond the Cabra and Finglas areas. Funding has been sought to do this and it is hoped that this may happen over the next year or so. Ms. Pauline Treanor, our Director of Midwifery and Nursing and her staff should be congratulated again for continuing to provide excellent standards of midwifery and nursing care.

In 2005 we saw the hospital continue its strong tradition of quality education and research. We continued to welcome undergraduate students from the Royal College of Surgeons in Ireland and Trinity College. All twelve postgraduate students successfully completed the residential Diploma in Gynaecology and Obstetrics Programme from Trinity College. The hospital welcomed undergraduate summer students from a number of countries including Germany, Poland and The Czech Republic. **The Ninian Falkiner Lecture 2005** was delivered by Dr. Steven Gould and the title of his lecture was *'CESDI to CEMACH: Evolving Epidemiology in Obstetric and Paediatric Pathology in Great Britian'*. The **Bartholomew Mosse Lecture** was delivered by Professor Robbie Harrison who spoke on *'The Governance of Infertility Treatment in Ireland, Past, Present and Future'*. This was an excellent lecture and highlighted the significant changes that have taken place in the area of infertility in the last couple of decades. Professor Harrison in his own right has substantially contributed to these developments both in Ireland and internationally.

I am pleased to note that staff members have maintained the hospital's fine tradition of excellence with respect to publications and presentations at national and international meetings. In addition to the usual impressive list of publications (page 147) I am pleased to report that members of staff have won prizes at national and international academic meetings during 2005.

We are again indebted to the Friends of the Rotunda who worked tirelessly to raise funds for hospital research and other necessary projects. The Golf Classic was held at Milltown and was very successful. The Race Day was again held in Leopardstown and the monies raised contributed to the development of the new Perinatal Brain Injury Research Centre. The monthly car draw was commenced again. Monies raised from this will contribute to a new air conditioning system for the labour ward.

Our GP Liaison Committee is now in its fourth year and the hospital staff remain committed to working closely with our GP Colleagues. In addition to the direct referral system for the Early Pregnancy Assessment Unit, the hospital has put in place a new system for direct referral for gynaecology ultrasound. The GP study evening again proved very popular and this year focused on Reproductive Medicine and Infertility issues. We were pleased to introduce new evening outreach clinics in the Swords and Blanchardstown area. This is a combined care model between the midwife and the GP for the very low risk healthy women. As ever we are grateful to our GP colleagues for their support and interest in the Hospital.

As part of the accreditation process the hospital was visited by a team of national and international surveyors in October who were nominated by the Irish Health Services Accreditation Board. A thorough review of the hospital was conducted with participation by eight care and non-care teams. More than 200 of our staff and several members from the Board of Governors were directly involved with the team based approach to accreditation. The remainder of the staff also had a significant role to play in putting into place the recommendations of the various teams. All of the staff were absolutely thrilled when we received the news in December 2005 that we had received accreditation. The Rotunda was the second hospital in Ireland to receive accreditation from the Irish Health Services Accreditation Board and the first maternity hospital to do so. This is a fantastic message for our patients and a great tribute to all of the staff who worked so hard to achieve this important award. I am personally very proud of the achievements of the staff and would like to congratulate everyone involved. Undoubtedly the process demanded significant work but a very pleasing aspect was the team-work and communication between different departments around the hospital. Sheila Breen, our Accreditation Manager, deserves special mention for steadfast encouragement and motivation of staff during the entire process.

I would like to thank Pauline Treanor, our Director of Midwifery and Nursing and Fintan Fagan, our Secretary/General Manager for their tremendous commitment to the hospital and their ongoing support during the year. As members of the Executive Management Team they remain very committed to maintaining the highest possible standards here at the Rotunda.

The excellent results in 2005 are a real testimony to the staffs' ongoing commitment to provide the best care possible to all mothers and babies under our care. I am very grateful to all members of staff for their support during the year and I would like to thank the Board of Governors for their support, encouragement and advice. We look forward to embracing the new challenges and developments in 2006.

Dr. Michael Geary
Master

2

STATISTICAL TABLES & SUMMARIES

Comparative Results For 10 Years

YEARS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Babies Born	5,857	6,223	6,387	6,334	6,310	6,600	6,971	6,790*	6731	6804
Perinatal Deaths	60	44	52	43 +4*	57 +8*	60 +6*	58 +8*	58 +12*	61 +13*	61 +10*
Perinatal Mortality Rate	10.2	7.1	8.1	6.7	9	9.1	8.3	10.3	11	9.8
Mothers Delivered	6,414	6,880	7,048	7,003	6,978	7,178	7,624	7,486	7,199	7,482
Maternal Deaths	0	1	0	2	0	2	0	2	1	0
Caesarean Section %	19.8	21.9	24.2	25.1	25.5	26.6	25.7	28.2	26.6	25.6
Forceps/ Ventouse %	14.3	16.2	17.1	16.1	20.3	15.8	17.1	16	16.5	15.3
Epidural %	67.1	70.8	55.8	53.4	52.5	48.4	47	46	48	46.7
Induction %	18.1	22.2	21	20.9	24.4	20.4	18.2	18	19	19

STATISTICAL SUMMARIES

1. TOTAL MOTHERS ATTENDING

	Totals 2005
Mothers who have delivered babies weighing >500 grams	6695
Mothers who have delivered babies weighing <500 grams {including miscarriages}	732
Hydatidiform Moles *	22
Ectopic Pregnancies	69
TOTAL MOTHERS DELIVERED	7518

*This figure includes complete & Partial Hydatidform Moles

2. MATERNAL DEATHS

	Totals 2005
Maternal Deaths	0

3. BIRTHS

	Totals 2005
Singletons	6694
Twins	220
Triplets	0
Quadruplets	0
TOTAL BABIES DELIVERED WEIGHING 500 grams OR MORE	6804

4. OBSTETRIC OUTCOME

Spontaneous Vaginal Delivery	59.0%
Forceps	3.6%
Ventouse	12.0%
Caesarean Section	25.6%
Induction of Labour	19.0%

5. PERINATAL DEATHS

Antepartum Deaths	43
Intrapartum Deaths	3
Stillbirths	46
Early Neonatal Deaths	21
Late Neonatal Deaths	3
Congenital Anomalies	21

6. PERINATAL MORTALITY RATES

Overall Perinatal Mortality Rate per 1,000 Births	9.8
Perinatal Mortality Rate Corrected For Lethal Congenital Anomalies	6.8
Perinatal Mortality Rate Including Late Neonatal Deaths	10.3
Perinatal Mortality Rate Excluding Unbooked Cases	7.9
Corrected Perinatal Mortality Rate Excluding Unbooked Cases	5.4

7. STATISTICAL ANALYSIS OF HOSPITAL POPULATION

AGE AT DELIVERY	1999	2000	2001	2002	2003	2004	2005
<20	8.6%	8.7%	7.4%	6.7%	7.0%	5.3%	6.1%
20-24	18.0%	18.4%	18.6%	18.2%	17.1%	17.4%	18.0%
25-29	24.8%	24.2%	24.8%	25.2%	24.9%	25.0%	23.1%
30-34	29.7%	29.5%	30.3%	30.2%	30.2%	31.2%	30.9%
35-39	16.1%	16.0%	15.9%	16.9%	17.5%	17.7%	18.5%
>=40	2.8%	3.2%	3.1%	2.9%	3.3%	3.5%	3.5%

PARITY	1999	2000	2001	2002	2003	2004	2005
0	45.3%	45%	44.1%	47.5%	48.3%	43.1%	45.5%
1	28.5%	29.6%	30%	29.6%	29.1%	31.6%	29.5%
2-4	24.2%	24%	24.4%	21.2%	21.1%	23.6%	23.4%
5+	2%	2%	1.7%	1.7%	1.5%	1.6%	1.6%

BIRTHWEIGHT (grams)	1999	2000	2001	2002	2003	2004	2005
500-999	0.6%	0.9%	0.8%	0.6%	0.6%	0.8%	0.5%
1000-1499	0.8%	0.7%	1.1%	0.8%	0.7%	0.9%	1.0%
1500-1999	1.2%	1.6%	1.8%	1.2%	1.5%	1.4%	1.5%
2000-2499	3.6%	3.6%	4.2%	3.9%	3.8%	3.5%	3.7%
2500-2999	13.8%	12.5%	13.5%	14.5%	13.2%	13.6%	14.9%
3000-3499	33.1%	32.4%	32.8%	34.8%	34.3%	33.3%	32.6%
3500-3999	31.8%	32.6%	31.7%	30.5%	31.1%	31.9%	31.5%
4000-4499	12.5%	12.7%	12.0%	11.5%	12.4%	12.5%	11.9%
4500-4999	2.3%	2.4%	2.1%	1.8%	2.0%	2.0%	2.1%
>5000	0.3%	0.2%	0.2%	0.2%	0.2%	0.3%	0.2%

GESTATION (Weeks)	1999	2000	2001	2002	2003	2004	2005
<26 weeks	0.3%	0.4%	0.3%	0.2%	0.3%	0.3%	0.2%
26 - 29 weeks + 6 days	0.8%	0.8%	0.9%	0.5%	0.5%	0.7%	0.7%
30 - 33 weeks + 6 days	1.4%	1.5%	1.4%	1.2%	1.4%	1.3%	1.3%
34 - 36 weeks + 6 days	4.4%	4.5%	4.2%	4.1%	3.9%	4.0%	4.4%
37 - 41 weeks + 6 days	88.9%	89.3%	89.2%	90.3%	90.0%	90.4%	90.2%
42 + weeks	4.2%	3.5%	4.0%	3.7%	3.9%	3.2%	3.2%

FETAL LOSS
The Master

NOTES ON PERINATAL MORTALITY

1. The overall rate applies to all babies greater than or equal to 500g who were stillborn or died in the first seven days of life (67).

2. The uncorrected perinatal mortality is calculated when the thirteen unbooked deaths are excluded (67 –13 = 54). Unbooked cases are those who presented to the hospital for the first time in labour or were transferred in from another hospital. Late bookers are considered as booked cases.

3. The corrected perinatal mortality is the uncorrected perinatal deaths (54) less the congenital abnormalities (54-17 = 37). (There were 21 congenital abnormalities, 4 already excluded as they were unbooked). This gives an uncorrected rate of 7.9 and a corrected rate of 5.4.

4. There were no intrapartum deaths this year in term normally formed infants. There were three intrapartum deaths in total. All three were at extremely pre-term gestations and associated with placental abruption. The three infants were normally formed.

STILLBIRTHS

Stillbirths	**46**
Abruption	13
Fetal Anomalies	11
Hypoxia	10
Cord	9
Unexplained	3

Abruption (13)

1. **Age 31.** Para 2. Previous vaginal delivery at 36 weeks. Subsequent stillbirth at 36 weeks due to chronic utero-placental insufficiency. Late booker at 21 weeks. Attended the Emergency Room at 30 weeks with suspicion of PPROM - not confirmed. Presented 5 days later with pains and pv bleeding. Intrauterine death confirmed with clinical evidence of placental abruption. Developed low grade intrapartum coagulopathy. Spontaneous vaginal delivery of a stillborn female infant weighing 1800g. Post-mortem revealed a normally formed infant and retro-placental haemorrhage confirmed. Background of chronic utero-placental insufficiency noted.

2. **Age 25.** Three previous full term normal deliveries. Booked at 17 weeks gestation. Scan confirmed dates. Regular antenatal care. Emergency admission at 32 weeks with severe abdominal pain and significant antepartum haemorrhage. Intrauterine death diagnosed. Clinically obvious placental abruption. Developed mild coagulopathy. Proceeded to spontaneous vaginal delivery of a stillborn female infant weighing 2040g. Post-mortem declined. IUD bloods normal.

3. **Age 17. Primigravid.** Booked at 10 weeks gestation. Non-substantial mid trimester bleed at 22 weeks gestation. Ultrasound at 28 weeks gestation showed fetal biometry just above the 10th centile. Presented at 33 weeks having delivered macerated stillborn male infant at home. Birth weight 1160g. Post-mortem revealed a normally formed infant. Hypoxic changes present. Placental examination revealed a large area of clot and infarction consistent with placental abruption. Chronic utero-placental insufficiency also noted.

4. **Age 18. Primigravid.** Family history of epilepsy and type II diabetes. Booked at 10 weeks gestation. Uneventful care until presented at 23 weeks and 5 days with pain and bleeding. Intrauterine death diagnosed. Proceeded soon after admission to vaginal breech delivery of a stillborn male infant weighing 630g. Post-mortem revealed a normally formed infant with hypoxic changes. Placental examination revealed retro-placental haemorrhage secondary to utero-placental insufficiency.

5. **Age 29.** Three previous full term normal deliveries. **Unbooked.** Delivered macerated stillborn male infant in the Ambulance just upon arrival to the Rotunda. Birth weigh 1360g. Post-mortem declined. Placental examination revealed evidence of large concealed retro-placental haemorrhage.

6. **Age 18. Primigravid.** Booked at 15 weeks gestation. Scan confirmed dates. Cigarette smoker of 10 per day. Presented to ER at 24 weeks with abdominal pain for one day. No PV loss. PPROM soon after admission – clear liquor. Antibiotics and steroids commenced. Transferred to the labour ward four hours later in labour. No fetal heart present. Scan confirmed intrauterine death. Spontaneous vaginal delivery of a stillborn female infant weighing 600g. Large clot passed with delivery of the placenta. Post-mortem revealed a normally formed infant, retro-placental haemorrhage noted secondary to chronic utero-placental insufficiency. IUD bloods normal.

7. **Age 36.** Three previous deliveries. Term SVD x 2. Preterm LSCS x 1. **Unbooked** Rotunda. Booked elsewhere. Complicated medical history with background of essential hypertension since her last pregnancy. Pre-eclampsia during that pregnancy and emergency LSCS at 36 weeks. Known Grave's disease and also admitted to own hospital at 23 weeks with infective exacerbation of asthma. Transferred to Mater ICU for ventilation. While in ICU, developed uncontrollably high blood pressure requiring poly pharmacy. Intrauterine death diagnosed at 24 weeks when ventilated. Extubated after one week but required re-intubation. Subsequent successful extubation and transferred to Rotunda for further management and IOL. Labour induced and spontaneous vaginal delivery of a stillborn female infant weighing 500g. Post-mortem declined. Placental examination revealed chronic utero-placental insufficiency with evidence of infarction and old retro-placental haemorrhage. IUD bloods normal.

8. **Age 21. Primigravid.** Booked at 14 weeks. Booking scan revealed dichorionic twin pregnancy. Uneventful antenatal care until 21+6 weeks gestation when presented with bleeding PV and backache. Both fetal hearts present. Admitted to hospital. Two hours after admission developed regular pains and possible SROM. Speculum examination revealed heavily blood stained liquor, cervix four centimetres dilated, and cord prolapse. Transferred to the labour ward. Subsequent spontaneous vaginal delivery of twin I, who was a stillborn male and weighed 660g. Twin II born alive, female infant, weighing 540g, neonatal death at 7 minutes of age. IUD bloods normal. Post-mortem for both babies revealed normally formed infants. Hypoxic changes noted. Retroplacental haemorrhage confirmed secondary to chronic utero-placental insufficiency.

9. **Age 34.** Previous elective LSCS for breech 14 years earlier, previous spontaneous miscarriage at 12 weeks gestation. Background of secondary infertility. Booked at 14 weeks. Weight 87 kilograms. Non-smoker. Known history of migraine. Uneventful antenatal care until 34 weeks when admitted with migraine which settled. Presented at 37 weeks with a 24 hour history of abdominal pain and no fetal movements for several hours. Intrauterine fetal death diagnosed. Subsequent spontaneous onset of labour and spontaneous vaginal delivery of a stillborn female infant weighing 1.94 kilograms. Post-mortem performed. Early maceration noted. No fetal abnormality seen. Evidence of chronic hypoxia. Chronic utero-placental insufficiency noted with old placental infarction and also evidence of acute retro-placental haemorrhage. Incidental finding of crossed renal ectopia with fusion of the kidneys on the left side. Cause of death hypoxia due to placental abruption.

10. **Age 30.** Previous late miscarriage at 20 weeks associated with suspected placental abruption. Preterm delivery with substantial antepartum haemorrhage at 35 weeks. Two term uncomplicated vaginal deliveries. Booked at 16 weeks gestation. Known heavy smoker more than 20 per day. Pregnancy uneventful until 34 weeks when admitted with severe abdominal pain. Intrauterine fetal death diagnosed. Large retro-placental clot noted on scan. Subsequent spontaneous vaginal delivery. Concealed abruption of greater than 1 litre at delivery. Significant anaemia postnatally and required blood transfusion. Post-mortem declined. Placental examination confirmed retro-placental haemorrhage involving more than 30 % of maternal surface. Evidence of chronic utero-placenta insufficiency. Cause

of death hypoxia secondary to concealed placental abruption.

11. **Age 19. Primigravid.** Booked at 12 weeks gestation. Scan confirmed dates. Admitted with suspected DVT at 22 weeks. Doppler negative. Admitted from Clinic at 32 weeks with suspected PET. Scan revealed normal fetal health, EFW 1.82 kilograms, and grade III placenta praevia. Commenced on Aldomet. Developed sudden onset of abdominal pain two days post admission. Clinical suspicion of concealed placental abruption. Intrauterine death diagnosed by ultrasound. In view of major placenta praevia, decision for LSCS. Large retroplacental clot greater than 500 mls noted. Stillborn male infant weighing 1.57 kilograms. Mother transfused with three units RCC post delivery. Post-mortem revealed a normally formed infant. Diagnosis of abruption substantiated with evidence of chronic utero placental insufficiency. IUD bloods including thrombophilia screen normal.

12. **Age 25.** One previous first trimester miscarriage. Booked at 19 weeks gestation. Scan confirmed dates. Cigarette smoker less than 10 per day. Ambulance admission at 26 weeks with history of PPROM at home and contracting. On arrival to Emergency Room – noted to be fully dilated with breech presentation and fetal bradycardia. Transferred immediately to theatre. On arrival to theatre breech on perineum with persistent bradycardia, pushing commenced. Delivered to shoulders with two contractions. Head entrapment behind incompletely dilated cervix. Duhrusson's incisions to cervix. Male infant weighing .710g delivered stillborn. Post-mortem revealed no congenital malformations. Significant retroplacental haemorrhage noted.

13. **Age 19.** Previous Ventouse delivery at 38 weeks, birth weight 2.2 kilograms. **Late booker** at 28 weeks gestation. Cigarette smoker, 20 per day. Booking haemoglobin 7.9g per d/l – started on iron. Booking scan at 28 weeks revealed mildly dilated renal pelvis. Booked for further scan six weeks later. Did not attend antenatal visit at 32 weeks. Subsequently attended several days later and findings normal. Follow-up scan at 33+ weeks revealed AC less than the fifth centile, normal umbilical Doppler and bilateral dilated renal pelvis. Scheduled for follow-up growth scan. Four days later presented at 34 weeks with antepartum haemorrhage, abdominal pain, and contractions. Ultrasound revealed intrauterine death. Cervix two centimetres dilated. Subsequent SVD of a stillborn male infant weighing 1.66 kilograms. Post-mortem revealed evidence of hypoxia. Normally formed infant. Significant retroplacental haemorrhage noted with background of chronic utero-placental insufficiency (recurrent). A true knot in the cord noted but loose (likely incidental). IUD bloods normal.

Fetal Anomalies (II)

1. **Age 31.** Attended Rotunda in year 2000 – 6 weeks spontaneous miscarriage. 2002 – term stillbirth weighing 2.1 kgs with a background of pre-eclampsia. Apparently normally formed but no postmortem done. Subsequent term delivery in 2003 – 3.3 kgs. Booked at 15 weeks. Clinically large for dates at 24 weeks. Scan revealed polyhydramnios, ventricular septal defect, echogenic cardiac focus and IUGR. Amniocentesis revealed trisomy 18. Intrauterine death diagnosed at 34 weeks gestation. Labour induced and SVD of stillborn male infant weighing 1360 grams. Postmortem not performed.

2. **Age 42.** Para 2. Full term normal delivery on first pregnancy, followed by emergency caesarean section for PET at 34 weeks gestation. Second child early neonatal death secondary to Trisomy 13. Booked at 12 weeks gestation. Declined antenatal screening. Regular antenatal care. Presented with reduced fetal movements at 37 weeks. Intra-uterine death diagnosed. Spontaneous vaginal delivery of stillborn female infant weighing 2640g. Multiple abnormalities noted including single palmar crease, epicaenthic folds. Post-mortem declined. Multiple abnormal features consistent with Trisomy 21.

3. **Age 29.** One previous term normal delivery. **Unbooked.** Booked at another hospital. In-utero transfer at 18 weeks gestation for second opinion. Ultrasound revealed massive cystic hygroma, ascites, pleural effusion, skin oedema, oligohydramnios and hyperplacentosis. Intrauterine death diagnosed at 20 weeks. Vaginal delivery of a stillborn male infant weighing 530g. TORCH screen negative. Post-mortem declined.

4. **Age 22.** One previous full term normal delivery. Cigarette smoker. Booked at 10 weeks gestation. Presented at 26 weeks gestation with absent fetal movements. Intrauterine death diagnosed. Labour induced and vaginal breech delivery of a stillborn female infant weighing 560g. Post-mortem revealed exencephaly with anencephaly also. Torsion of umbilical cord also noted.

5. **Age 29. Primigravid.** Booked 11+6 weeks gestation. Regular antenatal care. Presented at 33 weeks gestation with irregular pains. Scan revealed severe micromelia, small fetal chest, ascites, trident hand and marked polyhydramnios. Features consistent with a lethal skeletal dysplasia. Subsequent spontaneous onset of labour with vaginal breech delivery of a stillborn female infant weighing 1590g. Post-mortem declined but radiological studies confirmed short rib polydactyly (autosomal recessive).

6. **Age 29. Primigravid.** Booked at 11 weeks. GTT positive at 27 weeks gestation. Scan at 29 weeks revealed anhydramnios, absent kidneys and small fetal chest. Features consistent with Potters sequence. Spontaneous onset of labour at 34 weeks gestation. Vaginal breech delivery of a stillborn of indeterminate sex. Birth weight 1720g. Post-mortem declined. Superficial examination revealed evidence of syringomelia.

7. **Age 34.** Three previous caesarean sections. **Unbooked.** In-utero transfer at 27 weeks gestation with significant polyhydramnios. Ultrasound revealed fetal biometry consistent with 23 weeks gestation. Multi-cystic dysplastic kidney, Dandy Walker malformation, left sided hydronephrosis, ascites and polyhydramnios all noted. Amnio reduction of three litres performed. PCR revealed Trisomy 13. Intrauterine death diagnosed four days following amnio reduction. Stillborn female infant weighing 1390g delivered by elective repeat caesarean section. Post-mortem declined.

8. **Age 31. Primigravid.** Booked at 10 weeks gestation by scan dates. Family history of NIDDM (father). Ultrasound at 21 weeks revealed very large septated cystic hygroma with significant hydrops. Amniocentesis revealed normal chromosomes. Torch screen and parvovirus screen negative. Presented with no fetal movements at 24+6 weeks. Scan confirmed intrauterine death. Labour induced at 25+2 weeks. Assisted vaginal breech delivery of a stillborn female infant weighing 1100g. Post-mortem confirmed significant hydrops secondary to large cystic hygroma.

9. **Age 24. Primigravid. Booked elsewhere at 17 weeks.** Booking scan revealed anhydramnios with no bladder or stomach seen, no kidneys seen. Referred to Fetal Assessment Unit for second opinion at 22 weeks. Likely diagnosis – Potters sequence. Intrauterine death noted at 34+ weeks. Labour induced and assisted vaginal breech delivery of a stillborn male infant weighing 2.28 kilograms. Post-mortem confirmed absent kidneys. Abnormal small testes noted and utricle present. Diagnosis of multi-factorial Potters Syndrome (4 – 5% risk of recurrence).

10. **Age 23.** Two previous full term normal deliveries. Booked at 14 weeks. A scan revealed a cystic hygroma with alobar holoprosencephaly. Amniocentesis performed. Chromosomes revealed Trisomy 18. Further multiple abnormalities noted on subsequent scans. Intrauterine death diagnosed at 35 weeks gestation. Subsequent SROM at 36 weeks. Vaginal breech delivery of a stillborn male infant weighing 1060g. Post-mortem declined.

11. **Age 40.** Two previous full term vaginal deliveries. Left salpingectomy in 2003 for ectopic pregnancy. Booked at 12 weeks gestation. Scan confirmed dates. Known cigarette smoker, less than 10 per day. Scan at 20 weeks revealed anhydramnios and absent kidneys. Subsequent repeat scans revealed scans with likely diagnosis of Potter's Syndrome. No fetal movements at 34+ weeks. Intrauterine death confirmed by ultrasound. Labour induced and assisted vaginal breech delivery of a stillborn male infant weighing 1.38 kilograms. IUD bloods normal. Postmortem confirmed renal adysplasia. VSD also noted.

Hypoxia (10)

1. **Age 33. Primigravid.** Past history of primary infertility and polycystic ovary syndrome. Cholecystectomy. IVF twin pregnancy. Booked at 13 weeks gestation. Ultrasound revealed dichorionic twins. Regular antenatal care and scans at 19, 26, 30 and 34 weeks all normal. Presented at 35 + 3 with headaches and oedema. Blood pressure 144/88. No proteinuria. Reassured and discharged home. Admitted at 36 weeks with abdominal pain (not in labour). Scan the day after admission revealed intrauterine death of Twin II. Emergency caesarean section performed. Twin I, liveborn female infant weighing 2640 grams. Twin II, stillborn male infant weighing 2430 grams. Postmortem revealed Twin II was markedly pale. No fetal abnormality noted. Kleihauer markedly positive with evidence of fetomaternal haemorrhage noted. Cause of death due to acute fetomaternal haemorrhage.

2. **Age 26.** One previous full term normal delivery. **Unbooked.** Travelled from Nigeria at 41 weeks gestation. Spontaneous onset of labour within hours of arrival to the country. Intrauterine death diagnosed on presentation to the hospital. Spontaneous vaginal delivery of a macerated stillborn male infant weighing 2640g. Weakly positive Kleihauer test. Post-mortem revealed a normally formed infant with hypoxic changes and significant maceration suggestive of IUD ? 5 days previously. Likely cause of death feto-maternal haemorrhage.

3. **Age 18. Primigravid. Late booker** at 29 weeks. Uneventful antenatal care until 37 weeks gestation. Did not attend visit at 39 weeks. Presented to the Emergency Room at 40 +4 weeks with pains and no fetal movements for one day. Scan confirmed intrauterine death. Admitted and labour induced. Subsequent spontaneous vaginal delivery of a stillborn female infant weighing 4.04 kilograms. IUD bloods all normal, apart from Kleihaeur test markedly positive. Post-mortem confirmed evidence of a sub-acute feto-maternal haemorrhage and background of hypoxic changes.

4. **Age 32. Unbooked.** In-utero transfer at 26 weeks gestation because of maternal hypertension. Previous stillbirth at 30 weeks. Subsequent full-term live born normal delivery. IUGR and hypertension present in both previous pregnancies. Booking scan at 13 weeks confirmed dates. Developed IUGR and PET in this pregnancy. On arrival to the Rotunda, ultrasound revealed an intra-uterine fetal death. BP 194/120 and significant proteinuria, transferred to HDU and commenced on MGSO4 prophylaxis and intravenous anti-hypertensives. Liver enzymes markedly elevated, thrombocytopenia of 89, but no haemylosis noted. Labour induced and SVD of a stillborn female infant weighing 585g. Post-mortem declined.

5. **Age 36.** Two previous first trimester spontaneous miscarriages. 1999 – vacuum delivery at 39 weeks, birth weight 2.46 kilograms. 2004 – stillbirth at 27 weeks, possible PET, birth weight 200g. Booked at 9 weeks. Scan confirmed dates. Antenatal care uneventful until 25 weeks when presented with lower abdominal pain and query decreased fetal movements. Ultrasound normal. Further scan arranged at 28 weeks which revealed an intrauterine death. Labour induced and SVD of a stillborn female infant weighing 620g. IUD bloods normal. Post-mortem revealed a normally formed infant. Hypoxic changes noted. Placental examination

revealed massive perivillous fibrin – chronic placental failure. Placenta from 2004 re-examined and confirmed same diagnosis.

6. **Age 25.** Previous first trimester miscarriage. Booked at 12 weeks. Scan confirmed dates. Antenatal care uneventful until 28 weeks. Scheduled GTT and antenatal visit at 28 weeks – noted to be significantly small for gestational age. Fetal heart not heard and intrauterine death confirmed by ultrasound. Anhydramnios noted. Labour induced and SVD of a stillborn male infant weighing 585g. Post-mortem revealed a normally formed infant with significant hypoxic changes. Evidence of chronic utero-placental insufficiency noted secondary to placental hypoplasia. Ascending infection noted most likely post IUD affect.

7. **Age 23.** Previous full term normal delivery. Booked at 16 weeks. Scan confirmed dates. Cigarette smoker, less than 10 per day. Uneventful regular antenatal care. Attended for routine antenatal visit at 35 weeks. Fetal heart not detected. Ultrasound confirmed intrauterine death. Labour induced and SVD of stillborn female infant weighing 2.38 kilograms. Post-mortem revealed a normally formed infant with significant hypoxia. Placenta very pale. IUD bloods normal apart from very abnormal Kleihauer – feto maternal haemorrhage greater than 27 mls noted.

8. **Age 18. Primigravid.** Booked at 15 weeks. Scan confirmed dates. Antenatal care uneventful until 31+ weeks when presented to the antenatal clinic with +4 proteinuria and BP 208/128. Fetal heart not detected and scan confirmed intrauterine death. Treated with anti-hypertensives and magnesium sulphate. Labour induced and SVD of stillborn female infant weighing 920g. Post-mortem revealed no fetal abnormality. Acute and chronic hypoxia noted. Significant chronic utero-placental insufficiency present, CMV inclusion bodies noted in the placenta but all IUD bloods normal including CMV IgM.

9. **Age 36.** One previous first trimester loss. Attended her booking scan at 14 weeks. Scan confirmed dates. **No further attendance to the hospital for antenatal care.** Attended Independent Midwife for antenatal care. Self referral to the Emergency Room at term plus 18 with history of no fetal movements for one day. Fetal heart not detected. Ultrasound confirmed intrauterine death. Labour induced and spontaneous vaginal delivery of a stillborn male infant weighing 4.6 kilograms. IUD bloods normal. Post-mortem arranged (Coroners Case). Normally formed infant. Hypoxic changes present.

10. **Age 33.** Previous full term normal delivery. Booked at 11 weeks gestation. Scan revealed dichorionic twins. Admitted at 12 weeks and 20 weeks with hyperemesis. Antenatal course otherwise uneventful. Serial scans throughout demonstrated apparent normal fetal growth and wellbeing for both twins. Scan at 38 +5 weeks revealed an intra-uterine death in twin I. Elective LSCS the following day. Twin I stillborn male infant weighing 2.49 kilograms. Twin II liveborn male infant weighing 3.34 kilograms with Apgars of 9 and 10. Post-mortem declined. Placental examination for Twin I revealed accelerated villous maturation and other signs of chronic utero-placental insufficiency. Features most likely consistent with a primary trophoblast disorder. IUD bloods normal.

1. **Age 30.** Single mother of 7 children. SVD x 7. All term deliveries. Past history of gestational hypertension in first pregnancy. Anaemia. 12 units of alcohol per week. **Unbooked.** Presented at 34 weeks gestation with a history of no fetal movements for 3 days. Intrauterine death diagnosed. Labour induced and SVD of stillborn female infant weighing 1670 grams. Postmortem declined. Examination of cord revealed recent thrombosis in both umbilical artery and vein. Cause of death due to cord accident.

2. **Age 32.** Two previous term SVDs. Booked at 13 weeks. Uneventful antenatal course until 34 weeks gestation, when presented with reduced fetal movements. Intrauterine death diagnosed. Labour induced and spontaneous vaginal delivery of a stillborn male infant weighing 1870g. Post-mortem revealed a normally formed infant. Hypoxic changes notes. IUD bloods normal. Cord vessel thrombosis noted with evidence of torsion of the cord. Cause of death due to cord accident.

3. **Age 36.** Two previous term SVDs. Subsequent spontaneous miscarriage at 13 weeks gestation. Previous gestational diabetes in last term of pregnancy. Booking weight 106 kilograms. Attended combined diabetic obstetric clinic from six weeks gestation. Sugars well controlled on diet until 33 weeks when fetal growth noted on the 97th centile. Insulin commenced. Presented with reduced fetal movements at 34 weeks. Intra-uterine death diagnosed. Labour induced and spontaneous vaginal delivery of a stillborn male infant weighing 2840g. Post-mortem revealed a normally formed infant. True knot in the cord noted. Cause of death due to cord accident.

4. **Age 20. Primigravid.** Iron deficiency anaemia noted at booking. Regular antenatal care. Presented at 34 weeks with absent fetal movements for one day. Intrauterine diagnosed. Labour induced and vaginal delivery of a stillborn female infant weighing 2100g. Nuchal cord noted at delivery. Post-mortem revealed a normally formed infant with hypoxic changes. Cord examination revealed increased coiling index, significant cord vessel thrombosis. Evidence of cord torsion. IUD bloods normal. Cause of death due to cord accident.

5. **Age 29.** Previous full term normal delivery. Booked at 18 weeks gestation. Low titres of anti kell and anti Kpa in serum throughout pregnancy. Presented at 37 weeks gestation with absent fetal movements for 6 days. Intrauterine death diagnosed. Labour induced and vaginal delivery of stillborn female infant weighing 2300g. Offensive liquor noted at delivery and the umbilical cord tightly wrapped around the leg three times. Post-mortem revealed a normally formed infant with hypoxic changes. Examination of the cord revealed reduced coiling index with evidence of umbilical cord entrapment and umbilical vein thrombosis. Cause of death due to cord accident.

6. **Age 23. Primigravid.** Booked at 13 weeks. Uneventful regular antenatal care. Attended outlying clinic at 36+ weeks and fetal heart not detected. IUD confirmed by ultrasound at Rotunda. Labour induced and SVD of a stillborn male infant weighing 2350g. Post-mortem revealed a normally formed infant. Placental examination revealed haemorrhagic endo-vasculitis. Cord examination revealed

umbilical venous thrombosis with reduced coiling index. Hypoxic changes noted in the fetus. Cause of death – probable cord accident.

7. **Age 37.** Two previous full term deliveries. Booked at 14 weeks gestation. Regular antenatal care. Attended at 36+ weeks with reduced fetal movements. Normal CTG. Subsequent attendance at antenatal clinic at 39+ weeks. Intrauterine death diagnosed. Labour induced and spontaneous vaginal delivery of a stillborn male infant weighing 3.14 kilograms. True knot noted in the cord. Post-mortem declined. Cause of death cord accident.

8. **Age 29. Primigravid.** Booked at 13 weeks gestation. Scan confirmed dates. Family history – NIDDM and hypertension. Clinical suspicion of small for dates at 28 weeks with a background of decreased fetal movements for three days. Scan revealed normal estimated fetal weight of 1.2 kilograms and normal biophysical profile score. She presented two weeks later with a history of no fetal movements for ten days and scan confirmed intra-uterine death with evidence of oligohydramnios. Labour induced and assisted vaginal breech delivery of a stillborn male infant weighing 0.98 kilograms. Post-mortem revealed no congenital fetal abnormality. Placental examination normal. Cord examination revealed increased coiling index with significant cord arterial and venous thrombosis. Torsion of the umbilical cord also noted. IUD normal. Cause of death cord accident.

9. **Age 35.** Full term Ventouse delivery in 2003 – 3.16 kilograms. Booked at 13 weeks gestation, scan confirmed dates. Family history of IDDM (father). Developed palpitations at 18 weeks gestation. TFTs revealed sub-clinical hypothyroidism. Subsequent repeat TFTs showed further reduction in free T4. Commenced on Eltroxin at 31 weeks gestation. Antenatal care otherwise uneventful. GTT at 28 weeks normal. Presented for routine visit at 36 weeks gestation and noted that fetal movements had been a little quieter than usual. Fetal heart not detected. Intrauterine death confirmed by ultrasound. Labour induced and spontaneous vaginal delivery of a stillborn female infant weighing 2.56 kilograms. Post-mortem revealed a normally formed infant. Placental examination normal. Cord examination revealed significant cord vein thrombosis with an uncoiled short umbilical cord. Cause of death cord accident.

Unexplained (3)

1. **Age 23.** 1 previous term vaginal delivery weighing 2.8 kgs. Past history of recurrent UTIs and chronic backache. Booked at 9 weeks gestation. Referred to medical clinic – DNA on 3 occasions. Admitted at 19 weeks gestation and 30 weeks gestation for treatment of E.coli UTI. Renal ultrasound normal. Presented at 35 weeks with no fetal movements for 3 days. Intrauterine death diagnosed. Labour subsequently induced and SVD of stillborn female infant weighing 2470 grams. Postmortem revealed a normally formed infant. Hypoxic changes noted. Placental examination normal. Chromosomes normal. IUD bloods normal. Cause of death unexplained.

2. **Age 33. Primigravid.** Booked at 10 weeks gestation by ultrasound dates. Family history of IDDM (sister). Regular antenatal care. GTT at 28 weeks normal. Uneventful antenatal care until 38 weeks when presented with no fetal movements for one day. Intrauterine death confirmed by ultrasound. Labour induced. Forceps delivery for failure to advance in the second stage. Mild shoulder dystocia and third degree tear sustained. Stillborn male infant weighing 3.06 kilograms. IUD bloods normal. Post-mortem revealed a normally formed infant, maceration. Chronic hypoxic changes noted. Probable feto-placental failure suggested. Cause essentially unexplained.

3. **Age 25.** Two previous full term normal deliveries – 3.6 and 3.9 kilograms. Booked at 13 weeks gestation. Scan confirmed dates. Uneventful antenatal care until 28+6 weeks when presented with no fetal movements for two days. Scan in Fetal Assessment Unit following admission revealed intrauterine death. Very large peri-caridal effusion and ascites with significant hydrops and suspicion of cystic hygroma or encephalocoele. Labour induced and spontaneous vaginal delivery of a stillborn female infant weighing 1.45 kilograms. Limited post-mortem performed. Negative for congenital malformations. Significant maceration noted with confirmation of significant hydrops. Skin biopsy for cyto-genetics failed to culture. All IUD bloods normal apart from a borderline thyroid function. Placental histology normal.

EARLY NEONATAL DEATH

Early Neonatal Deaths	21
Fetal Anomalies	10
Infection	4
Hypoxia	4
Prematurity	3

Fetal Anomalies (10)

1. **Age 43.** Two previous full term normal deliveries. Booked at 11 weeks gestation. Regular antenatal care. Developed non-proteinuric hypertension at 27 weeks. Methyldopa commenced. Ultrasound at 28 weeks identified bilateral pyelectasis and reduced end-diastolic flow of the umbilical artery. Delivered at 29 weeks gestation by caesarean section because of oligohydramnios. Liveborn male infant weighing 1260g. Died day 2, post-mortem declined. Chromosome analysis confirmed Trisomy 13.

2. **Age 34. Primigravid.** Threatened miscarriage 6 weeks gestation. Booked at 13 weeks gestation. Scan confirmed dates. Regular antenatal care. Presented at 34 weeks gestation in labour with a footling breech. Anhydramnios noted on ultrasound. Liveborn male infant delivered by emergency caesarean section. Birth weigh 1790g. Apgars 6 at 1 and 9 at 5 minutes. Post-mortem revealed multiple anomalies with evidence of pulmonary hypoplasia also. Features consistent with Potters sequence.

3. **Age 32.** Spontaneous miscarriage in 2002 at 6 weeks. Ventous delivery at full term in 2004 – female infant weighing 3.5 kilograms. Booked at 11 weeks gestation. Scan confirmed dates. Uneventful antenatal care until 32 weeks gestation when noted large for dates. Ultrasound revealed polyhydramnios and enlarged BPD. Subsequent detailed anatomy scan revealed very large fetal head, and strong suggestion of skeletal dysplasia. Elective caesarean section performed at 36+5 weeks. Live male infant delivered weighing 2.98 kilograms. Neonatal death at 14 minutes of age. Post-mortem confirmed Thanatophoric Chondrodysplasia. Subsequently referred for genetic counselling.

4. **Age 39.** TOP at 6 weeks in 1984. 1998 - spontaneous vaginal delivery at 32 weeks gestation, with background of PPROM. **Late booker** at 22 weeks gestation. Cigarette smoker – 10 per day and 18 units of alcohol per week. Had triple test prior to booking, revealing low risk of Trisomy 21 but significantly elevated MSAFP, serial growth scans planned. Scan at 25 weeks gestation revealed absent cavum septum pellucidum. Scan at 27 weeks revealed fetal growth less than the third centile. No obvious structural abnormality noted. Amniocentesis revealed 46XX. Biophysical profile and umbilical arterial Doppler normal. GTT at 28 weeks revealed mildly impaired glucose tolerance. Commenced on diabetic diet. Admitted at 29 weeks gestation with slight pv bleeding. Commenced on steroids. Subsequent scan following admission revealed normal biophysical profile and Dopplers. Three days following admission complained of pressure but no pains. Cervix noted to be 3 – 4 centimetres dilated with fetal feet in vagina with intact membranes. Strict bed rest and bed elevation. Spontaneous onset of labour the same evening, transferred to the delivery suite and spontaneous vaginal delivery of a live female infant weighing 690g. Apgars 4 at 1 and 9 at 5 minutes. Transferred to NICU. Neonatal death on day 1. Post-mortem declined. Superficial examination revealed some dysmorphic features – significant microcephaly, abnormal skin folds at fetal neck and abnormal nasal bridge. Placental histology revealed evidence of acute chorioamnitis secondary to ascending infection.

5. **Age 36.** Three previous term deliveries. Booked at 14 weeks gestation. Structural ultrasound at 27 weeks which revealed a large neck mass and poly-hydramnios. Subsequent detailed ultrasound suggested a neck teratoma. Steroids given. Subsequent preterm labour six days later and delivered by caesarean section. Paediatricians and ENT airway team present for delivery. EXIT procedure performed with elective intubation and ventilation. Baby transferred to NICU and subsequent transfer to the Children's Hospital Temple Street after stabilisation. Significant postnatal growth in the neck mass over the first few days of life and deemed surgically un-resectable. Neonatal death on day 5. Post-mortem declined.

6. **Age 43.** Two previous full term normal deliveries – 3.2 kilograms and 3.5 kilograms. Booked at 11 weeks gestation. Scan confirmed dates. Had prenatal diagnosis – negative for Trisomy 18 and 21. Scan at 28 weeks gestation revealed ventriculomegaly. Subsequent detailed anatomy scan revealed semi-lobar holoprosencephaly. No other abnormalities noted. Amniocentesis performed at 36 weeks revealed Trisomy 13. Head size very large and therefore elective LSCS performed at 37 weeks gestation. Liveborn female infant delivered weighing 2.92 kilograms. Neonatal death on day 1. Post-mortem not performed.

7. **Age 34.** One previous miscarriage. Three previous caesarean sections. **Booked elsewhere.** Suspected PPROM at 18 weeks gestation. Care transferred at 21 weeks gestation. Expectant management. Scan for estimated fetal weight at 23 weeks, approximately 470g. Subsequent chorioamnitis at 23+2 weeks. Treated with triple IV antibiotics and transferred to labour ward. Labour induced and spontaneous vaginal delivery of a liveborn female infant weighing 540g. Neonatal death at 3 to 4 minutes of age. Manual removal of placenta required. Placenta acreta noted and massive PPH of approximately 3 litres. Uterine balloon used to control bleeding with good result. Managed in HDU and balloon removed after 72 hours. Limited post-mortem revealed multiple abnormalities, ? Golden Hauer Syndrome or Dellman Syndrome. Placenta revealed evidence of acute chorioamnitis.

8. **Age 26. Primigravid.** Booked at 9 weeks gestation. Scan confirmed dates. History of CIN III just prior to pregnancy – LETTZ planned postpartum. Ultrasound at 30 weeks revealed bilateral multi-cystic dysplastic kidneys with hydroureter and oligohydramnios. Counselled re poor prognosis. Presented in labour at 40 weeks with breech presentation. Despite counselling patient adamant re LSCS. Male infant delivery by LSCS weighing 2.7 kilograms. Post-mortem revealed Potter's sequence with marked uretheral stenosis and tracheo oesophageal fistula, chromosomes 46XY.

9. **Age 39.** Four full term normal deliveries. Seen at Prenatal Diagnosis at 12 weeks. Significantly abnormal nuchal translucency. Decided against invasive testing and scheduled for 20 week anatomy scan. Biometry normal. VSD noted. Decision to defer amniocentesis until 29 weeks gestation. Chromosomes revealed Trisomy 18. SROM at 34+ weeks gestation. Spontaneous vaginal delivery of a female infant weighing 1.81 kilograms. Died day 2. Post-mortem declined.

10. **Age 19.** Previous first trimester miscarriage. Booked at 15 weeks. Scan confirmed dates. Known asthmatic. History of pulmonary embolus in 2004. History of recurrent UTI. Suspected large for dates at 27 weeks. Ultrasound revealed polyhdryamnios with significant IUGR. Suspicion of aneuploidy. Amniocentesis performed which revealed Trisomy 18. Expectant management. Amnio reduction at 34 weeks gestation. Subsequent spontaneous onset of labour and SVD of a live female infant weighing 720g. Apgars 2 at 1 and 3 at 5. Neonatal death at 3 hours 45 minutes. Post-mortem declined.

Infection (4)

1. **Age 32.** Previous LSCS at 36 weeks for SROM and breech. **Booked elsewhere.** PPROM at 18 weeks gestation – clear liquor. Conservative management. Referred to Rotunda Fetal Assessment Unit for a second opinion. No structural abnormality noted. Expectant management continued. Presented to Emergency Room at 26+ weeks gestation draining greenish stained liquor. Apyrexial and no other clinical signs of infection. Spontaneous onset of labour several hours later. Live female infant delivered by LSCS weighing 1.08 kilograms. Apgars 5 at 1 and 6 at 5 and 7 at 10 minutes respectively. Cord pH 7.20 (arterial) and 7.31 (venous). Transferred to NICU. Subsequent neonatal death on day 2. Post-mortem revealed congenital broncho-pneumonia secondary to ascending infection. Chronic hypoxic changes also noted.

2. **Age 21. Primigravid.** One previous early miscarriage. Booked at 14 weeks gestation. Known PCOS. Booking weight of 114 kilograms. URTI at 18 weeks gestation. Presented with PPROM at 22 weeks. Subsequent spontaneous vaginal delivery within 24 hours. Birth weight 500g. Liveborn male infant who lived for 48 minutes. Post-mortem declined. Placental examination revealed evidence of significant chorioamnionitis.

3. **Age 32. Primigravid.** Spontaneous miscarriage at 6 weeks gestation. IVF pregnancy. Booked at 13 weeks gestation. Scan confirmed dates. Past history of hyperprolactanaemia, not on treatment. Prolactin at booking 3049 milli-units per litre. Visual fields normal. Uneventful antenatal care. Scans at 39+ and 40+5 weeks revealed normal biophysical profile. Cervix unfavourable at 40+5. Plan for further scan at term plus 9. Presented to the ER at term plus 9 with pains and a SHOW. Fetal bradycardia noted. Cervix 1 centimetre dilated with membranes intact. Immediately transferred to theatre for emergency LSCS. Live female infant delivered weighing 2.85 kilograms. Thick grade III meconium noted at delivery. Apgars 1 at 1, 0 at 5 and 0 at 10. Cord pH 6.8 (arterial). Baby unresponsive to resuscitation and neonatal death at 24 minutes of age. Post-mortem revealed no congenital abnormalities. Florid vasculitis, funicitis and chorioamnitis noted. Significant anaerobic infection noted. No evidence of retro-placental haemorrhage.

4. **Age 23.** Previous full term LSCS for breech. Booked at 20 weeks gestation. Twelve days later presented with PPROM at 22 weeks gestation. Ultrasound revealed anhydramnios and fetal hydronephrosis. Spontaneous onset of labour the following day with assisted breech delivery of a male infant weighing 560g. Died within 20 minutes of birth. Manual removal of placenta required. Swabs revealed heavy growth of ureaplasma urealyticum. Post-mortem declined. IUD bloods normal. Chromosomes normal. Cause of death due to infection.

Hypoxia (4)

1. **Age 33.** Previous emergency caesarean section at 35 weeks because of severe PET and HELLP syndrome. Past history of known spina bifida occulta and lumbar spinal fusion. Booked at 17 weeks gestation. Scan confirmed dates. Uneventful antenatal care. At 35+5 weeks proteinurea +1 noted. MSU normal. BP normal. Scheduled for elective caesarean section at 39 weeks. Admitted at 37 weeks with +1 protein and BP 150/93. Admission CTG revealed markedly decreased variability with unprovoked decelerations. Delivered by emergency LSCS. Live male infant delivered with Apgar score of 1 at 1 and 1 at 5. Meconium grade 1 present. Birth weight 2.52 kilograms. Cord pH 7.22 venous and 7.14 arterial. Neonatal death at 45 minutes. Coroners case. Post-mortem revealed evidence of significant antenatal hypoxia. No fetal abnormality apart from enlarged fatty liver. Vasculitis and funicitis of the cord noted. Significant thrombosis of the umbilical vein present. IUD bloods normal. Likely cause of death cord accident.

2. **Age 32. Primigravid.** Past history of cryptomenorrhorea. Noted to have a bicornuate uterus. Booked at 14 weeks gestation. Regular antenatal care. SROM at term + 11. Clear liquor. Subsequent spontaneous labour. Oxytocin augmentation at 8 cms because of OP position. Minor concerns on CTG but otherwise normal. Spontaneous vaginal delivery of a female infant weighing 3060 grams. Apgars 2 at 1, 3 at 5, and 3 at 10 minutes respectively. Cord pH 6.8, base excess – 29. Transferred to NICU. Clinical evidence of hypoxic ischaemic encephalopathy, seizures from 28 hours of age. Supportive treatment only and infant died at 41 hours of age. Postmortem revealed a normally formed infant. Hypoxic changes noted. Postmortem and MRI findings suggest intrauterine insult possibly 7 to 10 days prior to birth.

3. **Age 31.** Two previous miscarriages. First miscarriage at a very early gestation. Second miscarriage following IVF pregnancy with twins. Late miscarriage occurred – first twin delivered at 18 weeks and second twin at 21 weeks. Booked at 11 weeks gestation following IVF conception. On low dose aspirin. Excellent attendance for antenatal care with frequent reassuring ultrasounds and normal TVS cervical length. Admitted with threatened preterm labour at 34 weeks. Tractocile commenced to facilitate steroid administration. Ultrasound revealed reduced end diastolic flow and estimated fetal weight of 1.9 kilograms. Plan for caesarean section if labour commenced. Complained of abdominal pain on the ward. Clinical suspicion of abruption. Noted to be fully dilated and transferred to the labour ward. Assisted breech delivery of a male infant with Apgar scores of 2 at 1 and 4 at 5 minutes. Cord pH 6.6. Large concealed retro-placental haemorrhage immediately following delivery. Neonatal resuscitation and transferred to NICU.

Subsequent evidence of hypoxic ischaemic encephalopathy. Neonatal death day 4. Post-mortem revealed evidence of hypoxia with no fetal abnormality noted. IUD bloods all normal.

4. **Age 21. Primigravid.** Booked at 14 weeks. Booking scan revealed di-chorionic twin pregnancy. Uneventful antenatal care until 21+6 weeks gestation when presented with bleeding PV and backache. Both fetal hearts present. Admitted to hospital. Two hours after admission developed regular pains and possible SROM. Speculum examination revealed heavily blood stained liquor. cervix four centimetres dilated, and cord prolapse. Transferred to the labour ward. Subsequent spontaneous vaginal delivery of twin I, who was a stillborn male and weighed 660g. Twin II born alive, female infant, weighing 540g, neonatal death at 7 minutes of age. IUD bloods normal. Post-mortem for both babies revealed normally formed infants. Hypoxic changes noted. Retroplacental haemorrhage confirmed secondary to chronic utero-placental insufficiency.

Prematurity (3)

1/2. **Age 27. Primigravid. Booked elsewhere.** Known dichorionic twin pregnancy. Suspicion of PPROM at 25 weeks gestation. In utero transfer. Ultrasound revealed bilateral talipes for Twin I with oligohydramnios. Twin II normal liquor and normal anatomy. Managed with steroids and antibiotics. Expectant management. Clinical evidence of chorioamnitis at 28 weeks and delivered by emergency LSCS. Twin I live female infant from cephalic position weighing 1.19 kilograms. clear liquour. Twin II live female infant cephalic, weighing 1.26 kilograms, clear liquor. Twin I neonatal death at 21 hours secondary to severe pulmonary hypoplasia. Twin II neonatal death at 55 hours secondary to acute respiratory failure. Post-mortem declined for both.

3. **Age 32. Primigravid.** Booked at 13 weeks gestation. Uneventful antenatal care until 24 weeks when admitted with non-substantial antepartum haemorrhage. PPROM diagnosed soon after admission. Detained in hospital and managed expectantly. Antibiotic and steroid prophylaxis given. Scan at 27 weeks revealed AFI of 8 centimetres. Doppler normal. Scan at 28+ weeks gestation – EFW 1.06 kilograms. Minimal liquor present. Retained in hospital. Developed clinical chorioamnionitis at 28+5 weeks. Delivered by emergency caesarean section. Live female infant weighing 1.1 kilograms. Apgar score 4 at 1 and 7 at 5 minutes. Cord venous pH 7.31, cord artery pH 7.15. Transferred to NICU. Infant remained unresponsive to intensive ventilatory support. Neonatal death at 8 hours of age. Post-mortem revealed no congenital abnormalities. Amnion nodosum and significant hypoplasia present. Failure of capillary development in lungs also noted. Persistent fetal circulation observed.

Maternal Loss
The Master

MATERNAL DEATH

Maternal Deaths	0

Maternal Mortality

Year	Total	Total Number of Mothers Delivered
1996	0	6414
1997	1	6880
1998	0	7048
1999	2	7003
2000	0	6978
2001	2	7178
2002	0	7624
2003	2	7486
2004	1	7199
2005	0	7518
Total	**8**	**71,328**

Maternal Mortality Rate **11.25/100,000**

WHO Definitions:

Direct obstetric deaths are those resulting from obstetric complications of the pregnant state {pregnancy, labour and the puerperium} from interventions, omissions, incorrect treatment or from a chain of events resulting from the above.

Indirect obstetric deaths are those resulting from previous existing disease or disease that developed during pregnancy and which are not due to direct obstetric causes, but are aggravated by the Physiologic effects of pregnancy.

The following is a late indirect death which occurred several months post delivery.

Age 21. Immigrated to Ireland from Nigeria in 2003. Spontaneous vaginal delivery in 2003 with birth weight of 5 kilograms. Diagnosed HIV positive in that pregnancy and treated with HAART. Booked at 14 weeks in this pregnancy. Seen in the DOVE Clinic and also Beaumont Adult ID Clinic. Booked for GTT but delivery prematurely at 22 weeks in Clonmel while visiting friends. Infant weighed 550g. The patient continued follow-up care in Beaumont. She became unwell approximately 3 months post delivery and died from a combination of hepatitis secondary to medication and salmonella sepsis.

Dr Michael Geary
Master

Severe Maternal Morbidity

The Master

The three Dublin Maternity Hospitals have been publishing combined clinical data in the first twenty tables for each report since 2002. This is outlined in table 19. Last year I included two additional sub-divisions in the report to include uterine rupture and eclampsia. This year I have added pulmonary embolus and this will be included in all of my future reports. In total there are 24 cases reported on. One case however involves a patient who was never actually admitted to the Rotunda. This is case 6 in the Transferred Out section. This was an intriguing case in a young primigravid who attended a number of hospitals in Dublin. We delivered her baby on site in the Mater and then transferred the baby to our Neonatal Intensive Care Unit. It is important that her case is reported as there are valuable lessons to be learned. This young woman was critically ill for a very long time but fortunately she had a good outcome.

I would strongly recommend that severe maternal morbidity should be audited by all maternity units in Ireland. This should be done from a local learning perspective but also to assist in compiling national data. These cases can and should be highlighted as "great saves" rather than "near misses".

Maternal Transfusion > 5 UNITS	13
Eclampsia	5
Transferred to Mater	5(6)
Pulmonary Emboli	3
Peripartum Hysterectomy	1

Maternal Transfusion > 5 UNITS (13)

1. **Age 25.** Full-term normal delivery in 2001. Booked at 11 weeks gestation. Monochorionic twin pregnancy. Admitted with PPROM at 22+2 weeks gestation. Spontaneous onset of labour several hours later. Pyrexia and foul smelling liquor. Treated with triple IV antibiotics. Spontaneous vaginal delivery of both stillborn twins weighing 380g and 480g. Significant PPH greater than 2 litres, transfused four units initially and transferred to HDU. Further bleeding over the next twenty-four hours. EUA performed and removal of adherent placenta tissue. Further associated blood loss of approximately 2.5 litres. Total blood transfusion of 11 units of RCC. Retained in HDU for a further two days and subsequently discharged home.

2. **Age 17. Primigravid.** Booked at 11 weeks gestation. Poor attendance for antenatal care. Rapid labour at term. Massive PPH of at least 1500 mls. Multiple vaginal and labial lacerations sutured. Haemoglobin 3g following delivery. Blood transfusion of 7 units RCC. Very good recovery postnatally.

3. **Age 30.** Two full term normal deliveries in 1996 and 1998. Elective caesarean section in 2002 for breech presentation. Spontaneous onset of labour at 40+ weeks. Labour 2 hours 20 minutes. Spontaneous vaginal delivery of a female infant weighing 4.48 kilograms. Apgars 9 and 10. Placenta appeared complete. Uterus very atonic. Remained atonic despite full use of utero-tonics. EUA in theatre. No obvious retained placenta, scar felt intact, and no evidence of uterine rupture. Transfused 4 units RCC and 2 units FFP. Transferred to HDU. Further heavy bleeding at 7 hours post-partum. Laparotomy performed. Uterine scar intact but small tear noted in the left lower segment with small piece of placenta adherent to this. Decision for sub-total hysterectomy. Recovered very well. Total transfusion 8 units RCC and 4 units FFP.

4. **Age 32.** Full term normal delivery 2000. Booked at 12 weeks gestation. Booking weight 91 kilograms. Noted on scan to have multiple small fibroids. Antenatal care uneventful. Spontaneous onset of labour at 41 weeks gestation. Emergency LSCS for fetal bradycardia at 6 centimetres dilatation. Male infant weighing 3.72 kilograms. Apgars 4 at 1 and 8 at 5 minutes. Extended tear down into vagina and extension in to broad ligament also. Profuse bleeding. Combination of suturing and uterine packing performed. Estimated blood loss approximately 12 litres. Transfused 22 RCC, 3 platelets, 10 units cryoprecipitate. Transferred to Mater Hospital ICU. Packs removed 24 hours later when stable. Good recovery.

5. **Age 31.** Para 2. Previous twin delivery at 36 weeks gestation. SVD following abruption at 26 weeks gestation – neonatal death. Booked at 12 weeks gestation. Following delivery PPH of 2.4 litres. Developed DIC. Transfused 8 units RCC, 4 units FFP and 6 units cryoprecipitate. Good maternal recovery.

6. **Age 31.** Para 1. Ventouse delivery at 40 weeks in 2001. Late booker at 24 weeks gestation. Uneventful antenatal care. Spontaneous onset of labour at 39 weeks gestation. Spontaneous vaginal delivery. Placenta delivered with controlled cord traction. Became hypotensive following delivery of the placenta and uterine inversion noted. Transferred to theatre – uterus replaced with balloon and hyrostatic pressure. Estimated blood loss of greater than 2.5 litres. Transfused 7 RCC, 4 FFP and 2 platelets. Recovered well and discharged home on day 4.

7. **Age 28.** Para 1. Full term normal delivery in 1996. On Methadone programme. Attending DOVE Clinic. Hepatitis C positive. Cigarette smoker – 10 per day. Known asthmatic. Beta thalassemia trait. Booked at 16 weeks gestation. Attended at 23 weeks with perineal trauma. Antenatal care otherwise uneventful. Spontaneous onset of labour at 40+ weeks. Emergency LSCS for fetal bradycardia. Female infant delivered weighing 2.26 kilograms. Apgars 9 and 10. Operation uncomplicated and blood loss considered to be within normal limits. Postnatal haemoglobin unexpectedly low at 4g. Very symptomatic. Transferred to HDU and transfused with 4 units RCC. Abdominal distension and slight PV bleeding. Managed expectantly. Further drop in haemoglobin to 3.5g even after transfusion. A further 6 units of RCC and 2 units of FFP transfused. Recovered reasonably well, but slowly. Large wound haematoma subsequently developed. Evacuated on day 15, recovered well subsequently.

8. **Age 34. Primigravid.** Transferred from another hospital Casualty Department. Significant abdominal pain and pregnancy test positive. Haemodynamically unstable on arrival. Ultrasound revealed no intrauterine sac. Clinical suspicion of ectopic pregnancy. Laparotomy and salpingectomy performed for ruptured ectopic. Two litres of blood in the abdomen. Transfused initially with 2 units of O negative blood and a further 4 units of cross matched RCC. Good recovery.

9. **Age 26. Primigravid.** Booked at 11 weeks. Booking weight 112 kilograms. Booking blood pressure 150/90. Left pelvic kidney diagnosed in pregnancy. Antenatal care uneventful until 33 weeks when admitted with hypertension. Commenced on anti-hypertensives. Seen in Day Care Unit at 37 weeks with significant proteinuria, raised uric acid, and platelets of 47. Labour induced with prostaglandins. Subsequent ARM and oxytocin. Spontaneous vaginal delivery of a female baby weighing 3.74 kilograms. Retained placenta and became haemodynamically unstable with hypertension and tachycardia. Transferred to theatre for manual removal of placenta. Uterus very atonic and treated with full regimen of utero-tonics. Despite this, EBL of approximately 3.5 litres. Intrauterine balloon therefore used to successfully arrest bleeding. Transfused 6 RCC, 2 plasma and 2 platelets. Transferred to HDU. Balloon deflated after 24 hours. Discharged home well on day 5.

10. **Age 32.** Elective caesarean section in 1996 at 27 weeks gestation for hypertension, SVD of stillborn infant at 24 weeks in 1999, SVD of stillborn infant at 26 weeks in 2000. Emergency caesarean section in 2000 at 29 weeks – liveborn infant weighing 1.1 kilogram. Fourteen week miscarriage in 2004. Booked at 14 weeks gestation. Known essential hypertension on Labetolol and Adalat. Commenced on low dose Aspirin from booking. Reviewed in the Medical Clinic the following day. Anti-hypertensive medications increased. Admitted the following day with vaginal bleeding. Haemoglobin 6.4g. Transfused 3 units of RCC. Fetal heart still present. Further bleeding and hypotension. Transfused a further 3 units of RCC. Two days later had significant bleeding. Haemoglobin 4.9g and platelets 64. Fetal heart still present. Transfused 2 further units of RCC. Ultrasound revealed possibility of a necrotic fibroid. Intra-uterine death diagnosed. Conservative management with antibiotics and medical treatment with Misoprostol. Delivered male infant with gastroschisis. Good recovery. Followed up in Miscarriage Clinic. Ultrasound revealed a normal uterus with no evidence of fibroid.

11. **Age 21. Primigravid.** Booked at 11 weeks gestation. Uneventful antenatal care. Ventouse delivery at 40 weeks gestation for failure to advance in second stage. Manual removal of retained placenta. Significant repair of third degree tear. Significant uterine atony. Estimated blood loss at least 1800 mls. Transfused 3 units RCC and 2 FFP. Post-transfusion haemoglobin 7g and remained symptomatic. Transfused further 3 unit RCC. Good recovery.

12. **Age 32. Primigravid.** Booked at 13 weeks. Antenatal care uneventful. Spontaneous onset of labour at 39 weeks. Short labour – 1 hour. SVD of female infant weighing 2.9 kilograms. Apgars 9 and 10. Significant post-partum haemorrhage after 12 hours. Treated with IM syntometrine and 40 unit oxytocin infusion. Haemoglobin 6g and ongoing bleeding. Transferred to HDU. Transfused a total of 7 units of RCC. Discharged home well on day 4. Several further postpartum

haemorrhages over the next six weeks. ERPC x 2 performed - required for small piece of very adherent placental tissue. Ultimately required hysteroscopic resection of this placental fragment. Full and normal recovery.

13. **Age 33.** Full-term normal delivery in 2004. IVF pregnancy. Booked at 12 weeks gestation. Uneventful antenatal care. Spontaneous onset of labour at 40+ weeks gestation. Labour 7 hours 30 minutes. SVD of a male infant weighing 4.4 kilograms. Apgars 8 and 10. Initial PPH of 700 mls secondary to atonic uterus. Treated with cytotec and 40 unit syntocinon infusion. Two further substantial bleeds two hours later of approximately 1300 mls. Uterus atonic. Further misoprostol given. Carboprost one dose given. Transfused 4 units RCC and 2 FFP. Transferred to HDU. Total estimated blood loss approximately 3 litres. A further transfusion of 3 units of RCC and 2 units of FFP. Normal recovery and outcome.

Eclampsia (5)

1. **Age 30. Primigravid.** History of hyperthyroidism – previous thyroidectomy. Previous LLETZ for CIN II. Booked at 15 weeks gestation. Uneventful antenatal care until 38 weeks gestation when diagnosed with pre-eclampsia. Investigations in progress when developed an eclamptic seizure on the ward on the morning following admission. Treated with magnesium sulphate. BP 210/110 and treated with Labetolol infusion. Transferred to HDU. Delivered by emergency LSCS when stabilised of a female infant weighing 3.59 kilograms. Apgars 9 and 10. Very good maternal recovery and discharged home well. Blood pressure normal two week postnatal.

2. **Age 26. Primigravid.** Booked at 18 weeks gestation. Booking blood pressure 100/60. Uneventful antenatal care. +1 of protein noted at antenatal visit at 39+ weeks gestation with blood pressure 120/80. Scan revealed normal fetal growth and well being. Presented one day later to the Emergency Room with contractions. Not in labour. Blood pressure 155/80 and +1 of protein. Admitted to Prenatal Ward. Maternal collapse on Prenatal Ward the following day. Seizure lasting one minute noted at the time. BP 170/110. Patient resuscitated and stabilised with Labetolol and magnesium sulphate infusions. Delivered by emergency caesarean section when stable. Female infant weighing 2.38 kilograms. Apgars 9 & 10. Transferred to HDU. Recovered very well in the postnatal period. No further seizures. Discharged home day 9. BP normal at Medical Clinic at 6 weeks postnatal. Labetolol stopped. Normal outcome.

3. **Age 18. Primigravid.** Booked at 12 weeks gestation. Blood pressure 100/60. Cigarette smoker – 10 per day. Uneventful antenatal care until 36 weeks when admitted with significant oedema, visual symptoms and significant headache. BP 141/82 and +3 proteinuria. Uric acid 441. LFTs, renal function tests and platelets normal. Ultrasound revealed evidence of IUGR with oligohydramnios. Clinical symptoms improved after admission. While 24 hour protein collection in progress developed generalised tonic clonic seizure on ward lasting one minute. Diastolic BP 88 in the immediate post ictal phase. Stabilised and treated with magnesium sulphate infusion. Transferred to HDU and subsequent emergency caesarean section. Female infant weighing 2.33 kilograms. Apgars 9 & 10. Required Labetolol in the postnatal period. Very well at six weeks postnatal, blood pressure normal and Labetolol stopped. Normal outcome.

4. **Age 17. Primigravid.** Booked at 12 weeks gestation. Booking blood pressure 120/70. From the Congo and very poor English. Uneventful pregnancy up to 38 weeks gestation. Presented with hypertension only and several visits to Day Care Unit. Admitted for observation and rest. Discharged home two days later. Readmitted at 38+6 weeks, elevated blood pressure with diastolic of 110. Trace of proteinuria. Twenty-four hour protein collection 0.35g. ET bloods normal. Induction of labour at 39+ weeks gestation. Spontaneous vaginal delivery of a male infant weighing 3.82 kilograms. Apgars 9 and 10. Control of blood pressure in the postnatal period difficult. Treated with Labetolol 300 milligrams tds and Adalat Retard 20 milligrams bd. Blood pressure settled well. However complained of ongoing headache. Suspected dural puncture and therefore treated with blood patch. On day 6 had suspected seizure. No seizure witnessed but patient drowsy and unresponsive on postnatal ward. Blood pressure 250/130 at the time. Treated with magnesium sulphate and Labetolol infusions. Transferred to the Mater Hospital ICU for further observation. CT scan of brain normal. Stabilised and transferred back to the Rotunda three days later. No further problems. Blood pressure control normal and discharged home on day 10. Normal recovery and normal outcome.

5. **Age 17. Primigravid.** Unbooked for antenatal care (concealed pregnancy). Presented with seizures at approximately 25 weeks gestation. Brought to Beaumont Casualty Department. Subsequently transferred to the Rotunda. Blood pressure on arrival 189/123. Stabilised on Labetolol infusion and magnesium sulphate infusion. Steroids given to promote fetal lung maturity. Managed in HDU to allow time for steroid effect. Ultrasound biometry consistent with 27 to 28 weeks gestation. Umbilical artery Doppler revealed absent end diastolic flow. Delivered by emergency caesarean section after steroids completed. Male infant weighing 1.12 kilograms. Apgars 9 and 10. Transferred to NICU. Difficult control of blood pressure postnatally. Discharged home well on day 8 on Labetolol. Follow-up in the Medical Clinic. Normal recovery and normal outcome at 6 weeks.

Transferred Out 5(6)

1. **Age 33.** Two previous full-term normal deliveries. No previous medical history of note. In-utero transfer from Sligo at 29 weeks gestation with suspected pre-eclampsia and associated cough and dyspneoa for two weeks. Orthopnoea and general flu like illness also. On Methyldopa for blood pressure. Twenty-four hour protein collection 2.2 g. Clinical and blood picture not typical of PET. Bloods revealed anaemia, thromocytosis and neutrophilia. Echo-cardiography revealed bilateral pleural effusions and peri-cardial effusions. Transferred to the Mater HDU and delivered by emergency caesarean section. Treated as severe infection with some evidence of pre-eclampsia in the background. CTPA not performed. Transferred back from the Mater on day 2. Treated with Labetolol in the postnatal period. Very good recovery and discharged home on day 6. Normal recovery and normal outcome.

2. **Age 36.** Three previous deliveries. Term SVD x 2. Preterm LSCS x 1. **Unbooked Rotunda.** Booked elsewhere. Complicated medical history with background of essential hypertension since her last pregnancy. Pre-eclampsia during that pregnancy and emergency LSCS at 36 weeks. Known Grave's disease and also admitted to own hospital at 23 weeks with infective exacerbation of asthma. Transferred to Mater ICU for ventilation. While in ICU, developed uncontrollably high blood pressure requiring poly pharmacy. Intrauterine death diagnosed at 24 weeks when ventilated. Extubated after one week but required re-intubation. Subsequent successful extubation and transferred to Rotunda for further management and IOL. Labour induced and spontaneous vaginal delivery of a stillborn female infant weighing 500g. Good recovery in the postnatal period and transferred back to Cavan for further care on day 3.

3. **Age 37.** Previous SVD of stillborn infant at 33 weeks gestation in 1989. Elective LSCS at 38 weeks in 2003 – healthy female infant. Booked at 14 weeks gestation. Antenatal care uneventful until 37 weeks gestation when admitted from DCU with hypertension only. Treated with Methyldopa. Blood pressure well controlled. Developed calf pain during stay in hospital. Calf ultrasound normal. Discharged home. Elective caesarean section at 39 weeks gestation. Uncomplicated. Female infant weighing 2.71 kilograms. Apgars 9 & 10. Developed significant pyrexia on day 2 postnatally. No obvious focus for infection. Treated with IV antibiotics. Pyrexia remained very difficult to control despite antibiotics. Full septic screen including lumbar puncture normal. Managed in HDU. Developed pleuritic chest pain on day 3. Suspected pulmonary embolus and therefore commenced on therapeutic dose of Innohep. Transferred to the Mater for further care and CTPA. CTPA revealed findings consistent with moderate ARDS. No obvious pulmonary embolus. Improved well and transferred back to the Rotunda four days later. Very good recovery and discharged home well on day 13. Working diagnosis of post-partum ARDS.

4. See No. 4 in section on *Maternal Transfusion > 5 units*
5. See No. 4 in section on *Eclampsia.*

6. **Age 18.** Previous spontaneous vaginal delivery at 33 weeks gestation. Booked in Mullingar Hospital. Background of asthma. Poor social circumstances. Referred to NMH at 25+ weeks with flank pain and uterine contractions. Known pyelonephritis and positive blood cultures for E.coli. Treated with atosiban, steroids and triple antibiotics. Diagnosis of acute pyelonephritis. Remained unwell with pyrexia. Twenty-four hours post admission developed significant dyspnoea and had low oxygen saturations. Clinical diagnosis of bilateral pneumonia and transferred to St.Vincents Hospital. Took her own discharge after six days and returned home. Re-admitted to Mullingar Hospital with severe respiratory distress. Intubated and ventilated and transferred to the Mater ICU with suspected septicaemia and possible pulmonary embolus. Episode of PV bleeding at 29 weeks. Delivered by emergency caesarean section in the Mater Hospital. Male infant weighing 1.44 kilograms. Apgars 4 at 1 and 3 at 5. Baby transferred to Rotunda NICU. Retro-placental clot noted at time of delivery. Mother developed adult respiratory distress syndrome. Ventilated for 38 days. Referred for ECMO (Extra Corporeal Membrane Oxygenation) to Sweden.

Remained gravely ill and required 50 days of ECMO. Recurrent problems with pulmonary haemorrhage and fungal infections. Patient returned for further 74 days to Mater ICU. With gradual improvement she was discharged to the High Dependency Unit. Slow resolution of the pulmonary infiltrates, but with return of renal function, nutritional support and intensive physiotherapy, the patient was well enough to be transferred back to the ward one month later. Her recovery and rehabilitation continued slowly and she was eventually discharged home directly from Mater Hospital when she was ten months post-partum.

Pulmonary Emboli - 3

1. **Age 31. Primigravid.** Booked at 11 weeks gestation. IVF dichorionic twin pregnancy. Booking weight 56 kilograms. Moderate cigarette smoker – 10/20 per day. Uneventful antenatal care until developed acute shortness of breath at 31 weeks gestation. CT angiography revealed multiple small pulmonary emboli. Treated with Heparin. Emergency caesarean section as first twin breech in labour. Warfarinised post-partum. Normal outcome for mother and both babies.

2. **Age 30.** Previous full term normal deliveries. **Booked elsewhere.** In-utero transferred at 27 weeks with substantial APH and PPROM. Managed expectantly initially. Subsequent placental abruption. Emergency caesarean section performed. Baby transferred to NICU. Significant dyspnoea 30 minutes after leaving recovery. Chest clear, subtle ECG changes noted. Angiography confirmed pulmonary embolus. Treated with Heparin. Good recovery.

3. **Age 39. Primigravid.** Booked at 14 weeks gestation. Non-smoker. Uneventful antenatal care. Forceps delivery at 41 weeks gestation. Female infant weighing 3.38 kilograms. Apgars 9 and 10. Discharged home well on day 3. Returned on day 5 with a significant dyspnoea. CT pulmonary angiography confirmed pulmonary embolus. Heparinised. Good recovery.

Peripartum Hysterectomy – 1

1. See No. 3 in section on *Maternal Transfusion > 5 units.*

Hypertension with Proteinuria

The Master

YEARS	2004	2005
Total number of cases	**212**	**231**
Booked	198	221
Unbooked	14	10
Incidence against delivery	3.2%	3.5%
Eclampsia %	1.4%	2.2%
Stillbirths	0	2
Neonatal Deaths	0	1
Multiple pregnancy	14	13

PARITY OF PATIENTS AT DELIVERY		
0	132	161
1	47	38
2	19	22
3	8	5
4 plus	6	5
Total	**212**	**231**

GESTATION OF PATIENTS AT DELIVERY		
< 28 weeks	3	2
28 - 29 weeks	1	6
30 - 31 weeks	6	8
32 - 33 weeks	5	7
34 - 35 weeks	9	18
36 weeks plus	188	190
Total	**212**	**231**

Induction of Labour

The Master

INDUCTIONS OVER 5 YEARS

Year	Primip	%	Multip	%	Total	%
2001	682	52%	640	48%	1322	20%
2002	642	52%	587	48%	1229	18%
2003	690	56%	539	44%	1229	18%
2004	611	48%	654	52%	1265	19%
2005	703	54%	591	46%	1294	19%

INDICATIONS FOR INDUCTIONS 2005

REASONS	TOTAL	%
Post Dates	546	42%
Prolonged SROM	160	12%
Reduced Fetal Movements	7	1%
Decreased Placental Function	3	0%
Diabetes	34	3%
Hypertension	143	11%
Heart Disease	1	0%
IUD	18	1%
Anomaly	3	0%
Antibodies*	6	0%
Diminished Liquor	57	4%
IUGR	21	2%
Large Baby	19	1%
Medical/Social	31	2%
Multiple Births	9	1%
Other	215	17%
Poor Biophysical score	11	1%
Poor Obstetric History	10	1%
Total	**1294**	**100%**

*Anti D detected or Anti E

Induction of Labour

The Master

ANALYSIS OF INDUCTION

YEARS	2004	2005
Total Number of Cases	1265	1294
Incidence against deliveries >500	19.2%	19.3%
No. of Caesarean Sections for Inductions	319	288
Stillbirths	24	18
Neonatal Deaths	2	0

METHOD OF INDUCTION	2004	2005
ARM	222	200
ARM + Syntocinon	277	201
Prostin + ARM + Syntocinon	159	193
Prostin + ARM	188	166
Prostin	257	336
Cytotec *	11	12
Prostin + Syntocinon	38	52
Syntocinon	113	134

* *Cytotec was only added to computer screens in 2004*

CAESAREAN SECTION

The Master

The caesarean section rate decreased by 1% by comparison to 2004. This is the second year in a row that the caesarean section rate for the hospital had reduced. The hospital continues to use the Robson ten group classification system for caesarean section. The ongoing use of this audit process allows us to critically evaluate the indications for caesarean section. Groups 1 to 4 are particularly important as the overall numbers in this group will make up between 70% and 80% of the obstetric population. It is encouraging to note that there were reductions in groups 1, 2 and 4 compared to 2004, and little or no difference in group 3. There were no differences of note also in groups 5, 6 and 9 by comparison to last year. As I have mentioned in previous reports the number of caesarean sections for breech presentation seems to have levelled out at the 90% to 95% rate. However the rate for multip breeches in group 7 increased from 94% to 97% this year. There has also been a slow and steady rise in the number of caesarean sections performed for multiple pregnancy and this year showed a 3% rise to 62% by comparison to 2004.

The elective and emergency caesarean section rates were broadly similar to last year with a 2% increase in the elective rate and a 2% reduction in the emergency rate compared to last year.

The hospital acknowledges the value of regular and rigorous audit of the caesarean section rate and this important process will continue into the future.

YEARS	2004	2005
Total number of cases	**1753**	**1715**
Incidence against total deliveries > 500g	26.2%	25.6%
Maternal Mortality	0	0
Stillbirths	5	4
Neonatal deaths	12	10
Primary C.S.	64.7%	62.0%
Repeat C.S.	35.3%	38.0%
Classical C.S	8	4
Tubal Ligation at C.S.	72	66
Peripartum Hysterectomy	7	1
Stillbirths prior to Caesarean Section	5	4

CAESAREAN SECTION ANALYSIS

All Deliveries for 2005	6695
All Caesarean Sections	1715
Section Rate	25.6%
Group 1 - Nullip Single Ceph Term Spont Lab	234/1841
Section Rate	12.7%
Group 2 - Nullip Single Ceph Term Induced	222/681
Section Rate	32.6%
Group 2a - Nullip Single Ceph Term CS Before Labour	**162**
Group 3 - Multip Single Ceph Term Spont Labour	42/1896
Section Rate	2.2%
Group 4 - Multip Single Ceph Term Induced	34/498
Section Rate	6.8%
Group 4a - Multip Single Ceph Term CS before Labour	**68**
Group 5 - Prev Section Single Ceph Term	562/878
Section Rate	64.0%
Group 6 - All Nullip Breeches	111/122
Section Rate	91%
Group 7 - All Multip Breeches	89/92
Section Rate	97%
Group 8 - All Multiple Pregnancies	69/111
Section Rate	62%
Group 9 - All Abnormal Lies	18/18
Section Rate	100%
Group 10 - All Preterm Single Ceph	104/328
Section Rate	32%
Elective Caesarean Section Total	**792 (46.2%)**
Emergency Caesarean Section Total	**923 (53.8%)**

INDICATION FOR PRIMARY SECTIONS

DELIVERY METHOD INDICATION	2004	2005
Fetal Distress {Antepartum & Intrapartum}	323	294
Failure to progress 1st stage	176	134
Failure to progress 2nd stage	53	33
Breech	157	174
Abruption/APH	18	17
P.E.T.	24	18
Transverse Lie/Oblique	21	13
Pyrexia	3	0
Placenta Praevia	24	17
Poor Obstetric History	9	8
Cord Prolapse/Presentation	7	6
Disproportion & Deep Transverse arrest	10	3
Failed Forceps/Ventouse	18	17
Face/Brow Presentation	12	1
Multiple Birth	19	5
Failed Induction	36	35
Prematurity	6	6
Hypertension	22	31
Emergency CS Scheduled for Elective CS	5	7
I.U.G.R.	14	24
Maternal Request	5	14
Medical Disorders	36	20
Poor Biophysical Profile	10	12
Other	117	164
Recurring indications	0	3
Rhesus	0	1
Malpresentation in Labour	0	16
Total	**1135**	**1063**

INDICATION FOR REPEAT SECTIONS

DELIVERY METHOD INDICATION	2004	2005
Failure to progress 1st stage	40	35
Failure to progress 2nd stage	5	7
Fetal distress	44	45
Disproportion(Malpresentation in Labour)	6	2
Breech	16	21
Hypertension	5	9
Placenta praevia	2	7
P.E.T.	4	8
Poor obstetric history	4	3
Previous LSCS	417	415
Previous classical CS	3	5
Multiple birth	2	2
Abruption / APH	4	8
Failed induction	9	6
Antepartum fetal distress	1	2
Emergency CS scheduled for elective CS	2	5
Failed forceps/ventouse	0	0
I.U.G.R.	2	2
Medical disorders	12	8
Transverse lie / Oblique lie	12	6
Other	28	50
Total	**618**	**646**

Outpatient Activity Data

CLINIC	Sessions	New Attendances	Return Attendances	Total
Antenatal & Postnatal	1836	7795	19462	27257
Gynaecology	908	3249	5630	8879
Paediatrics	1562	6638	4716	11354
Endocrinology	51	369	1700	2069
Nephrology	49	216	940	1156
Others	331	504	571	1075
TOTAL	**4737**	**18771**	**33019**	**51790**

3

Departmental Reports

DEPARTMENT OF GYNAECOLOGY

DR. R. GLEESON (CLINICAL DIRECTOR)

The gynaecological service continues to be a very busy part of the hospital's work. It is a credit to all staff involved that waiting times for appointments and surgery continue to be low. The surgical throughput continues to be high despite the ever increasing encroachment of Caesarean sections on elective lists.

In common with most units the number of gynaecological major operations has fallen in recent years. In particular the numbers of elective hysterectomies has fallen significantly due to increasing numbers of balloon and hysteroscopic endometrial ablations and use of the Mirena. Laparoscopic procedures are becoming more common as expertise improves.

THEATRE OBSTETRIC WORKLOAD

Majors	**2004**	**2005**
Peripartum Hysterectomy	7	1
Classical Caesarean Section	8	4
Ectopic	64	40
Lower Segment Caesarean	1738	1711
TOTALS	**1817**	**1755**

Minors	**2004**	**2005**
Delivery Forceps	13	24
Delivery Vacuum	38	46
Episiotomy Resuturing	6	24
Episiotomy Repair	26	23
Evacuation of Uterus (AB)	441	547
Evacuation of Uterus (PPH)	11	13
Placenta Manual Removal	75	76
Insert Shirodkar suture	4	4
Remove Shirodkar suture	3	1
Suturing 1st/2nd degree Tear	29	29
Suturing 3rd degree Tear	38	43
Suturing 4th degree Tear	5	1
Suturing Vaginal Wall Tear	13	9
Miscellaneous	39	31
TOTAL	**741**	**871**

GRAND TOTAL		
Obstetrics (Majors & Minors)	**2548**	**2626**

GYNAECOLOGICAL REPORT

Operation Categories	2001	2002	2003	2004	2005
Obstetrical Majors	1761	1811	1956	1817	1755
Obstetrical Minors	1015	1015	970	741	871
Vaginal Surgery	334	293	304	468	510
Abdominal operations of the uterus	158	155	182	187	167
Surgery on the tubes & ovaries	402	446	584	425	287
Other procedures	1425	1960	2028	2258	1869

GYNAECOLOGICAL THEATRE WORKLOAD

VAGINAL SURGERY	2004	2005
Vaginal hysterectomy	26	25
Manchester repair	5	4
Pelvic Floor Repair	56	50
Vaginal Hysterectomy & AP Repair	57	53
Removal of IUCD	55	68
Insertion of IUCD	249	289
Sacrospinous Colpopexy		10
Excision Vulval/Labial Cysts	20	11
Total	**468**	**510**

ABDOMINAL OPERATIONS OF THE UTERUS	2004	2005
Total Abdominal Hysterectomy	58	48
Myomectomy	33	18
TAH & Bilateral Salpingo-oopherectomy	76	80
Subtotal Hysterectomy		5
Subtotal Hysterectomy + BSO		2
Other	20	14
Total	**187**	**167**

SURGERY ON THE TUBES & OVARIES	2004	2005
Tubal Surgery	69	51
Laparoscopic Sterilization	73	22
Tubal Ligation at Caesarean Section	72	66
Salpingectomy	3	11
Ovarian Cystectomy	45	31
Oopherectomy	16	11
Ovarian Biopsy	86	57
Salpingo-oopherectomy	13	9
Aspiration Ovarian Cyst	48	29
TOTAL	**425**	**287**

OTHER PROCEDURES	2004	2005
Laparascopy	205	163
Laparascopy and Dye	714	499
Hysteroscopy + Curettage	644	649
EUA	29	32
Cystoscopy	11	9
Laparotomy (excluding Ectopics)	40	33
Excision Bartholins Cyst	29	31
Fentons	4	1
Diathermy Vulval Warts	3	2
Resection of fibroids	3	20
Endometrial Ablation	18	63
Laparoscopic division of Adhesions/Diathermy	30	149
Polypectomy	54	44
Cx Smear		116
LLETZ	7	8
Other Gynae Surgery	446	35
TOTAL	**2258**	**1869**

GRAND TOTAL		
Gynae (Majors & Minors)	**3338**	**2833**

DEPARTMENT OF PAEDIATRICS

DR. D. CORCORAN (CLINICAL DIRECTOR),
PROFESSOR T. A. CLARKE, PROFESSOR T. G. MATTHEWS,
DR. M. D. KING, DR. A. CHONG, DR. S. KEANE.

NEONATAL MORTALITY (Table2)

Congenital Malformations

There were 6 deaths due to congenital malformations in the first month of life, of which 3 were trisomies, and two infants had Potters sequence due to renal anomalies.

Normally formed Infants birth weight > 1500 grams.

One infant who had a low cord pH of 6.9 died of fulminant necrotizing enterocolitis and one infant died of sepsis and acute respiratory failure. The remaining 4 deaths were in near term infants and were attributable to perinatal asphyxia.

Infants with a birth weight of 1500 grams or less (Table 3).

Twelve normally formed infants with a birth weight of < 1500 grams died in the first 28 days of life. 6 of these were of less than 24 weeks gestation.

Three of the infants who died had prolonged premature rupture of the membranes over 3 weeks duration. PPROM is associated with pulmonary hypoplasia and with sepsis and pneumonia. The use of high frequency oscillation ventilation and surfactant may ameliorate the pulmonary hypoplasia associated with this condition, but many of these infants are infected at the time of delivery. A further infant born at 27 weeks gestation died due to severe pulmonary interstitial emphysema.

Two further infants died at 47 days and 40 days respectively. One infant, with a birth weight of 730 grams at 25 weeks gestation, who was in room air at age 2 hours and, had a right grade III IVH, developed Staphylococcal epidermis sepsis and NEC at age 16 days. He developed a further episode of NEC and clinical sepsis at age 32 days, with perforation of the abdomen at age 40 days. An infant who weighed 830 grams at birth at 24 weeks + 4 days, transferred from a Regional Hospital, developed pulmonary interstitial emphysema, chronic lung disease and bilateral grade IV IVH's; she developed overwhelming sepsis at age 30 days, with suspected NEC and multi-organ failure and renal failure at age 37 days and died at age 47 days. NEC continues to cause several deaths a year. Successful preventive strategy is not yet available, although there have been some promising reports on probiotic use recently.

The decline in autopsy rate remains a major concern in determining the cause of deaths and makes it more difficult to audit care with a view to improving management.

The Neonatal Information System remains unsatisfactory. Up to date survival and disability data should be readily available to enable us to provide parents with the information they wish to have, particularly with regard to infants being born at extremes of viability.

NEONATAL ENCEPHALOPATHY AND PERINATAL ASPHYXIA (Table 4)

There were 4 deaths of near term infants attributable to perinatal asphyxia and one further infant who had severe hypoxic ischaemic encephalopathy who is progressing well at 1 year of age. A further 4 infants had moderate Sarnat grade 2 encephalopathy and these infants were progressing well when last reviewed. Overall therefore, 9 infants either died shortly after delivery or showed evidence of moderate or severe neonatal encephalopathy, which is a small reduction since 2004.

VERMONT OXFORD NETWORK (Table 5)

The Rotunda Neonatal Unit has participated in the Vermont Oxford Neonatal Network since 1996. The VON Network has a database on all infants less than 1500 grams birth weight, and now has 400 participating NICU's. These include 8 regional neonatal units in Ireland allowing for national as well as international comparisons. The Rotunda compares well to the Network averages in terms of the use of antenatal steroids, surfactant, fungal infection, and the rate of chronic lung disease. We do less well in the rates of severe intraventricular haemorrhage and the rates of Coagulase negative staphylococcal infection. The former is a problem shared by other Irish units and the latter problem is related to inadequate nursing ratios.

COMMENT

The successful outcome of premature and other ill infants depends on the hard work and experience of the nursing and medical staff caring for them. It is essential that the sickest infants receiving intensive care should have one to one nursing. "Because of the complexities of a baby receiving intensive care, there should be one to one nursing. Occasionally, when a baby is particularly unstable, for example with severe pulmonary hypertension, two nurses will be required" British Association of Perinatal Medicine. (Standards for Hospitals Providing Neonatal Intensive Care, December 2001). Neonatal Units are in a difficult position, as all inborn infants have to be cared for and patients are still admitted to Neonatal Units when there is neither the physical or human resources to care for them. General and children's hospitals can refuse admissions when nursing numbers are inadequate. Inadequate staff numbers are associated with suboptimal care, an increased risk of clinical incidents, and an increased risk of infection. The expansion of the population on the Eastern seaboard and the difficulties with staff recruitment and retention has put all the neonatal units under great strain and it is increasingly difficult to transfer expectant mothers out when the neonatal unit is full.

Antenatal fetal assessment is now the norm, meaning that many high-risk pregnancies with fetal anomalies or growth-impaired fetuses needing to be delivered early are being identified and referred to the Maternity Units. This has meant that the NICU is becoming busy with a more complex case mix than ever before, not only requiring extra trained staff, but increasing the pressure on basic hygienic routines and encouraging the selection of antibiotics for different organisms. Much credit must go to all the staff who have coped with periods of intensively busy activity and also to the Infection Control Team for their constant reminding on hand washing and other hygienic measures.

During 2005 the unit underwent the accreditation process. A dynamic multidisciplinary team was formed and met weekly for the first 9 months of the year. The result of this hard work was that the unit achieved accreditation and the surveyors commented that the unit came up to best international standards. This was a great achievement for all the staff in the NICU, and a great credit to all concerned.

The neonatal nurse practitioners continue to provide valuable clinical expertise and continue to contribute hugely to the overall success of the Unit. The work of all the other staff, nursing, non-consultant medical, paramedical and administrative staff is very greatly appreciated, as well as the assistance of our consultant colleagues, Dr Mary King, Dr Susan Keane and Mr. Frank McManus.

ADMISSIONS TO THE NICU 2005 (Table 1)

Total Number of Admissions	**919**
Transfers from outside units	33
Babies < 2 kg birthweight	198
Readmissions	59

DEATHS VERY LOW BIRTH WEIGHT INFANTS (Table 2)

Birth Wt normally formed <1500g	Sex	Gestation	Delivery	Apgars	Age	Principal Cause of Death
690	F	29	SVD	4,9	4 days	Severe apnoea, absent corpus callosum, Poor myocardial function. IUGR.
1120	F	28	EMCS	4,7	8 hours	Chorioanmionitis. PROM,Pulmonary Hypoplasia
1190	F	27	EMCS	7,8	21 hours	PROM,Pulmonary Hypoplasia
1260	F	27	EMCS	8,9	2 days	Pulmonary Institial Emphysema
1060	F	26	ELCS	5,6	25 hours	PROM,Pulmonary Hypoplasia, Grade 3 IVH
1060	F	26	ELCS	5,6	25 hours	PROM,Pulmonary Hypoplasia, Grade 3 IVH
490	M	24	EMCS	6,9	2 days	Extreme prematurity
540	F	23	SVD	3,4	4 min	Extreme prematurity
560	M	22	SVD	N/A	1 hour	Extreme prematurity
480	F	22	SVD	N/A	5 min	Extreme prematurity
500	M	22		N/A	48 min	Extreme prematurity
540	F	22	SVD	7,8	7 min	Extreme prematurity
425	M	21	SVD	2,0	2 min	Extreme prematurity

Birth Wt normally formed >1500g	Sex	Gestation	Delivery	Apgars	Age	Principal Cause of Death
1760	F	34	SVD	2,4	5 days	Chorioamnionitis, PROM, Pulmonary Hypoplasia, sepsis
3060	F	41	SVD	2,3	1 day	Perinatal Asphyxia
1940	M	32	EMCS	5,9	9 days	Fulminant Necrotising Enterocolitis, cord pH 6.9
4000	M	38	Forceps	2,4	12 days	Perinatal Asphyxia
2520	M	38	EMCS	1,1	40 min	Perinatal Asphyxia
2850	F	41	EMCS	1,0	20 min	Perinatal Asphyxia

INFANTS WITH MAJOR CONGENITAL MALFORMATIONS

1140	F	33	SVD	2,3	3 hours	Trisomy 18
1800	F	34	SVD	3,6	2 days	Trisomy 18
2920	F	38	EMCS	4,9	6 hours	Trisomy 13
2720	M	40	EL LSCS	1,1	50 min	Bilateral Multicystic Kidneys
2980	M	36	ELCS		38 min	Thanatophoric Dwarfism
1790	M	34	EMCS	6,9	6 hours	Pulmonary Hypoplasia, Cloacal dysgenesis, Potters Sequence

MORTALITY BY GESTATION (Table 3)

Outcome of infant 501-1500 gm by gestation	'01	'02	'03	'04	'05	Observed mortality rate rate over 5 years (includes congenital malformations)
<22 weeks				1	0	1
RIP				1	0	1
22 weeks		2	3	1	0	6
RIP		2	3	1	0	100%
23 weeks	4	1	1	3	0	9
RIP	3	1	1	1	0	67%
24 weeks	3	7	9	6	1	26
RIP	2	2	5	4	0	50%
25 weeks	10	6	9	6	12	43
RIP	2	3	2	3	1	26%
26 weeks	9	3	6	14	2	34
RIP	2	1	1	2	0	18%
27 weeks	13	5	8	12	6	44
RIP	1	1	3	2	1	18%
28 weeks	16	10	6	11	18	61
RIP	3	1	1	0	3	13%
29 weeks	19	16	18	13	13	79
RIP	0	1	1	0	1	4%
30 weeks	10	10	10	6	12	48
RIP	1	0	3	1	2	15%
31 weeks	9	10	11	8	11	49
RIP	2	2	0	0	0	8%
32 weeks	8	8	7	5	4	32
RIP	0	0	0	0	1	3%
> 32 weeks	11	15	9	6	9	50
Total number < 1500 GM DEATHS	112	93	98	98	94	INCL DEL RM
Total number of deaths	16	14	*18	*12	*9	
			*Does not include 5 babies < 23 weeks gest	*Does not include delivery room deaths	*Does not include delivery room deaths	
Major congenital malformations	5	4	7	1	3	
observed mortality rate (including congenital malformations)	25%	15%	18%	12%	10%	
observed mortality rate excluding congenital malformations	19%	11%	11%	11%	7%	

NEONATAL ENCEPHALOPATHY (Table 4)

BW	GESTATION, completed weeks	MODE OF DELIVERY	1 min Apgar	5 min Apgar	cord pH Arterial	Sarnat Grade	Outcome
4.4	41	Ventouse	2	7	7.20	2	Normal at 4 months
3.5	41	EMCS	3	5	6.90	2	Normal at 4 months, emigrated
3.2	38	Ventouse	4	6	7.06	2	Normal at 1 year
3.7	40	EMCS	3	9	7.16	2	Normal at 9 months, attending CRC
3.2	37	EMCS	6	8	6.74	3	no definite signs of CP at 1 year. Attending CRC
4.0	38	Forceps	2	4	7.05	3	RIP Day 13
3.1	41	SVD	2	3	6.70	3	RIP Day 2

VERMONT OXFORD NETWORK (Table 5)

401-1500g % of complication rates	Rotunda Number	%	Vermont Oxford Network Number	%
	n= 94		n= 42937	
Inborn	90	96%	38399	84%
Male	45	48%	23343	51%
Caesarean Section	64	68%	31303	68%
Antenatal Steroids (partial course or complete course)	76	81%	32929	72%
RDS	63	72%	31892	73%
Pneumothorax	2	2%	2058	5%
Surfactant	46	49%	13982	31%
Nasal CPAP	60	69%	27548	63%
Conventional Ventilation	59	68%	29265	67%
High Frequency Ventilation	15	17%	10102	23%
Chronic Lung Disease (at 36 wks)	11	20%	9544	36%
Steroids for CLD	4	5%	3632	8%
Home Oxygen	2	4%	4569	14%
PDA	27	31%	16534	38%
Indomethacin	20	23%	14353	33%
PDA ligation	8	9%	3855	9%
NEC	8	9%	2914	7%
GI perforation	2	2%	984	2%
Any Grade of IVH	23	29%	10698	26%
Severe IVH (Grade 3-4)	13	16%	3820	9%
Cystic PVL	2	2	1297	3%
Retinopathy of Prematurity	20	29%	11856	40%
Severe ROP (Stage 3 or more)	5	7%	2798	9%
Early Bacterial Infection	1	1%	953	2%
Coagulase negative Staphylococcus	14	18%	5304	13%
Late bacterial infection	7	9%	4942	12%
Fungal Infection	0	0%	975	2%
Observed Mortality Rate	**13**	**14%**	**7480**	**16%**

2005	Standardised morbidity rate for severe IVH (95% C.I.) 1.48 (0.99-1.96)
2003-2205	Standardised morbidity rate for severe IVH (95% C.I.) 1.74 (1.39-2.09)
2005	Standardised mortality rate (95% C.I.) 1.05 (0.72-1.39)
2003-2005	Standardised mortality rate (95% C.I.) 1.19 (0.93-1.45)

DEPARTMENT OF ANAESTHESIA

DR. J. GARDINER, DR. W. BLUNNIE, DR. M. BOWEN, DR. E. CARTON, DR. J. LOUGHREY

DELIVERY SUITE ACTIVITY

DELIVERIES UNDER EPIDURAL (Number & Epidural Rate (%) for Parturients)

	2004	%	2005	%
Primiparous	1855	70.8	1916	70
Multiparous	1286	40.2	1208	40
TOTAL	3141	52	3124	55

A wide range of analgesic options are available, including Nitrous Oxide inhalation, Opioids and non-pharmacologic techniques such as relaxation and TENS (Transcutaneous Electrical Neuro Stimulation). However, the maternal demand for Epidural Analgesia in labour remains strong. All parturients now receive Patient-Controlled Epidural Analgesia (PCEA). Approximately 10% of the epidurals in multiparous women are Combined Spinal-Epidurals.

Mode of Delivery for Parturients who Select Epidural Analgesia

PRIMIPAROUS

Mode of Delivery	2004	%	2005	%
Normal	746	40.2	830	43.3
Forceps	157	8.5	144	7.5
Vacuum	525	28.3	567	29.6
L.S.C.S	424	22.9	374	19.5
Breech	3	0.2	1	0.1
TOTAL	**1855**	**100**	**1916**	**100**

MULTIPAROUS

Mode of Delivery	Figure	%	Figure	%
Normal	**890**	**69.2**	**922**	**76.3**
Forceps	**28**	**2.2**	**24**	**2.0**
Vacuum	**199**	**15.5**	**138**	**11.4**
L.S.C.S	**165**	**12.8**	**122**	**10.1**
Breech	**4**	**0.3**	**2**	**0.2**
Total	**1286**	**100%**	**1208**	**100%**

The Obstetric outcomes of women who select epidural analgesia are compatible with low dose techniques employed with over 40% of Primiparous women and over 75% of Multiparous women experiencing normal unassisted vaginal delivery.

CAESAREAN SECTION - Anaesthesia Technique 2005

Mode of Anaesthesia	Elective	%	Emergency	%
Spinal	764	96.1	391	42.5
G.A.	21	2.6	122	13.2
Epidural	5	0.6	390	42.4
CSE	5	0.6	17	1.8
	795	100	920	100

The Regional Anaesthesia rates for Caesarean Section delivery are 86.8% and 97.4% respectively for non-elective and elective cases. We utilise low dose Neuraxial Opioid as part of a multi-modal technique for post-Caesarean Analgesia.

POST DURAL-PUNCTURE HEADACHE (PDPH)

In 2005, 3,143 Epidurals 1,155 Spinal Anaesthetics and in excess 135 Combined Spinal-Epidurals were performed. There were 18 Epidural Blood Patches (EBP) performed following Epidural administration (0.55%). Seven women who had dural puncture with an epidural needle did not require EBP. Four additional Blood Patches were performed for the treatment of PDPH following Spinal Anaesthesia.

ANAESTHESIA FOR GYNAECOLOGICAL PROCEDURES

The commitment of our pool of only six NCHDs in Anaesthesia was remarkable given the Obstetric workload. In addition the Department provides anaesthesia for over 3,000 Gynaecological procedures per year at the Rotunda Hospital and for 1,000 women undergoing procedures related to IVF treatments at HARI Unit.

ANAESTHESIA OUTPATIENT CLINIC

The clinic was held on 36 occasions with 201 attendances. Dr. Mary Bowen continues to co-ordinate anaesthesia assessment services for the Department which has expanded again since 2004. An increasing number of morbidly obese pregnant patients attended this year. Most patients who attend the Thrombophilia Clinic are also referred to the Anaesthetic Assessment Clinic. We continue to see a large percentage of patients with spine pathology and cardiac disease. A specialised assessment service for women with Congenital Cardiac Disease is run in conjunction with the Mater University Hospital.

HIGH DEPENDENCY UNIT

DR MARY BOWEN

The High Dependency Unit had 121 admissions in 2005.
There were 34 cases of PET of which there were 5 cases of Eclampsia and 5 HELLP.
In total there were 51 cases of Peripartum Haemorrhage.
There were 3 cases of Pulmonary Embolism post Caesarean Section.

Suspected D.V.T. Post Caesarean Section	1
Renal Transplant Post Caesarean Section.	1
Acute Appendicitis at 26/40 weeks pregnancy.	1
Sickle Cell Positive with Significant Post Partum Haemorrhage.	1
Severe Rheumatoid Arthritis with a Secondary Haematoma Post Caesarean Section.	1

Severe Maternal Morbidity Transfusions > 5 units	Primiparous	Multiparous	Total
	5	*8	13

**One multiparous patient post vaginal delivery required hysterectomy. She was Para 4 and developed severe post partum haemorrhage.*

CONGENITAL HEART DISEASE:

There were two patients with Congenital Heart Disease:

1. This patient had previous Ross Procedure. She developed Myocardial Infarction in 2001. Endocarditis and Aortic Valve Replacement in 2001. Corrective surgery for Vertebral Artery to Jugular Vein Fistula was required in 2002. She was delivered by Elective Caesarean Section with Combined Spinal Epidural.

2. This patient had previously had a Fontan Procedure. She was delivered by Elective Caesarean Section with Combined Spinal Epidural.

GYNAECOLOGICAL ADMISSIONS

Vaginal Hysterectomy with Intra-operative Haemorrhage	3
Abdominal Hysterectomy with Intra-operative Haemorrhage	2
Atrial Fibrillation developed Post Abdominal Hysterectomy	1
Suspected Pulmonary Embolism post Laparoscopy. History of recent air travel. Pulmonary Embolism excluded.	1

INVASIVE MONITORING:

Central Venous Cannulation:	6 patients.
Arterial Monitoring:	8 patients.

TRANSFERS TO MATER UNIVERSITY HOSPITAL

There were 7 patients transferred to the Mater University Hospital in 2005.

OBSTETRICAL PATIENTS:

Five Obstetrical patients were transferred to the Mater Hospital.

1. Following Emergency Caesarean Section this patient had a blood loss of 16 Litres. She had a transfusion of 22 units of RBCs, 11 Octaplas, 2 Pooled Platelets, 10 Units Cryoprecipitate. She was ventilated overnight.

2. On the third day post caesarean section this patient developed Hypoxia and Adult Respiratory Distress Syndrome. The patient was not ventilated.

3. This patient developed a Chest Infection post Caesarean Section. The patient did not require ventilation.

4. Patient was transferred from Cavan to Mater Hospital to Rotunda Hospital. She was twenty-nine weeks pregnant with Pneumonia, Asthma, Conn's Syndrome, Hypertension and Hyperthyroidism. Patient was ventilated in ITU for four days. Patient had an Intrauterine Death.

5. Six days post vaginal delivery developed Eclamptic Seizure. CT Scan was normal.

**One patient was transferred directly from Mullingar General Hospital to the Mater University Hospital. Severe HELLP Syndrome. Emergency Caesarean Section in Mater Hospital. Developed Adult Respiratory Distress Syndrome. Ventilated for thirty-eight days. Referred for ECMO (Extra Corporeal Membrane Oxygenation) to Sweden. Patient returned for further seventy-four days to Mater ITU. Discharged home directly from Mater Hospital.*

GYNAECOLOGICAL TRANSFERS TO THE MATER HOSPITAL:

There were two Gynaecological transfers to Mater Hospital:

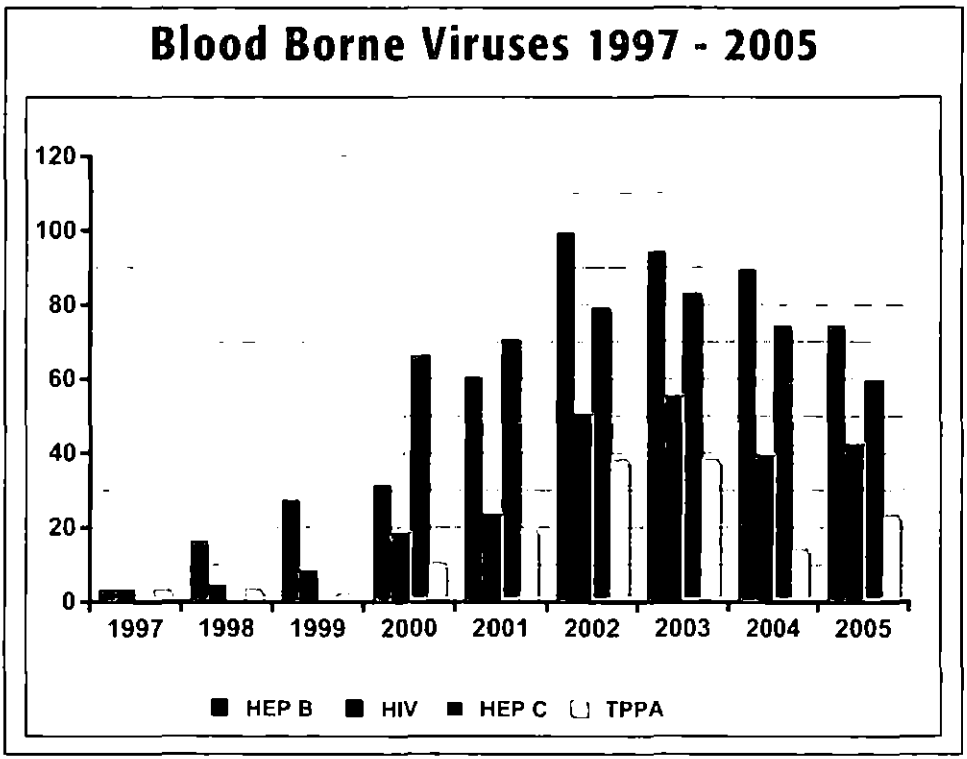
Bilateral Bronchopneumonia post Uterine Balloon Therapy.
Major haemorrhage post Abdominal Hysterectomy.

Dove Clinic

DR S COULTER-SMITH, DR J LAMBERT. DR V. MOLELEWKA. CMS M BRENNAN. CMS J LEE. CMS M BECKETT. DR W FERGUSSON. MS S DEVITT. PROF M CAFFERKEY.

The Dove Clinic had another busy year in 2005. the patterns of disease presentation changing with the fluctuation in patient demographics (Table 1). The numbers of patients seen has levelled out.

Table 1



The clinic links in with the Hepatology service from the Mater, and the adult and paediatric infectious disease teams from our sister hospitals with whom we hold monthly clinical update sessions continue to work well.

The arrival of Dr Jack Lambert, our new ID adult Physician has been a big success allowing all aspects of Adult ID care to be provided on site making the clinic more efficient and patient friendly

In addition to the infectious disease patients, we also see women who are presently using methadone, and those who have in the past or still use non prescription drugs. In 2005, 86 women on methadone treatment programmes delivered at the Rotunda. The number is unchanged since last year.

There was 1 death of an African woman who booked for antenatal care at the Rotunda in 2005 she was known HIV positive from 2002 and had attended the adult ID service in Beaumont Hospital. She had a preterm delivery at 22 weeks gestation, the fetus weighed 550g delivered in Clonmel. The patient herself died 3 months later following a HIV/AIDS related illness. She had Salmonella sepsis and Hepatitis secondary to her HAART medication.

The success of the clinic depends on the dedication and hard work of the midwives who co ordinate the care of these high risk pregnancies. To date all babies born last year to women with HIV have negative follow up.

RADIOLOGY/ PAEDIATRIC ULTRASOUND

PROFESSOR JAMES MC NULTY MD.FRCR(ENG)
DR. STEPHANIE RYAN FFR RCSI

RADIOLOGY

Professor James McNulty

The Radiology Department continued to be very busy during 2005. Much work involved the service to the Neonatal Intensive Care Unit where 24 hour cover is provided every day of the year. This work is very labour intensive and is often carried out during unsociable hours. Premature babies have at least one chest x-ray and some could have multiple examinations for diagnosis and management of neonatal problems.

During the 10 months of 1st January to 1st November 2005, the number of Hysterosalpingogram examinations increased by 25% in comparison with 2004. On November 6th, departmental preparation began for the installation of new digital imaging equipment and a computerised radiography system. Routine radiographs were still carried out in a room adjoining the department.

During the year increasing numbers of patients for routine x-rays came from family doctors and this is encouraged. There are no waiting lists for routine x-ray examinations in the department at the Rotunda Hospital, other than pelvic examinations in which the 10 day rule has to be observed.

In January 2005 Ms. Meave Mc Guckian BSC joined the department as a full time radiographer. Mrs. Sarah Johnson BSC came to the department as a permanent part-time radiographer in September 2005.

PAEDIATRIC ULTRASOUND

Dr. Stephanie Ryan

Over 600 paediatric ultrasound examinations were performed on babies in the Rotunda hospital in 2005. Most of these examinations were cranial ultrasound examinations done in the Neonatal Intensive care unit on babies of less than 32 weeks gestation at birth. Renal and abdominal ultrasound examinations are also frequently performed including many with Doppler examination of blood flow. Other studies including ultrasound scans of the scrotum and spine were also performed. There was a growth this year in the number of hip ultrasound examinations performed with the appointment of Dr Hilary Lane to the orthopaedic team. The hospital is progressing towards adoption of ultrasound of the hip in the screening of babies at risk for developmental dysplasia of the hip. Dr Ryan continues to provide a dedicated extra ultrasound list at the Children's Hospital for Rotunda outpatient babies. This has become much busier with up to ten hip ultrasounds added to the already busy one morning per week.

The further strengthening of the link with the MRI unit at the Children's Hospital, Temple Street, which has state of the art neonatal monitoring equipment, allows MRI scanning of neonates from the Rotunda whether these are intubated and ventilated or not. This is particularly valuable in the evaluation of the newborn with neonatal encephalopathy and adds very useful additional information to the bedside ultrasound examination. MRI scanning was also used for the evaluation of babies with hydrocephalus and those with brain and spinal malformations. Information on neonatal imaging has been an important part of the constant feedback to the antenatal fetal diagnosis team.

Dr. Ryan is actively involved in training at several levels. Radiology SpRs from the RCSI training Programme spend two months at a time training in paediatric radiology at the Children's University Hospital at Temple Street. These SpRs are trained in neonatal imaging at the Rotunda Hospital at Monday morning sessions. Two post-fellowships radiology SPRs trained for six months each at the Children's University Hospital in 2005 and also received some training in the Rotunda Hospital. Dr. Ryan gave several lectures on paediatric radiology to paediatric registrars and SHOs as well as a lecture on neonatal neuroimaging to the Postgraduate Neonatal Nursing course.

Dr. Ryan was invited to speak on Spinal Ultrasound and its role in the MRI era at the Royal College of Radiologists' Annual Scientific Meeting, London, England. Sept 2005. She spoke on Imaging in Paediatric Swallowing Disorders at the European Society of Paediatric Radiology Postgraduate Course in May 2005 and also gave lectures on paediatric MRI at joint Irish/UK meetings of MR useres and of opthalmologists.

Dr. Ryan, with several radiology and paediatric registrars, presented many papers at Irish and International paediatric and radiological meetings this year on a variety of topics including the role of MRI in the early evaluation of neonatal hypoxic ischaemic encephalopathy, the role of MRI in evaluation of the premature infant, disorders of neuronal migration and sulcation in children and the management of meconium ileus in the newborn. These studies were all well received and generated much interest in work done in this hospital.

BIBLIOGRAPHY 2005

PUBLICATIONS

1. Kavanagh EC, Ryan S, Awan A, McCourbrey S, O'Connor R, Donoghue V. **Can MRI replace DMSA in the detection of renal parenchymal defects in children with urinary tract infections?** Pediatr Radiol. 2005 35:275-281
[Finalist in nephrology section of the Irish Research Awards 2005]

INVITED LECTURES

1. **Spinal Ultrasound – its role in the MRI era**. Royal College of Radiologist Clinical Radiology Annual Scientific Meeting, London, England. Sept 2005

2. **Paediatric MRI – Children are Different** Joint MRRA UK and Irish MR Users meeting March 05

3. **Imaging in Paediatric Swallowing Disorders.** European Society of Paediatric Radiology Postgraduate Course, Dublin. May 2005

4. **MRI in the Paediatric Ophthalmology Patient.** 10th International Paediatric Ophthalmology meeting, Dublin. 23 Sept 05

PRESENTATIONS

1. **Atypical presentation of ataxia-oculomotor apraxia type I A** Shahwan, A M R Taylor, S Ryan, T Nestor, M D King; British Paediatric Neurology Association Annual Meeting Jan 2005.

2. **Non-Operative Management Of Uncomplicated Meconium Ileus With Gastrograffin Enema- factors that contribute to success.** Khan NA, D Rea, R Hayes, V Donoghue, Puri P, Ryan S. European Society of Paediatric Radiology Annual Meeting, Dublin. June 2005

3. **Abnormal corpus callosum in the early MR evaluation of neonatal hypoxic ischaemic encephalopathy(HIE) - frequency and suggested pathogenesis.** S.Ford, S.Ryan, R.O'Connor, C. Sadlear, V.Donoghue. Annual Scientific Meeting, Faculty of Radiologists, RCSI, Dublin Oct 04 and European Society of Paediatric Radiology Annual Meeting, Dublin. June 2005

4. **Can neonatal MRI in babies with neonatal encephalopathy predict neurological outcome?**
O'Brien S, Twomey A, Murphy J, Clarke T, Ryan S, Donoghue V. European Society of Paediatric Radiology Annual Meeting, Dublin. June 2005

5. **Prematurity-related White Matter Injury: Neonatal Cranial Ultrasound and MRI of Brain at term compared to MRI at 2 years of age.** Twomey EL, Dolan N, Twomey A, Ryan S, Donoghue VB. European Society of Paediatric Radiology Annual Meeting, Dublin. June 2005

DEPARTMENT OF MIDWIFERY/NURSING

MISS P. TREANOR	**DIRECTOR OF MIDWIFERY/ NURSING**
Ms. K. Ruddy	Assistant Director of Midwifery and Nursing with responsibility for Delivery Suite / Theatre/ Gynae / Prenatal / Admission Room / Parentcraft Department / Lactation / F.A.U. / D.C.U. / Ultrasound / Bereavement Support.
Ms. P. Williamson	Assistant Director of Midwifery and Nursing with responsibility for N.I.C.U. / Paediatric Services / O.P.D. / Postnatal / Mental Health / C.S.S.D.
Ms. M. Philbin	Assistant Director of Midwifery/Nursing with responsibility for Continuing Post-Registration Education / Maternity Care Assistants.
Ms. A. O'Byrne	Acting Practice Development Co-ordinator
Ms. D. Daly	Principal Midwife Teacher
Ms. M. Gannon	Night Superintendent
Ms. G. Birrane	Night Superintendent
Ms B. Beirne-Moore	CMM3 Out of hours

OTHER GRADES IN POST AT 31ST DECEMBER 2005

POST	WTE	Persons
Midwife Teachers	5.62	7
CMM 3	5	5
CMM 2	28.69	38
CMM1	35.27	43
CMS	13.5	15
Skills Facilitator	1	1
Staff Midwives	73.34	95
Staff Nurses	60.33	61
Student Midwives	61	61
Maternity Care Assistants	26.48	28

APPOINTMENTS

Midwives and Nurses	Midwifery Students
44.55 (47)	36
TOTAL: 80.55 (83)	

RESIGNATIONS/ RETIREMENTS

Midwives and Nurses	Midwifery Students
38.62 (40)	23
TOTAL: 61.62 (63)	

INTRODUCTION

The Midwifery and Nursing Departments continued to provide excellent care to women, babies and their families. Opportunities to gain greater knowledge, skills and IHSAB and BFHI quality initiatives, enhancing patient care, were embraced by the staff and supported by the Hospital.

RETIREMENTS

There were no retirements in 2005

SERVICE DEVELOPMENT

In 2005 the Hospital successfully progressed its application for site approval for Advanced Nurse Practitioners (Neonatology) and Ms Chrisitne McDermott and Ms Edna Woolhead were approved by the National Council for the Professional Development of Nursing and Midwifery and appointed in post on the 1st October 2005. They were the first ANP in Neonatology in the country and I congratulate them on their hard work, commitment and dedication to the Neonatal Unit as well as the hospital.

DOMINO AND EARLY TRANSFER HOME

The Rotunda Hospital progressed its development of these two new models of midwifery care to women living in the Finglas and Cabra West catchment area (Community Care Area 6). A team of one CMM3 manager and seven Midwife Specialists were appointed and work in partnership with the Hospital team, GP's and Public Health Nurses to provide these new models of care. These models of care have been extremely well received and demand from women is very high.

MATERNITY CARE ASSISTANTS

The Rotunda Hospital continued to facilitate the 'Healthcare Support Certificate' for Maternity Care Assistants in 2005, with external validation from FETAC. This programme involves students undertaking eight modules over a six month period commencing in September 2005 which are assessed by assignment, examination and skills demonstration. Modules undertaken ranged from Maternity Care Support and Customer Service to Teamworking and Care Skills.

Five Maternity Care Assistants from the Rotunda Hospital successfully completed the course. In addition, six Care Assistants from the Coombe Hospital were facilitated to attend classes in the Rotunda and completed a number of modules.

Congratulations to those staff who have received their certification.

RECRUITMENT AND RETENTION

Recruitment and retention of Midwifery Students and Midwives remained an area of focus throughout the year. The decision to streamline the intakes of Post Graduate Midwifery Students from two per year to one each September, put additional pressure on midwifery resources but this was somewhat offset bu the temporary appointment of additional Maternity Care Assistants.

The Hospital appreciate the commitment of the midwifery students who remained as staff midwives following their training and hope the experience you gain in the hospital will give life-long benefits. All new staff recruited from other areas are welcome and we hope you have a successful and fulfilling career in the hospital.

MIDWIFERY EDUCATION

The Report of the Expert Group on Midwifery and Children's Nursing Education presented to the Minister in December 2004 was endorsed and in December 2005 a National Implementation Group was announced to oversee the implementation of the Report's recommendations.

THE POSTGRADUATE DIPLOMA IN MIDWIFERY EDUCATION PROGRAMME

The School of Midwifery in partnership with the University of Dublin, Trinity College, continues to offer a two-year Midwife Registration Education Programme. In 2005, 22 students successfully completed their education and were eligible to register in the Midwives Division of the Register maintained by An Bord Altranais and were awarded the Postgraduate Diploma in Midwifery. Thirty-two midwifery students commenced in September 2005.

THE HIGHER DIPLOMA IN NURSING: NEONATAL INTENSIVE CARE PROGRAMME

The Higher Diploma in Nursing: Neonatal Intensive Care continued between the RCSI and the three Dublin Maternity Hospitals. In 2005, 3 students successfully completed the programme and a further 3 students commenced the programme.

EXTERNAL PLACEMENTS

The Hospital continues to support Obstetric Placements for BSc Nursing Students from Dublin City University. Midwife teachers deliver the theoretical component of the programme in Dublin City University. In 2005, approximately 100 students attended the Rotunda for a two-week practice placement. Paediatric Students from the National Children's Hospital, Harcourt Street/Tallaght Hospital are also facilitated for a Neonatology placement. A number of midwifery students from Northern Ireland, England and some European countries were also facilitated with placements to meet their educational requirements.

CONTINUING EDUCATION AND DEVELOPMENT

The School of Midwifery offers many other educational programmes for practicing midwives and doctors. During 2005, the following programmes were offered:
The Teaching, Learning and Assessing in Midwifery Practice Programme (4 per annum).
The UNICEF 18 hour Breastfeeding Programme (3 per annum).
The Neonatal Resuscitation Programme (6 per annum).
Perineal repair suturing programmes.

COMMITTEE MEMBERSHIPS AND INITIATIVES

Midwife teachers, midwife managers and midwives continue to work in close partnerships on a number of strategic developments and initiatives. These include:

- The University of Dublin Trinity College Faculty of Health Sciences Committee.
- The University of Dublin Trinity College School of Nursing and Midwifery Committee.
- The Postgraduate Diploma in Midwifery Monitoring and Co-ordinating Committee.
- The Postgraduate Diploma in Midwifery Curriculum Development Committee.
- The Higher Diploma in Nursing (Neonatal Intensive Care) Steering Committee.
- The Higher Diploma in Nursing (Neonatal Intensive Care) Programme Board.
- The Higher Diploma in Nursing (Neonatal Intensive Care) Curriculum Development Committee.
- The DOMINO scheme.
- Evidence based guidelines for midwife led care.
- The Research and Ethics Committee.
- The Education Committee.
- The Breastfeeding Committee.
- The Risk Management Committee.
- The Library Committee.

The Rotunda Hospital's commitment to lifelong learning and research development continues to be demonstrated by the facilitation of a large number of staff in further education and development.

In 2005 midwifery and nursing staff were facilitated to attend a total of 71 conferences/courses/workshops comprising of a wide spectrum of topics, and 19 staff undertook Higher/Postgraduate Diplomas, Degree and Masters Programmes amounting to a total of 1072.50 education release days.

BABY FRIENDLY HOSPITAL INITATIVE

It is The Rotunda Hospital Policy to protect, promote and support breastfeeding as the optimum way for mothers to feed their babies. This is in line with the World Health Organisation 10 steps to Successful Breastfeeding. The Hospital offers women support at all stages of pregnancy and following birth to help achieve successful breastfeeding. The Hospital was assessed for accreditation as a Baby Friendly Hospital in September 2005 and was successful in 8 of the 10 standards. On reassessment in January of 2006 all standards were successfully attained and accreditation was awarded. Congratulations to all staff within the hospital for their hard work and commitment in achieving this high international standard.

Breastfeeding Initiation Rates for 2005 = 56%

MENTAL HEALTH SUPPORT

The Mental Health Support Midwife, Margaret Sheridan, continues to provide appropriate care for women with emotional distress and mental health disorders in pregnancy and following delivery. The service provides a flexible, opportunistic and client centered approach.
There were 528 attendances at the support midwife clinic in 2005. A further 1272 reviews took place at ward level. The reassurance that support is available, even if not accessed is comforting for many mothers.

Support and information is sometimes provided over the phone when appointments are not practical or appropriate. In this way specific problems may be dealt with quickly and may involve referral to appropriate local services.
The Mental Health Support Midwife is actively involved in the training of midwife students and staff to highlight the prevalence of perinatal mental health issues and enable them recognise women in need of extra support.

The Edinburgh Postnatal Depression Scale is used routinely on day of discharge with the scores being sent to the patients Public Health Nurse and General Practitioner. This helps highlight a vulnerable group for postnatal depression who can be followed up more closely.

Margaret presented a paper on the psychological care of women in pregnancy and the puerpurium at the 27th Congress of the International Confederation of Midwives held in Brisbane, Australia in July '05. The presentation was well received and generated much interest and discussion on the unique service provided in this hospital.

PARENT EDUCATION AND FAMILY PLANNING DEPARTMENT

PARENT EDUCATION
The parent education team, Ms. Margaret Merrigan Feenan and Ms. Carmel Kearns (both CMM2's), provide an extensive range of education sessions including Parent Education and Family Planning Advice to both in-patients and out-patients.

There were 5623 attendances at formal Parent Education classes during 2005. A further 144 attended separately for a Delivery Suite tour. There were 15 attended for individual instruction.

Special education sessions are organised for groups with identified needs including:

- Teenagers. A total of 119 teenagers attended in 2005.
- People with hearing disabilities.
- People with sight disabilities.
- People with language difficulties.

The parent education sessions aim to convey positive messages for parents regarding their role in the development of healthy children and their lifestyles. This is achieved by woman-focused sessions with the role of the father emphasised throughout. Sessions also educate expectant women in issues relating to pregnancy, labour and the immediate postnatal period. Information is provided to inform parents where to source support and resources when they go home with their new baby.

FAMILY PLANNING

Family planning information is included in the parent education programme. In-patients are seen for a brief discussion on fertility, contraception and services available. The Family Planning Clinic continues on a Thursday morning. At the clinic contraception and other healthcare issues are discussed such as:

- Pre-conceptual care.
- Breast examination.
- Cervical smear tests.
- Sexual and reproductive health.
- Sterilisation.

Natural family planning methods with individual instruction are provided by Margaret Merrigan-Feenan to patients and also to doctors who are completing their Family Planning Course. "Breakfast Meeting Talks" were also arranged for doctors in artificial contraception methods. Family Planning Clinic attendances for the year = 214.

BEREAVEMENT SUPPORT

In 2005 the Bereavement Support Midwife continued to provide an extensive realm of care to all those families bereaved through Miscarriage, Stillbirth and Neonatal Death. She works closely with the Social Work and Fetal Anomaly and Early Pregnancy Unit Teams within the hospital.

The uptake of the follow-up support for parents continues to be successful through the Miscarriage, Bereavement, Recurrent Pregnancy Loss and Fetal Anomaly Clinics. These specific clinics afford bereaved parents the necessary support for their individual needs.

The research highlighted a number of issues and recommendations to improve the education of professionals working with bereaved parents. Bereavement Workshops and Peer Support were highlighted as two areas that staff felt would be beneficial in improving the care for bereaved parents and families. Three of these workshops have been set up for midwives and nurses completing the Higher Diploma in Neonatal Intensive Care and have proved very successful. The plan in the near future is to provide similar workshops to facilitate the remaining midwives, nurses and doctors.

The Bereavement Support Midwife, Theresa Laverty completed her B.A. (Hons.) Degree in Counselling and Psychotherapy in June 2005. She carried out her research thesis within the hospital by addressing the following topic: ***"A Study Of The Experience And Education of Professionals Who Work With Perinatal Loss."***

The research highlighted a number of issues and recommendations to improve the education of professionals working with bereaved parents. Bereavement Workshops and Peer Support were highlighted as two areas that staff felt would be beneficial in improving the care for bereaved parents and families. Workshops have been set up for midwives and nurses completing the Higher Diploma in Neonatal Intensive Care and have proved very successful. The plan in the near future is to provide similar workshops to facilitate the remaining midwives, nurses and doctors.

CHAPLAINS

We thank Canon T. Haskins, (Church of Ireland) and Reverend Father C. Sheridan (Roman Catholic) for their continued support to patients and staff in times of difficulty as well as joy.

HEALTH PROMOTING HOSPITALS

The Rotunda Hospital is a committed member of the Health Promoting Hospitals network and continued work in this area throughout 2005.

OCCUPATIONAL HEALTH NURSING

The Occupational Health Nursing continued to enhance the service being provided to the hospital staff by the Occupational Health Physician, Dr Natin. Services offered to staff in general included advice and support on smoking cessation and eye testing. The Occupational Health Nurse, Fidelma O'Carroll works closely with the Health Promotion Co-Ordinator and the Infection Control Nurse Maura Beckett to ensure staff are being afforded maximum opportunity of health.

PUBLICATIONS/PRESENTATIONS

PUBLICATIONS

McCarthy A, Millar S & Evans D (2005) **Maternity Services in the Health Services Executive Western Area: A survey of Midwives' and Consumers 'Views.** NMPDU Western Area

PRESENTATIONS

Daly D and Millar S, **Processing Pregnancy or Meaningful Midwifery**. Ireland's Annual Joint Midwives Conference: RCM Northern Ireland and Midwives Section INO. October 2005

Laverty, T. **A Study of the Education and Experience of Professionals who work with Perinatal Loss**. Irish Perinatal Society Meeting, Dublin May 2005

Millar S, co-presenter with Linda Biesty. **Developing Skills and Decision Making for Clinical Midwives**. Workshop for Community and Hospital Based Midwives, Florence, Italy. December 2005

Sheridan M. **The psychological care of women in pregnancy and the puerperium: Role of a support midwife for Mental Health.** International Confederation of Midwives Conference, Melbourne, Australia July 2005

Sheridan M. **Emotional Health in Pregnancy and the Puerperium**. Poster Presentation, International Confederation of Midwives Conference, Melbourne, Australia July 2005

Treanor, P. **The Role of the Midwife in Modern Obstetrics.** Dublin, November 2005

CONCLUSION

The commitment by midwifery and nursing staff to high standards of care and to staff development is evident in both clinical standards and the support they gave to the Hospital's preparation for the IHSAB Accreditation Assessment. Getting this accreditation is an acknowledgement from outside national and international experts of our high standards and I wish to congratulate and thank all staff for their support and hard work to achieve this.

My sincere thanks also to the Master, Dr Geary and to the Hospital Secretary/ General Manager, Mr Fagan for the continued support and advice they offered throughout the year.

Royal College of Surgeons in Ireland
Dept. of Obstetrics & Gynaecology

2005 saw major changes in the RCSI Department of Obstetrics and Gynaecology, which is based at the Rotunda Hospital. Professor Fergal Malone replaced Professor Robbie Harrison following his retirement. Prof. Malone is a graduate of University College Dublin and took over the leadership of the Department after leaving Columbia University in New York.

HEAD OF DEPARTMENT
Fergal D. Malone MD, FACOG, MRCOG, FRCPI

CONSULTANT SENIOR LECTURER
Paul Byrne MD, FRCOG, FRCPI

REGISTRAR LECTURERS
Thomas Walsh MRCOG (until June 2005)
Helen Mc Millan MRCOG (until June 2005)
Caoimhe Lynch MRCOG (from July 2005)
Fionnuala Breathnach MRCOG (From July 2005)

HONORARY CLINICAL PROFESSOR
Michael Geary MD, MRCOG, MRCPI

HONORARY CONSULTANT SENIOR LECTURERS
Carole Barry-Kinsella MD, MRCOG
Mary Holohan MRCOG

LABORATORY SCIENTIST
Louise Drudy, PhD

ADMINISTRATION
DEPARTMENTAL BUSINESS AND ADMINISTRATIVE MANAGER
Declan Keane, MBA

ADMINISTRATIVE STAFF
Karen McMahon Dip. HSM & First Line Management
Orla Smith

1. PATIENT SERVICES

The RCSI Department provides a core commitment to the Rotunda Hospital Fetal Assessment Unit for specialist prenatal diagnosis and fetal therapy services. The RCSI Women's Health Centre provides a full range of advanced obstetric ultrasound services, including rapid prenatal screening with the latest Kryptor maternal serum analyser, the only one of its kind in Ireland. Additionally, the RCSI Department provides a complete range of clinical services for Team B within the Hospital. Clinical achievements during 2005 include the introduction of the first chorionic villus sampling service to the Rotunda, as well as the performance of the first intrauterine fetal therapies, including fetal transfusions and treatment of fetal bladder outlet obstruction.

2. TEACHING

Two hundred and one students participated in the RCSI Obstetrics & Gynaecology and Neonatology clinical rotations in 2004/2005, and a further 203 RCSI students in 2005/2006. The RCSI Department of Obstetrics and Gynaecology at the Rotunda has a leadership role in providing teaching and assessment for undergraduates at the Rotunda, Coombe Women's Hospital, National Maternity Hospital, Our Lady of Lourdes Hospital Drogheda, Midland Regional Hospital Mullingar and Waterford Regional Hospital. Eighty four of these students attended the Rotunda Hospital for clinical attachments in the Academic year 2004/2005, and a further 82 attended in 2005/2006.

3. RESEARCH

3.1 Research Grant Awards

A) Health Research Board, Ireland
"Perinatal Ireland Research Consortium"
F. Malone, MD, Principal Investigator
Total support €3,900,000; 2005 – 2010

B) Royal College of Surgeons in Ireland Pilot Project Research Grant
"Subclinical Hypothyroidism and Pregnancy Outcome"
F. Malone, MD, F. Breathnach, Co-Principal Investigators
Total support €90,000; 2005 – 2007

C) National Institutes of Health and Columbia University New York
"The FASTER Trial"
F. Malone, MD, Principal Investigator
Total support €55,000; 2005 – 2006

3.2 Research Activities

A) *Perinatal Ireland:* RCSI-Rotunda leads this national consortium of eight academic obstetric centres that have agreed to collaborate on large-scale clinical research projects. Funded initially for 5 years by HRB, this consortium has the potential to become a self-sustaining national research core.

B) *Subclinical Hypothyroidism in Pregnancy:* This collaborative study between RCSI and the Rotunda focuses on evaluating thyroid dysfunction during pregnancy, including evaluation of thyroid antibodies and use of mass spectrome try to better define normal and abnormal thyroid status in pregnancy. This research is forming the basis of a postdoctoral MD thesis for Dr. Fionnuala Breathnach.

C) *FASTER Trial:* The international collaborative FASTER Trial continues to be jointly lead by investigators at Columbia University and RCSI. Ongoing studies being performed include role of second trimester ultrasound for diagnosing fetal abnormalities and no approaches to serum screening in pregnancy.

D) *Fertility in Cystic Fibrosis:* This collaborative student between the RCSI Departments of Obstetrics & Gynaecology and Medicine at Beaumont Hospital is lead by Dr. Paul Byrne and focuses on the male perspective to infertility in this cohort.

E) *Cancer Audit:* Two 10-year audits on cervical cancer and vulvar cancer have been performed between the Mater and Rotunda Hospitals, lead by Dr. Helen McMillan, and are awaiting publication.

F) *National Survey Perinatal Practice:* A national survey of obstetricians and general practitioners focusing on attitudes and knowledge of prenatal screening and diagnosis has been completed. Lead by Dr. Caoimhe Lynch, these results are awaiting publication.

3.3 Research Awards

The Green Journal: Obstetrics & Gynecology
Roy M. Pitkin Award, Best Research Paper Published in 2005
Fergal Malone, MD
"First Trimester Nasal Bone Evaluation for Aneuploidy in the General Population"

Society for Maternal-Fetal Medicine
Annual Clinical Meeting, New Orleans, Best Research in Ultrasound and Genetics, 2005
Fergal Malone, MD
"Detection of Down Syndrome by Proteomic Profiling of Maternal Serum"

3.4 Research Publications

A) Books:

"Antenatal Testing: Sonographic Detection of Aneuploidy" in *Protocols for High Risk Pregnancy,* Malone FD. by Queenan, Hobbins and Spong, 4th Edition, Blackwell Science, 2005, p 75 – 88.

B) Papers in Peer-Reviewed Journals:

Breathnach F, Daly S, Griffin E, Gleeson N. "Intracervical application of synthetic hydrogel sealant for prelabour preterm rupture of membranes." *Journal of Perinatal Medicine,* 33:458-460, 2005.

Malone FD, Canick JA, Ball RH, et al. "A Comparison of First Trimester Screening, Second Trimester Screening, and the Combination of Both for Evaluation of Risk for Down Syndrome". *New England Journal of Medicine*, 353:2001-2011, 2005.

Malone FD, Ball RH, Nyberg DA, et al. "First Trimester Septated Cystic Hygroma – Prevalence, Natural History, and Pediatric Outcome". *Obstetrics & Gynecology*, 106;1415-1416, 2005.

Malone FD, Ball RH, Nyberg DA, et al. "First Trimester Nasal Bone Evaluation for Aneuploidy in the General Population". *Obstetrics & Gynecology*, 105:901-902, 2005

Malone FD, Ball RH, Nyberg DA, et al. "First Trimester Septated Cystic Hygroma – Prevalence, Natural History, and Pediatric Outcome". *Obstetrics & Gynecology*, 106;288-294, 2005.

Malone FD. "Sequential Pathways of Testing After First-Trimester Screening for Trisomy 21". *Obstetrics & Gynecology*, 105:438, 2005.

Cleary-Goldman J, **Malone FD**, Vidaver J, et al. "Impact of Maternal Age on Obstetric Outcome." *Obstetrics & Gynecology*, 105:983-990, 2005.

Shevell T, **Malone FD**, Vidaver J, et al. "Assisted Reproductive Technology and Pregnancy Outcome – A Population Based Screening Study." *Obstetrics & Gynecology*, 106:1039-1045, 2005.

Dugoff L, Hobbins JC, **Malone FD**, et al. "Quad Screen as a Predictor of Adverse Pregnancy Outcome". *Obstetrics & Gynecology*, 106:260-267, 2005.

Dugoff L, Lynch AM, Cioffi-Ragan D, Hobbins JC, Schultz LK, **Malone FD**, D'Alton ME. "First Trimester Uterine Artery Doppler Abnormalities Predict Subsequent Intrauterine Growth Restriction". *American Journal of Obstetrics and Gynecology*, 193:1208-1212, 2005.

Khawaja N, **Walsh T**, Gill B. "Uterine artery ligation for the management of ruptured cornual ectopic pregnancy." *European Journal of Obstetrics Gynecology and Reproductive Biology*, 118:269, 2005.

Khawaja N, **Walsh T**, Gleeson R, Geary M. "Tubal abscess in pregnancy:A case report." *Journal of Obstetrics and Gynaecology*, 25:210, 2005.

Khawaja N, **Walsh T**, Coulter-Smith S, Geary M. "A survey of induction of labour practice in a primigravida with prolonged pregnancy." *Irish Medical Journal*, 98:218-219, 2005.

Cooley S, Yuddandi V, **Walsh T**, Geary M, McKenna P. "The medium- and long-term outcome of endometrial ablative techniques." *HYPERLINK "http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=journals&list_uids=3335&dopt=full" European Journal of Obstetrics, Gynecology, and Reproductive Biology*, 121:233-235, 2005.

C) Papers in Other Journals:

Malone FD. "Nuchal Translucency-based Down Syndrome Screening – Barriers to Implementation". *Seminars in Perinatology*, 29:272-277, 2005.

Cleary-Goldman J, **Malone FD.** "Advances in Prenatal Diagnosis". *Applied Radiology* 34:8-18, 2005

Bush MC, **Malone FD.** "Down Syndrome Screening in Twins". *Clinics in Perinatology*, 32:373-386, 2005.

D) Published Abstracts:

Malone FD, Comstock CH, Ball RH, et al. "Is There a Nuchal Translucency Measurement Above Which There Is No Added Benefit from Serum Screening?" *American Journal of Obstetrics and Gynecology*, 193:S28, 2005.

Malone FD, Cuckle H, Ball RH, et al. "Contingent Screening for Trisomy 21 – Results from a General Population Screening Trial". *American Journal of Obstetrics and Gynecology*, 193:S29, 2005.

Malone FD, Cuckle H, Ball RH, et al. "MoM Versus Delta NT: Trisomy-21 Risk Assessment Using Nuchal Translucency (NT) Sonography". *American Journal of Obstetrics and Gynecology*, 193:S162, 2005.

Cleary-Goldman J, **Malone FD**, Messerlian G, et al. "Subclinical Hypothyroidism and Pregnancy Outcomes". *American Journal of Obstetrics and Gynecology*, 193:S3, 2005.

Bukowski R, Hankins G, **Malone FD**, et al. "Stillbirth Risk Prediction". *American Journal of Obstetrics and Gynecology*, 193:S107, 2005.

Belogolovkin V, Eddleman K, **Malone FD**, et al. "is There an Association Between Low BMI and Preeclampsia?" *Journal of the Society of Gynecologic Investigation*, 12:152A, 2005.

Urato A, Craigo S, Collins J, **Malone FD**, et al. "Maternal Smoking and Pregnancy Outcome". *American Journal of Obstetrics and Gynecology*, 193:S121, 2005.

Urato A, Craigo S, Collins J, **Malone FD**, et al. "First Trimester Pregnancy Associated Plasma Protein-A (PAPP-A) Levels Identify the Pregnant Smoker at High-Risk of Pregnancy Complications". *American Journal of Obstetrics and Gynecology*, 193:S121, 2005.

McMillan H, Walsh T, Gannon M, Horgan R, Khawaja N ,Collins C, Geary M. "Proposal for a standardised classification system for audit of induction of labour." *American Journal of Obstetrics and Gynaecology*, 193:s115, 2005.

Walsh T, McMillan H, Khawaja N, Geary M. "Are patients with oligohydramnios at greater risk of Caesarean Section?" *Journal of Obstetrics and Gynaecology*, volume 25, April 2005.

Khawaja N, **Walsh T, McMillan H**, Geary M. "Are postdates patients with an unengaged vertex at higher risk of Caesarean Section?" *Journal of Obstetrics and Gynaecology*, volume 25, April 2005.

Khawaja N, **Walsh T, McMillan H**, Geary M. "The use of Misoprostol to induce labour with an intrauterine death." *Journal of Obstetrics and Gynaecology*, volume 25, April 2005.

Donnelly J, Cooley S, Balding J, Murphy C, **Walsh T**, et al. "Obesity, tumor necrosis factor-alpha and tumor necrosis factor-alpha -308 polymorphism in normal pregnancy." *American Journal of Obstetrics and Gynaecology*, 193:s160, 2005.

Donnelly J, Cooley S, Balding J, Murphy C, **Walsh T**, et al. "Uterine artery Doppler measurement and pro-inflammatory cytokines in normal pregnancy." *American Journal of Obstetrics and Gynaecology*, 193:s165, 2005.

E) Scientific Presentations:

McMenamin M, **Breathnach F, Clarke T**, Geary M. "Mode of delivery at the limit of viability." Junior Obstetricians and Gynaecologists Annual Scientific meeting; Dublin 2005.

Ogunlewe O, **Breathnach F**, Geary M. "Caesarean delivery and women's expectations for future pregnancy" International Society of Perinatal Obstetricians meeting; Dublin 2005

Molelekwa V, **Breathnach F, Byrne P**, Geary M. "Abnormal umbilical Doppler velocimetry and perinatal outcome." International Society of Perinatal Obstetricians meeting; Dublin 2005

Sarkar R, **Breathnach F**, Gleeson R, Geary M. "A review of the use of the helium beam thermal coagulator (HELICA) for treatment of endometriosis." Irish Fertility Society meeting; Dublin 2005.

McMillan H, Walsh T, Grundy K, et al. "Pilot study of Chlamydia trachomatis in an unselected population of 1002 women attending the Rotunda Hospital." Junior Obstetrics & Gynaecology Meeting; Dublin Nov 2005

McMillan H, Walsh T, Gannon M, et al. "Introduction of a standard classification system for Induction of Labour Audit." Junior Obstetrics & Gynaecology Meeting; Dublin Nov 2005 *(FIRST PRIZE WINNER)*

McMillan H, Gaughan E, **Walsh T**, et al. "Changes in Cervical Cancer management and the consequent outcomes 1992-2002." Junior Obstetrics & Gynaecology Meeting; Dublin Nov 2005

Walsh T, McMillan H, Khawaja N, Geary M. "Are patients with oligohydramnios at greater risk of Caesarean Section?" British Maternal Fetal Medicine Meeting; April 2005.

Walsh T, Cooley S, Donnelly J, **McMillan H**, et al. "Current Folic Acid status in 500 patients." British Maternal Fetal Medicine Meeting; April 2005 *(RUNNER UP)*

Khawaja N, **Walsh T, McMillan H**, Geary M. "Are postdates patients with an unengaged vertex at higher risk of Caesarean Section?" British Maternal Fetal Medicine Meeting; April 2005.

Walsh T, McMillan H, Khawaja N, Geary M. "Are patients with oligohydramnios at greater risk of Caesarean Section?" *Journal of Obstetrics and Gynaecology*, volume 25, April 2005.

Khawaja N, **Walsh T, McMillan H**, Geary M. "Are postdates patients with an unengaged vertex

Khawaja N, **Walsh T, McMillan H**, Geary M. "The use of Misoprostol to induce labour with an intrauterine death." British Maternal Fetal Medicine Meeting; April 2005

Cooley S, Donnelly J, **Walsh T**, et al. "The impact of Grannum grade on maternal and fetal well-being in the low-risk primigravid population." Junior Obstetrics and Gynaecology Meeting; Dublin Nov 2005.

Durnea U, Cooley S, Donnelly J, **Walsh T**, Geary M. "The pattern and demographics of emergency room attendees from the low risk primigravid population." Junior Obstetrics and Gynaecology Meeting; Dublin Nov 2005.

F) Invited Lectures:

Prof. Fergal Malone:

"The Role of Ultrasound in Obstetrics" – Royal College of Surgeons in Ireland, Medical School for Managers, Annual Obstetrics and Gynaecology Day, Beaumont Hospital, Dublin, Ireland, November 2005

"Screening for Fetal Abnormalities – Options for the Irish Healthcare System" – Institute of Obstetricians and Gynaecologists Annual Meeting, Dublin, Ireland, September 2005

"Contemporary Management of Multiple Gestations" – American Austrian Foundation, Maternal and Infant Health Annual Seminar, Salzburg, Austria, June 2005

"Twin-to-Twin Transfusion Syndrome – Current Management Practices" – American Austrian Foundation, Maternal and Infant Health Annual Seminar, Salzburg, Austria, June 2005

"Doppler Velocimetry and Intrauterine Growth Restriction" – American Austrian Foundation, Maternal and Infant Health Annual Seminar, Salzburg, Austria, June 2005

"Current Approaches to Down Syndrome Screening" – American Austrian Foundation, Maternal and Infant Health Annual Seminar, Salzburg, Austria, June 2005

"Advances in Prenatal Diagnostic Techniques" – American Austrian Foundation, Maternal and Infant Health Annual Seminar, Salzburg, Austria, June 2005

"Down Syndrome Screening – Standard of Care" – International Society of Perinatal Obstetricians / Irish Perinatal Society, Joint Annual Meeting, Dublin, Ireland, May 2005

"Lessons from the FASTER Trial" – Recent Advances in Obstetric and Gynaecological Ultrasound Course, The Coombe Women's Hospital, Dublin Ireland, March 2005

"Pitfalls of Down Syndrome Screening" – Society for Maternal-Fetal Medicine 25th Annual Meeting, Nuchal Translucency Postgraduate Course, Reno, Nevada, February 2005.

"The Future of First Trimester Screening for Aneuploidy" – Hot Topics in Ultrasound Conference, National Maternity Hospital, Dublin, Ireland, February 2005

"Nuchal Translucency Sonography – How to do it" – World Class OBGYN Ultrasound Course, Loma Linda University, San Antonio, Texas, January 2005

"Down Syndrome Screening: What Have We Learned From the FASTER Trial" – World Class OBGYN Ultrasound Course, Loma Linda University, San Antonio, Texas, January 2005

"Invasive Prenatal Diagnosis – Options for 2005" – World Class OBGYN Ultrasound Course, Loma Linda University, San Antonio, Texas, January 2005

"Nuchal Translucency: What Have We Learned from the FASTER Trial?" – Robert Wood Johnson Medical School, 13th Annual Perinatal Ultrasound Symposium, New Brunswick, New Jersey, January 2005

"Nuchal Translucency: What Have We Learned from the FASTER Trial?" – Robert Wood Johnson Medical School, 13th Annual Perinatal Ultrasound Symposium, New Brunswick, New Jersey, January 2005
"Nuchal Translucency Sonography – Technique and Pitfalls" – Robert Wood Johnson Medical School, 13th Annual Perinatal Ultrasound Symposium, New Brunswick, New Jersey, January 2005
"Multiple Gestations: Contemporary Challenges" – Obstetrics and Gynecology Grand Rounds, Lennox Hill Hospital, New York, New York, January 2005
"Nuchal Translucency: What Have We Learned from the FASTER Trial?" – Obstetrics and Gynecology Grand Rounds, Hackensack University Medical Center, Hackensack, New Jersey, January 2005

Dr. Paul Byrne

"New Developments in Gynaecology." Beaumont Hospital General Practitioners Study Day January 2005
"Trans Obturator Tape in the Management of Stress Urinary Incontinence- Surgical Anatomy." Irish Urogynaecology Group May 2005
"Pregnancy in Renal Transplant Recipients." Beaumont Hospital Foundation October 2005
"New Technologies in Gynaecology- Implications for the Manager." Med School for Managers Beaumont Hospital November 2005

Dr. Helen Mc Millan

"Women's Health & Reproduction." Royal College of Surgeons in Ireland "Mini-Med School" Feb 2005

Dr. Thomas Walsh

"Folic Acid Status in Caucasian Primigravid Population in Ireland." Royal Academy of Medicine Ireland Feb 2005

Human Assisted Reproduction Ireland

DIRECTOR
MICHAEL DARLING MD. MRCOG.

CONSULTANT
Edgar Mocanu MRCOG

SUB-SPECIALIST TRAINEE SENIOR REGISTRAR
Maura O'Donovan MRCOG (up to June 2005).

CLINICIANS
Hanora Ryan MRCOG.
Umme Salma MRCOG
Helen Spillane MRCOG.
Tahira Javaid. MRCOG
Manal Younis. MRCOG

LABORATORY
Declan Keane MSc. MBA. (From August 2005)
Kathleen Waite BSc.
Ciara Hughes MSc.
Evelyn Cottell PhD (up to July 2005)
Jemma Matthewson BSc., MSc.
Lisa Burke MSc.
Wendy Griffin MSc.
Louise Drudy PhD. (Part-Time)

NURSES
Benny Hennelly SRN. SCM. Sr.
Joan Kelly SRN. SCM. MBA..
Bronagh Murphy SRN. SCM. BNS.
Teresa Woods SRN. SCM.
Kitty Lowry SRN. SCM. SRCN.

COUNSELLORS
Bonnie Maher M.Psych.Sc., MIACT.
Joan Hamilton SRN., Dip.C (TCD)
Helga Behan. DipC. (TCD) (From July 2005)

ADMINISTRATION
Marie-Louise Brennan MBA.
Helga Behan (up to June 2005)
Natasha O'Sullivan
Eimear Dempsey
Maureen Redmond
Deirdre McCarthy
Adrienne Coote
Suzanne Naughton
Laura Behan (From June 2005)
Karen McMahon (Part-Time)

HOUSEKEEPING
Ann Mulligan
Christina Hopkins
Yvonne Murray Nurses Aide (up to July 2005)
Michelle Kelly Nurses Aide (From November 2005)

1. SERVICE

During 2005 under the guidelines of the Medical Council the HARI unit provided for those living in the Republic of Ireland IVF, ICSI, Gonadotrophin Stimulation, TESE, Sperm, Oocyte and Zygote Freezing.

2. RESULTS

2.1. GENERAL DATA 2005

443 couples were invited to attend the evening information sessions. 257 new patients attended HARI for interview during the year. During the year 2005 1129 cycles were undertaken, 532 IVF, 295 ICSI and 302 Frozen. 713 had oocytes collected (IVF 445, ICSI 268). Zygotes were transferred in 886 (IVF 408, ICSI 247 and frozen 231) cases.

Mean age of the female patients was 35.9 years and males 38 years. The mean duration of infertility of those undergoing fresh cycles was 3.6 years. 68% of these were primary infertile. The main cause necessitating IVF or ICSI in this year was Male Factor 40%, with Tubal + Endometriosis 26%, Unexplained 22%, and Ovulation 4%.

RATES

Pregnancy rates shown are clinical pregnancy rates. Take home baby rates are always one year behind, the figures shown are therefore purely for the years 2004, calculated from the throughput of these years alone.

DEFINITIONS

Clinical Pregnancy = *represents all cases where an intrauterine visible pregnancy sac has been identified per number of patients that commenced therapy.*

Clinical Pregnancy Rate per Cycle Started = *number of clinical pregnancies per number of patients that commenced therapy.*

Clinical Pregnancy Rate per Oocyte Recovery = *number of clinical pregnancies per number of patients that had an oocyte recovery.*

Clinical Pregnant Rate per Zygote Transfer = *number of clinical pregnancies per number of patients that had zygotes transferred.*

Delivery Rate = *number of delivery episodes of babies weighing more than 500grams (per cycle started, per oocyte recovery, per zygote transfer).*

The above described definitions and rates are presented in a tabular form in the five tables to follow.

TABLE 1. CLINICAL PREGNANCY RATES 2005.

	Overall n = 827	IVF n = 532	ICSI n = 295
Per Cycle Started	28.5%	27.4%	30.5%
Per Oocyte Recovery	33.1%	32.8%	33.6%
Per Zygote Transfers	36%	35.8%	36.4%

These figures should be read as follows:- the likelihood of a patient commencing on our ART programme to conceive and have a clinical pregnancy is 28.5% per cycle started, 33.1% per oocyte recovery and 36% per zygote transfer. The clinical pregnancy rates for patients undergoing frozen cycle transfers are 18.5% per cycle started and 24.2% per zygote transfer.

TABLE 2. CLINICAL PREGNANCY RATES ACCORDING TO PATIENT'S AGE (2005).

	Age	Overall n = 827	IVF n = 532	ICSI n = 295
Per Cycle Started				
	< 30	38%	35.9%	39.6%
	31-34	38.3%	39.3%	36.8%
	35-39	27.3%	27.8%	26.2%
	40+	14.8%	13.1%	20%
Per Oocyte Recovery				
	< 30	42.2%	40%	43.8%
	31-34	42.9%	44.4%	40.6%
	35-39	31.3%	32.9%	28.4%
	40+	18.9%	17.4%	22.9%
Per ZygoteTransfer				
	< 30	44.3%	42.4%	45.7%
	31-34	46.8%	48.4%	44.4%
	35-39	34.1%	36.2%	30.3%
	40+	21.1%	18.8%	27.6%

The likelihood of a female less than 30 years of age achieving a clinical pregnancy per cycle started is 38%, per oocyte recovery 42.2% and per zygote transfer 44.3%.

TABLE 3. DELIVERY RATES FOR YEAR 2004 (At least one baby 500grams+)

	Overall n = 249	IVF n = 116	ICSI n = 87	Frozen n = 46
Per Cycle Started	21.1%	21.8%	26.9%	14.1%
Per Oocyte Recovery	27%	25.4%	29.6%	
Per Zygote Transfers	27.2%	28.4%	31%	20.4%

TABLE 4. DELIVERY RATES ACCORDING TO PATIENT'S AGE (2004).

	Age	Overall n = 856	IVF n = 532	ICSI n = 324
Per Cycle Started				
	< 30	36.4%	30.3%	41.1%
	31-34	30.9%	29%	33.3%
	35-39	20.6%	20.6%	20.6%
	40+	12.4%	12.6%	11.83%
Per Oocyte Recovery				
	< 30	37.5%	31%	42.6%
	31-34	33.3%	32.4%	34.4%
	35-39	24.3%	24.4%	24%
	40+	15.2%	15.7%	13.8%
Per ZygoteTransfer				
	< 30	39.1%	34.2%	42.6%
	31-34	36.2%	37.1%	35.2%
	35-39	26.3%	27%	25.2%
	40+	17.3%	17.6%	16.7%

TABLE 5. NUMBER OF BABIES DELIVERED (PERCENTAGE OUTCOMES 2004)

	Overall	IVF	ICSI	Frozen
Singleton	63.7%	64.5%	53.6%	78.8%
Twins	34.4%	35.5%	43.8%	15.4%
Triplets	1.9%		2.6%	5.8%

During 2004 the overall pregnancy loss for IVF was 27.5%. 19.4% for ICSI and 41.7% for Frozen Transfers. This rate includes ectopic pregnancies as well as miscarriages. The overall ectopic pregnancy rate was 2%. These are the main reasons for the difference between pregnancy and take home baby rates.

Important issues such as perinatal mortality and birth abnormalities cannot be judged over short periods of time. Results from the start of the programme in 1989 are very similar to those obtain uncorrected for the hospital in general. Perinatal mortality is always measured /1000 babies born 500grams and over. It is not a % figure. All figures below (years 2003 and 2004 only) are uncorrected. While the overall figures are distorted upwards due to the low number involved, the ICSI figures are distorted downwards.

PERINATAL INFORMATION 2003-2004. n=510

	Overall n = 510	IVF n = 258	ICSI n = 158	Frozen n = 94
PNM/1000 500gram+	25	31	19	21
Reported abnormality at time of birth or within first year.	0.8%	0.8%	0.6%	1%

In terms of birth abnormalities and problems in the first year of life the figures are less than to be expected but could be an underestimate as unlike what happens at birth where there is full feedback to us from all patients this does not occur when problems are found later in the year. The birth abnormality rate is measured in %.

Full data will be discussed at the information evenings but the major causes are Down Syndrome 0.4% of the total which is a reflection of the age group of our patients (see Section 5.5.2). Cardiac Disease 0.4% of total births and after birth Cerebral Palsy (0.5% of births) which although not a fetal abnormality in the strict sense of the word is included because of the impact it does have. This is a reflection of the prematurity associated with higher incidence of multiple pregnancies (see Table 5 and Section 4.10.4.2.).

From the full data set it is possible to conclude that of all the patients who have commenced the programme from the start up to 31/12/04 **48.8% have achieved a pregnancy and 32.9% have taken home at least 1 baby up to 31/12/04.** A further 11% have got pregnant while waiting to start on the programme and 21% have had a spontaneous success within 2 years of a pregnancy on the programme.

2.2. FREEZING SPERM FOR CANCER PATIENTS

The year 2005 saw 134 new patients freezing and storing with HARI.
The freezing programme for oocytes from relevant female cancer continues and 9 patients were referred for treatment in 2005 but unfortunately these patients were not suitable for the programme. Novel methods of ovarian stimulation that do not interfere with medical condition or treatment are in the process of being explored.

3. RECOGNITION.

The RCOG continued HARI recognition for special interest training in Infertility and in Human Reproduction but also in Ultrasound and Zygote Transfer.

The unit is recognised for training purposes by the Association of Clinical Embryologists UK. Two of the embryologists are undergoing training programmes at present.

During the year 2005 the HARI Unit actively participated in the Rotunda Hospital accreditation programme and obtained its accreditation being thus the only IVF Unit accredited in the Republic of Ireland.

Dr. Maura O'Donovan received her subspeciality recognition in Assisted Reproduction from the RCOG. Dr. Louise Drudy and Ciara Hughes were both recognized by the Health Professionals Council in the UK and Dr. Umme Salma received her certificate from the RCOG for special interest training in Human Reproduction.

4. INVITED PRESENTATION.

Edgar Mocanu
Infertility and Human Assisted Reproduction
MedSchool For Managers Course, RCSI, Beaumont Hospital 23/11/2005

Medico Legal and Ethical Issues in Assisted Reproduction
International Federation of Medical Students, "Windows Into Medicine"
Conference UCD, Dublin 29/10/2005

From Dream to Reality.
GP Study Evening Rotunda Hospital 26/10/2005

Infertility in Primary Care. The New Age.
Schering Female Health Annual Lecture Dublin, 26/11/2005

Pregnancy and Parkinson's
Euroyapmeet Dublin, 8/10/2005

Reflexology and infertility
Irish Reflexology Institute Annual Meeting Dublin 08/10/2005

5. PUBLICATIONS

Fertility concerns and opportunities before and after cancer treatment.
Fahy,Caoimhe. Grant Cliona, Mocanu Edgar, O'Reilly Seamus.
Cancerwise , 2005, 4 (3): 11-16.

Edgar V. Mocanu, Salem Adala, J.J. O'Leary
Womb With A View
Human Fertility, 2005, 8 (1): 34-40.

DEPARTMENT OF PATHOLOGY

DR. J.E. GILLAN (DIRECTOR)
MRS GWEN O'CONNOR (CHIEF MEDICAL SCIENTIST)

INTRODUCTION

The workload of the Rotunda Hospital Pathology Department during 2005 increased in some areas while decreasing in other areas. This is in part due to a reduction in the overall clinical activity of the hospital. The fall in specimens received was noted mainly in Haematology and Transfusion and to a lesser extent in Microbiology. The Biochemistry and Histopathology departments had increased activity as had Cytology. The numbers of specimens referred and volumes of tests performed is stated in table 1 below.

Department	Number of Specimens	% + /- over2004	Number of Tests	% +/- over2004
Haematology	37,263	-12.2	47,281	-15.4
Blood Group	15,845	-7.7	48,220	-8.9
Transfusion	4,699	-26.5	5,339	-24.5
Microbiology	58,792	21	120,413	-2.2
Biochemistry	39,589	0.4	194,969	30
Histopathology				
◦ Surgicals	3,688	-1	19,454	+3
◦ Autopsies	95	+14	4,569	+6
Cytology	23043	1.25	23,043	1.25

HISTOPATHOLOGY

STAFF

Consultants:	Dr. J.E. Gillan, Dr. Deirdre Devaney, Dr. Colette Adida
Registrars:	Dr. Amanda Murphy (January-June 2005) and Dr. Ciaran O'Riain (July-December 2005)
Senior Medical Scientists:	Ms. Carmel Curran and Ms. Dympna Sheehan
Medical Scientists:	Ms. Philomena Bateson, Ms. Michelle O'Brien, Ms. Miriam Hurley; Ms. Jannet Fahy; Ms. Helena Duggan
Electron Microscopist:	Dr. Aiveen O'Malley; Pathology Technician: Mr. Bill O'Neill;
Trainee Pathology Technician:	Mr. Scott White;
Laboratory Aides:	Ms. Grainne McDonald; Ms. Gillian Murray and Ms. Sandra McCandless

The overall activity of the department demonstrated an increase during 2005. While the total surgical specimens were decreased as indicated in table 1, this work comprises two components showing short term diverging trends: - The number of placentas referred decreased by 20%, from 1670 to 1333; the number of surgical specimens, on the other hand, increased by 14%. This latter increase was exclusively due to the rising number of cervical Lletz biopsies, which numbered 355 during the year.

The number of autopsies performed increased by 14%. Those referred from outside institutions numbered 10 compared to 7 in 2004. 83 "in-house" autopsies were performed compared to 76 in 2004, representing an increase of 12%. The overall combined fetal and neonatal losses in the hospital totalled 186. There were four cases in which the parents chose to remove their deceased infant directly from the hospital ward. This meant that neither a superficial examination of the body nor an autopsy could be performed. The overall autopsy rate was 47%. The perinatal autopsy rate was 58%. The autopsy rate amongst the neonatal deaths was 52%. Analysis of these data are outlined in tables 2-5.
It is significant that there are two unexplained deaths amongst the listed causes for normally formed infants of >500 grams, see table 4. This reflects a trend for this diagnosis in perinatal figures over the past 5 years (2001-2005) in which there has been a total of 6 unexplained deaths amongst 139 autopsied cases, i.e. 4%. This represents a very significant difference from the multi-centre CESDI (Confidential Enquiry into Stillbirth and Death in Infancy) data in the United Kingdom of Great Britain and Northern Ireland, which reports incidence of unexplained perinatal deaths of 50%. Individual institutions have tended to report an incidence of 35-40%. There is however little published data giving analysis of different causes. One paper from the Southampton Regional Paediatric Pathology Service in England (Burnley H, Moore I. J Clin Path 2005;58:93-94) provides an important comparison in which 38% of their normally formed perinatal deaths were unexplained. The single diagnosis in their series, which contrasts with that of the Rotunda Hospital, is umbilical cord lesions. 2% of the Southampton perinatal deaths related to umbilical cord disorders compared to 26% at the Rotunda Hospital. Analysis of these cord problems in the Rotunda autopsy series indicates: - Torsion of cord (47%); uncoiling of the cord (22%); nuchal cord (9%); prolapse of cord (6%); true knot of cord (3%); vasa praevia rupture (3%). Other diagnostic categories of perinatal loss in both the Southampton and the Rotunda Hospital series were remarkably similar which strongly suggests that the category of "unexplained fetal death" in Southampton and other centres may well be specific accidents of the umbilical cord. While it is understandable that this view may be received with certain scepticism, it deserves mention that almost identical results to those obtained at the Rotunda have been obtained in Utrecht in Holland where a similar focus has been directed at this problem.

It deserves mention that occasional unexplained intrauterine deaths occur which are often ignored because of another overriding diagnosis. This occurred in on of the two cases of Potter's syndrome due to renal adysplasia (see table 5). Both cases were stillborn: - one due to torsion of the umbilical cord, while the second was due to unexplained intrauterine hypoxia.

The autopsy rate for fetuses <500 grams was 42%. The diagnoses for both full autopsy and superficial examinations are stated in table 6. It is noteworthy in this setting of <500 grams, there is still an unexplained group of 13%. The rate of 46% amongst those without an autopsy strongly suggests that this examination in this gestational group makes a significant diagnostic contribution. It is also noteworthy that the superficial examination in the smaller fetuses provides critical diagnostic data in 54% of cases.

TABLE 2: ANALYSIS OF AUTOPSIES FOR THE YEAR 2005

Birth Weight	Stillbirth		Early NND		Late NND		Post NND		Referred Cases		Total	
Category	CA*	(SE)+	CA	(SE)	CA	(SE)	CA	(SE)	CA**	(SE)	CA	(SE)
	28	(16)	9	(8)				(1)	7		44	(25)
	46	(70)	2	(2)					3		52	(72)

* *CA - Complete Autopsy*
\+ *(SE) - Superficial Examination*
** *Death occurred at other institutions, autopsy conducted at the Rotunda Hospital*

TABLE 3: CLASSIFICATION OF AUTOPSIES (AND SUPERFICIAL EXAMINATIONS) IN 86 PERINATAL DEATHS > 500grams

Birth Weight	Stillbirth		Early NND		Late NND		Post NND		Referred Cases		Total	
Wigglesworth Category	CA	(SE)	CA	(SE)	CA	(SE)	CA	(SE)	CA	(SE)	CA	(SE)
Normally formed stillbirths	24	(9)	-	-	-	-	-	-	4	-	28	(9)
Malformations	3	(7)	3	(3)	-	-	-	-	2	-	8	(10)
Prematurity	-	-	3	(5)	-	-	-	(1)	-	-	4	(6)
Birth Asphyxia	-	-	2	-	-	-	-	-	1	-	3	-
Specific Cases	-	-	1	-	-	-	-	-	-	-	1	-
Total	27	(16)	9	(8)	-	-	-	(1)	7	(1)	44	(25)

TABLE 4: DIAGNOSIS IN PERINATAL AND LATE NEONATAL DEATHS IN NORMALLY FORMED INFANTS ≥ 500grams

DIAGNOSIS	COMPLETE AUTOPSY		SUPERFICIAL EXAMINATION	
	Number	(%)	Number	(%)
Chronic Uteroplacental Insufficiency (associated with RPH)	11	32.4	7	47
Retroplacental Haemorrhage	1	2.9	1	6.7
Retroplacental haemorrhage with infection	0	0	1	6.7
Ascending Infection	1	2.9	3	20
Fetomaternal Haemorrhage	3	8.8	0	0
Hydrops (non-immune, unexplained)	2	5.9	1	6.7
Postmaturity	1	2.9	0	0
Massive perivillus fibrin of placenta	1	2.9	0	0
Twin-to-twin transfusion syndrome	1	2.9	0	0
Congenital pneumonia	1	2.9	0	0
Torsion of umbilical cord	3	8.8	0	0
Nuchal cord	1	2.9	1	6.7
Uncoiling of umbilical cord (1 case associated with entrapment)	5	14.7	0	0
True knot in cord	1	2.9	1	6.7
Unexplained intrauterine hypoxia	2	5.9	0	0
TOTAL	34		15	

TABLE 5: MALFORMATIONS/ANENPLOIDY FOUND IN PERINATAL DEATH ≥ 500g

DIAGNOSIS	COMPLETE AUTOPSY	SUPERFICIAL EXAMINATION
	Number	Number
Trisomy 13		1
Trisomy 18		2
Trisomy 21*		1
Patau's	1	2
Sirenomelia		1
Utheral stenosis	1	
Cloacal dysgenesis	1	
Renal Adysplasia	2	
Thanatophoric chondro dysplasia	1	
Short ribbed polydactly		1
Meckel-Gruber syndrome	1	
Exencephaly	1	
CNS malformation (NOS)* +		1
Ptergium syndrome		1
TOTAL	8	10

** Not otherwise specified.* *+ For discussion re: lapse in standards*

TABLE 6: DIAGNOSIS OF MISCARRIAGE IN FETUSES OF < 500g

DIAGNOSIS	COMPLETE AUTOPSY	SUPERFICIAL EXAMINATION
	Number	Number
Major Malformation	6	5
Anenploidy	8	3
Chronic Uteroplacental Insufficiency	4	2
Retroplacental Haemorrhage	2	14
Retroplacental Haemorrhage and Ascending Infection	8	9
Ascending Infection	8	2
Maternal placental space infection secondary to amniocentesis	1	0
Villitis	1	0
Torsion of Umbilical Cord	1	1
Nuchal Cord	1	0
Unexplained Hydrops Fetalis	2	0
Fetus Papyraceous	1	1
Twin-to-twin transfusion	2	2
Ectopic Pregnancy	0	1
Unexplained	7	33
TOTAL	52	72

CYTOLOGY

MEDICAL STAFF

Consultants: Dr. J.E. Gillan; Dr. Deirdre Devaney, Dr. Colette Adida

Registrar: Dr. Mary Dowling, Dr. Amanda Murphy (January-June 2005) and Dr. Ciaran O'Riain (July-December 2005);

Senior Medical Scientists: Ms. Maria Tobin, Ms. Jane Halligan, Ms. Mary Svejdar;

Medical Scientists: Ms. Tokiko Kumasako, Ms. Ann Field, Ms. Lorna Hopkins, Mr. Aidan Doherty, Ms. Carmel Maguire, Ms. Fiona Fitzgerald;

Laboratory Aides: Ms. Sandra McCandless and Ms. Caroline Monks.

A total of 23 043 samples were received. 22 938 were processed. The remainder were inadequately labelled specimens and could not be evaluated. The total number of satisfactory smears was 21 994. The diagnostic reporting of this material is presented in table 7.

TABLE 7: CERVICAL CYTOLOGY RESULTS, 2005

DIAGNOSTIC CATEGORY	NUMBER	PERCENTAGE
Unsatisfactory	944	-
Negative	20 635	89.5
BNA	484	2.2
CIN I	687	3.1
CIN II	120	0.55
CIN III	164	0.75
cGIN/Atypical Glandular Cells	9	0.04
Invasive Squamous Carcinoma	2	0.009

There were 2 cases of invasive squamous cell carcinoma which were confirmed histologically. A total of 9 cases of glandular abnormalities were identified: - One case each of – cervical glandular intraepithelial neoplasia (cGIN); invasive endocervical adenocarcinoma; and clear cell carcinoma. There were two cases of endometrial adenocarcinoma. One case proved to be negative on follow-up histology. There was one case of BNA and two cases in which no follow-up was obtained at the time of writing. The age distribution of the CIN cases are stated in table 8 below.

The relatively high level of unsatisfactory smears is scheduled to see a significant reduction. This arises with the recent introduction of a Cytyc Thin Prep T2000 processor, which is being used to re-process smears initially found to be unsatisfactory.

249 non-gynaecological samples were also processed. These comprised peritoneal fluid and ovarian cyst aspirates.

TABLE 8: AGE GROUP BREAKDOWN FOR CIN CASES

Grade	0-20	21-30	31-40	41-50	51-60	60+	Total
CIN I	56	368	173	71	16	3	**687**
CIN II	8	66	30	11	4	1	**120**
CIN III	2	66	71	21	3	1	**164**

HAEMATOLOGY-TRANSFUSION:

Medical Staff:

Consultant: Dr. Melanie Cotter

Chief Medical Scientist: Ms. Catherine Robinson;

Senior Medical Scientist: Ms. Caroisa Power; Ms. Cathy Maloney.

Medical Scientists: Ms. Liliana Rasidovic, Mr. Briain McDonald, Ms. Aoife O'Neill, Ms. Emily Forde; Ms. Adele Cussen; Ms. Noreen Brady; Ms. Rosemary Geary

Laboratory Aides: Ms. Claire O'Rourke; Ms. Jennifer Ffrench; Ms. Susan O'Keeffee and Ms. Sandra McCandless.

Major changes occurred in the course of the year which proved challenging: - A total of 5 members of staff moved to new positions in other laboratories and one member went on a career break.

This diaspora included all of the senior staff members, and several of these moves were promotional. We wish to acknowledge the importance of their contributions to the work of the laboratory and wish each of these past members of the department success and happiness in their chosen paths.

Induction and training of new staff has been demanding in both time and effort while simultaneously continuing to engage the day-to-day workload. This challenge has been met by both the existing and incoming staff in a singularly steadfast and resilient manner. It also deserves mention that this transition was also assisted by some of the outgoing staff who fortunately did not all leave at the same time. This setting also required additional work in bringing new members of staff into the multidisciplinary on-call rota. A further "knock-on" effect has been a delay in the implementation of new technology in the current year of 2006.

TABLE 9: HAEMATOLOGY 2005 IN-HOUSE

TESTS	NUMBERS	% +/- OVER 2004
FBC	28267	-13.2
Manual Diff.	3193	-20
Manual Platelet count	104	No significant change
ESR	31	No significant change
Reticulocytes	289	-2.4
Sicklecell screen	234	-41
Prothrombin Time	3085	-13.9
APTT 3315	-12	
Fibrinogen	270	No significant change
FDP/DD	22	No significant change
Lupus anticoagulant	321	100%
Anti Xa	217	Small number –45%
Kleihauer	430	-26
Haemoglobinopathy	3317	-10.5
Malaria	18	No significant change
TOTAL TESTS	**43113**	**-13.60%**
TOTAL SPECIMENS	**35437**	**-12.10%**

TABLE 10: HAEMATOLOGY REFERRED WORKLOAD 2005

TESTS	NUMBER	SPECIMEN
Factor Assays	233	133
Thrombophilia Screen	1548	268
YDNA	99	99
Cytogenetics	553	553
Molecular Genetics	168	168
HLA	11	11
Haemoglobinopathy confirmations	463	192
Immunology	997	306
Miscellaneous	49	49
Lymphocyte subsets	47	47
Total Number	**4168**	**1826**

HAEMATOLOGY:

The year of 2005 saw a decrease of 12% in the number of specimens received with this corresponding reduction in the numbers of tests. The reduction was exclusively in the in-house work, while there was no change in the profile of samples referred to outside laboratories, i.e. coagulation studies, etc., as enumerated in table 10 above.

TABLE 11: ANALYSIS OF BLOOD TRANSFUSION WORKLOAD

TESTS	NUMBERS	% +/- OVER 2004
Group/Save	4437	-27
X-matches performed (units)	902	-11
Patients X-matched	262	-17.3
Units Transfused	512	+45.0
X-match transfusion ratio	1:1.18	
Paedipacks issued (90 babies)	316	-18.3
Wastage: - Red cell concentrate	9.7%	27.2%
- Plasma reduced	3.0%	6.3%
- Platelets	2.0%	Not available
- Plasma	5.8%	Not available
Plasma transfused – Adult	83	-7.8
- Paed	30	-28.6
Platelets – Adult	14	-33.3
- Paed	38	-19.7
Cryo - Adult	9	Not available
- Paed	0	
Nova Seven	0	2
Anti-D Immunoglobin	1008	No change
TOTAL TESTS	**5339**	**-24.6**
TOTAL SPECIMENS	**4699**	**-26.5**

TABLE 12: ANALYSIS OF BLOOD GROUP SEROLOGY WORKLOAD 2005

TESTS	NUMBERS	% +/- OVER 2004
ABO Groups	15845	-7.7
Rh Groups	15845	-7.7
Antibody screens	13663	-8.1
Direct Coombes tests	1906	0.6
Antibody Identification	367	3.4
Titres	149	+30
Genotypes	349	-40
Immunes ABO	94	22.0
T Activation	2	No significant change
Total Tests	**48220**	**-8.9**
Total Specimens	**15845**	**-7.7**

BLOOD GROUP SEROLOGY:

The decrease in both specimen and tests is really a reversion to the 2003 workload. The year of 2004 was an exceptionally busy year.

55 Immune antibodies were detected of which Anti-D still remains the largest number (25.5%), with Anti-E (14.5%)and Anti-C+D (10.9%) being the next most significant. Of the other blood group systems Anti-K detected made up 12.7% of total. Kell negative blood is now being issued to all females under 60 years so this antibody should not present a problem in the future.

TRANSFUSION WORKLOAD:

Workload changes are as referred to in the comment regarding Blood group serology.

Of the adults transfused 25 patients had greater than 5 units. Of these 13 were due to PPH, which remains the largest group requiring transfusion. Only one patient required Hysterectomy.

90 babies required blood and/or blood products. The donor exposure rate has decreased significantly with the majority-51 babies- being exposed to one donor only. 24 were exposed to 2 donors, 9 to three donors and 1 to four donors. There was no exposure above four.

4 exchange transfusions took place all due to HDNB. Antibodies involved were Anti-D (3) and Anti-C+D (1).

Blood stock management has been improved by the introduction of Partial packed (plasma reduced) units, which replaced whole blood, for neonatal use. When not used, within the expiry time of 5 days, for the paediatric patient is transferred to adult blood stock with the normal expiry date of 35 days. This has resulted in less wastage of a valuable product.

STAFF

Consultant:	Prof. Mary Cafferkey
Chief Medical Scientist:	Mr. Ken Grundy;
Senior Medical Scientists:	Ms. Ita Cahill, Mr. David LeBanc;
Medical Scientists:	Ms. Patricia Baynes, Ms. Susan Luke, Ms. Ann Lamont, Ms Sheila Collins, Ms. Bernadette Lennon, Ms. Ellen Lennon;
Laboratory Aides:	Ms. Caroline Monks.

The number of specimens processed in the Clinical Microbiology laboratory increased by 5% over the 2004 number. Overall there were considerable increases in in-house general microbiology tests. The principal increased workload in general microbiology resulted from a 9% increase in urine specimens and an increase of 4% in swab specimens. The numbers of serology specimens increased by 1% reflecting stabilization in demographic changes.

Some major changes were made in tests and procedures during 2005.

TABLE 13: ROUTINE MICROBIOLOGY

	Test No's	% +/- over 2004	Specimen numbers	% +/- over 2004
Urine analysis	28982	5	16990	9
Swabs	20991	49	14926	4
CSF	220	11	110	11
Blood Cultures	1133	-2	1133	-2
Semenanalysis	4463	-12	1877	-1
Mycoplasma	639	21	639	21
Rotavirus	24	4	24	4
Sensitivities	6040	-5	N/A	N/A
Pregnancy Tests	789	-8	1789	-8
Chlamydia	1462	-14	1462	-14
Total Tests	**64743**	**13**	**37950**	**8.8**

1. TESTING FOR HIV

A change was made in the testing methods for anti-HIV. From the time that routine testing was introduced in January 1998, two screening tests had been performed, in line with best practice recommendations. Ongoing audit of the findings revealed that one of the two test utilised was problematical being associated with a small but unacceptable rate of false positives, which necessitated repeat testing later in the pregnancy. Also in the interim the testing methodology had improved and a newly developed test for both antibody and antigen was available. This new test represents a major advance on previous tests for diagnosing infection with HIV in that as it can detect both antigen and antibody it will be positive at an earlier stage in the infection than a test that is based on antibody detection alone. International bodies now recommend this improved test for screening. Hence during 2005 this combined antibody/antigen test was introduced and replaced the two separate tests previously used for detection of anti-HIV.

TABLE 14: SEROLOGY

	Test number	% +/- over 2004	Specimen Number	% +/- over 2004
HIV	9821			
Hep B	9848			
Hep B core	316			
Hep C	2950			
CMV	2118			
VZ	8031			
TOTAL	**33084**	**-23**	**11733**	**1**

TABLE 15: REFERRED SPECIMEN

	Tests	% +/- over 2004	Specimen	% =/- over 2004
			8	
Rubella/syphilis	8947/7849	0.53	947	2
*Others	5790	-10.6	1962	-5
TOTAL	**22586**	**-2.6**	**9109**	**11.3.**

*To specialised reference laboratories

2. PROCESSING OF HIGH VAGINAL SPECIMENS FOR BACTERIAL VAGINOSIS

There have been many reports of an association between bacterial vaginosis and late miscarriage and/or spontaneous preterm birth. Bacterial vaginosis is usually a low-grade or asymptomatic infection. The laboratory diagnosis of this condition has been controversial, and culture for associated microbial flora is no longer generally recommended. Instead, various criteria have been established for the diagnosis of bacterial vaginosis based on microscopic examination of a specimen of vaginal fluid. Audit revealed that this condition was rarely diagnosed at the Rotunda. To address this issue, during 2005, the methodology for processing and reporting "routine" high vaginal swab specimens was amended to incorporate the use of Hay's criteria for microscopic diagnosis of bacterial vaginosis. Audit of this revised methodology is ongoing.

3. ANDROLOGY

Many Dublin laboratories have discontinued their semenology service. As a consequence the workload referred to this laboratory has increased. This was reflected in the large number of specimens received for examination (1877 in 2005). During 2005, use of the MAR test on semen specimens was discontinued because of the well-known difficulty in establishing criteria for interpretation of the results, and this is in line with international best practice recommendations. Ongoing audit of this testing is in progress.

4. SCREENING FOR ANTIMICROBIAL-RESISTANT ORGANISMS

Following ongoing audit of practice and outcomes, change made in some procedures for surveillance and screening for antimicrobial- resistant organisms. The following is the guideline now in place.

The **routine** screening programme includes the following:

a) staff screening
b) screening of all infants in the Neonatal Unit
c) screening of all patients who are known to be carriers of or infected with specific antibiotic-resistant organisms.
d) patients admitted from all other hospitals or units
e) screening in specific circumstances

4.a STAFF SCREENING

A routine programme of screening medical, nursing and allied staff for MRSA carriage is in place.

4.a (i) On commencement of employment all of the following staff are screened routinely for MRSA **nasal** carriage:

All medical staff
All midwifery and nursing staff
All seconded midwifery and nursing students
All maternity care assistants
Each incoming group of medical students
Physiotherapy staff
Radiology staff

4.a (ii) Because some members of the medical, nursing and allied staff also work in other healthcare institutions, screening of staff working in all clinical areas is undertaken on a rotational basis.

4.b SCREENING OF INFANTS IN THE NEONATAL UNIT

Routine screening for specific antimicrobial resistant organisms is performed on a weekly basis for all infants in the Neonatal Unit.
Routine screening of all infants for MRSA carriage is performed bi-weekly.
In the alternate weeks, routine screening is performed for multiple antibiotic resistant Gram negative bacilli, extended spectrum blactamase–producing Gram negative bacilli (ESBL GNB), cephalosporinase producing Gram negative bacilli, vancomycin-resistant enterococci (VRE) and candida species.

4.c SCREENING OF ALL PATIENTS WHO ARE KNOWN TO BE/FOUND TO BE CARRIERS OF/OR INFECTED WITH SPECIFIC ANTIBIOTIC-RESISTANT ORGANISMS.

MRSA

All patients who have previously found to be carriers of or infected with MRSA are screened.

Multiple-antibiotic resistant Gram negative bacilli, ESBL and/or VRE

All patients found to carriers of/infected with these organisms are nursed in isolation in a single room. Repeat screening is performed weekly or as required.

4.d PATIENTS ADMITTED FROM ALL OTHER HOSPITALS OR UNITS

All infants admitted or readmitted from another hospital or Unit are presumed to be colonized with MRSA until results of admission screening swabs/specimens become available. These infants are managed as for infants found to be MRSA carriers; for details see the infection control guidelines.

All patients (all ages) admitted from another hospitals or unit are screened to MRSA nasal carriage. In the case of a patient with a skin lesion(s), the lesion is also swabbedfor MRSA carriage. Additional screening specimens for MRSA screening in infants are an umbilical swab, and, if intubated a nasal aspirate.

4.e Screening in specific situations

In the event of possible episodes of cross-infection, the Infection Control team may undertake screening of all patients and staff in a particular clinical area.

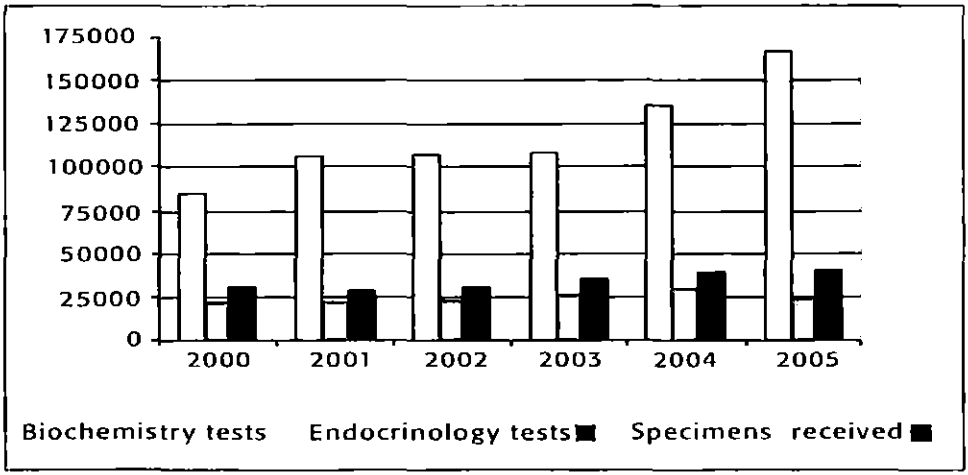
BIOCHEMISTRY:

Medical Staff:	
Consultant:	Prof Philip Mayne
Senior Biochemist:	Mr Peter Brown;
Senior Medical Scientist:	Ms Hilda Guerin;
Medical Scientists:	Mr. Andrew Wortley, Ms. Lorna Pentony;
Laboratory Aides:	Ms. Ciaran McGee; Ms. Caroline Monks; Ms. Claire O'Rourke, Ms. Miriam Blesa

The activity for 2005 compared to those from 2000 to 2004 is shown in the Figure below. The overall number of tests performed in General Biochemistry increased by 22% compared to 2004. There was no significant increase in the number of specimens received but the test / request ratio increased by over 20%. This activity is clinician driven; there appears to have been a general increase in the level of ordering tests particularly from Day Cases with the majority of individuals now having 'routine' renal and liver profiles. The endocrine workload continued to benefit from the introduction of the Roche Elecysis discrete-discretionary analyser during 2003. The activity was down slightly on the previous year with a modest reduction in the test request ratio.

During 2005 the laboratory was partially refurbished and up-graded with new benching; the Roche Integra 700 Biochemistry analyser was upgraded to the Roche Integra 800. The laboratory 'acquired' HPLC equipment from the Mater Miscericordiae University Hospital's Biochemistry laboratory and now performs glycated haemoglobin analyses on site. The service is also provided to the Coombe Women's Hospital. This has significantly improved the turn-around of analysis from receipt of sample to generation of result and, as a consequence, has proved cost effective.

Figure: Biochemistry in-house workload between 2000 and 2005



The Biochemistry Staff membership was stable during 2005 and all continued to work hard in preparing documentation for Pathology Laboratory Accreditation and in the implementation of policies and procedures.

PUBLICATIONS:

Sri Paran T, Mortell A, Devaney D, Pinter A, Puri P
Mucinous cystadenoma of the ovary in perimenarchal girls
Pediatr Surg. Int. 2006 Mar: 22(3): 224-7.Epub 2006 Jan 17

Sheehan KM, Mc Garvey C, Devaney DM, Matthews T.
How reliable are SIDS rates?
Arch Dis Child 2005 Oct; 90 (10): 1082-3

Taha MK, Alonso JM, Cafferkey M, Caugant DA, Clarke SC, Diggle MA, Fox A, Frosch M, Gray SJ, Guiver M, Heuberger S, Kalmusova J, Kesanopoulos K, Klem AM, Kriz P, Marsh J, Molling P, Murphy K, Olcen P, Sanou O, Tzanakaki G, Vogel U
Interlaboratory comparison of PCR-based identification and genogrouping of Neisseria meningitidis.
Journal of Clinical Microbiology 2005;43:144-9.

O'Halloran Damien M, Cafferkey Mary T
Multiplex PCR for identification of seven Streptococcus pneumoniae serotypes targeted by a 7-valent conjugate vaccine
Journal of Clinical Microbiology 2005;43:3487-90

Knowles SJ, Cahill I, Grundy K, Cafferkey MT, Geary M
Low cytomegalovirus sero-prevalence in Irish pregnant women.
Irish Medical Journal 2005:98:210-2

Sayers G, McCarthy T, O'Connell M, O'Leary M, O'Brien D, Cafferkey M, McNamara E.
Haemolytic uraemic syndrome associated with interfamilial spread of E. coli O26:H11.
Epidemiology and Infection 2005 Dec 22::1.5 [e-pub ahead of print]

Murphy J, Hoey HMCV, Philip M, Roche EF, Macken S, Mayne P, Duff D, O'Keefe M, McShane D, Fogarty E, O'Regan M.
Guidelines for the medical management of Irish children and adolescents with Down Syndrome.
Irish Med J 2005;98:48-52

Kirke PN, Mills JL, Molloy AM, Brody LC, O'Leary VB, Daly L, Murray S, Conley M, Mayne PD, Smith O, John M Scott JM
Impact of the MTHFR C677T polymorphism on risk of neural tube defects: case-control study.
BMJ. May 2004;10:1136

Flanagan JM, Tighe O, O'Neill C, Naughten E, Mayne PD, Croke DT.
Identification of sequence variation in the galactose-1-phosphate uridyl transferase gene by dHPLC
Molecular Genetics and Metabolism 2004;81:133-136.

Naughten ER, Mayne PD, Monavari AA, Goodman SI, Sulaiman G, Croke DT.
Glutaric Aciduria Type I, Outcome in the Republic of Ireland.
J Inherit Met Dis 2004:27:917-920

Tighe O, Flanagan JM, Kernan F, O'Neill C, Naughten E, Mayne PD, Croke DT. Frequency ***distribution of the Los Angeles and Duarte galactose-1-phosphate uridyltransferase variant alleles in the Irish population.***
Mol Genet Metab. 2004;82:345-347.

ABSTRACTS AND PRESENTATIONS

A. O'Malley and J. Gillan.
The incidence of viral infection causing villitis.
Pathology Departments, _Rotunda Hospital and _Trinity College Medical School, Dublin, Ireland.
European Placenta Group, Glasgow, Scotland, March 2005.

A. O'Malley, J. Banks, S. Cooley, J. Donnelly, C. Curran, B. O'Neill, C. McMahon, M. Geary, J. Gillan.
Influence of thrombophilia on placental villus structure: a stereological study.
Departments of Pathology and Obstetrics, Rotunda Hospital, Trinity College Medical School and Haematology Department, Our Lady's Hospital for Sick Children, Crumlin, Dublin, Ireland.
European Placental Group, Glasgow, Scotland, March 2005.

A. O'Malley, J. Banks, S. Cooley, J. Donnelly, C. Curran, B. O'Neill, C. McMahon, M. Geary, J. Gillan.
Chronic uteroplacental insufficiency associated with normal birth weight – a stereologically distinct entity.
Departments of Pathology and Obstetrics, Rotunda Hospital, Trinity College Medical School and Haematology Department, Our Lady's Hospital for Sick Children, Crumlin, Dublin, Ireland.
European Placental Group, Glasgow, Scotland, March 2005.

A. O'Malley, S. McCauley and J. Gillan.
Chronic uteroplacental insufficiency (CUPI) causing IUGR in one of dichorial twins, - evidence of a primary disorder of the non-villous trophoblast.
Department of Pathology, Rotunda Hospital and Trinity College Medical School, Dublin, Ireland.
European Placental Group, Glasgow, Scotland, March 2005.

Balgobin N. Devaney D.
Discrepancy between neuroimaging and post mortem findings in a case of glutaric aciduria type I
British Paediatric Pathology Association.
Royal College of Paediatrics and Child Health 9th Spring Meeting, Univ. of York. 18-21 April 2005.

Devaney D.
Rare Combination of Diarrhoea- Negative Haemolytic Uraemic Syndrome and Acute Post-Infectious Glomerulonephritis
Paed. Pathol. Society, Tours, France, 31st August – 3rd September 2005.
Melanie Cotter, Thomas Connell, Eric Colhoun, Owen P. Smith and Corrina McMahon.
Carbonic Anhydrase II Deficiency: A Rare Autosomal Recessive Disorder of Osteopetrosis, Renal Tubular Acidosis, and Cerebral Calcification
Journal of Pediatric Hematology/Oncology 2005:(27):115_117.

Annemarie Tobin, Melanie Cotter, Alan D. Irvine and Brian Kirby.
Successful treatment of a refractory verruca in a child with acute lymphoblastic leukaemia with topical cidofovir.
British Journal of Dermatology 2005;(2):386-8.

Devaney D, Cumiskey J, Buckley C, Murphy K, Cafferkey M.
Diagnosis of Invasive Meningococcal Disease in Post Mortem Archival Material
European Monitoring Group on Meningogocci
R.C.S.I., Dublin, 6th – 8th September 2005.

Devaney D, Cumiskey J, Buckley C, Murphy K, Cafferkey M.
Diagnosis of Invasive Meningococcal Disease in Post Mortem Archival Material
European Monitoring Group on Meningogocci
R.C.S.I., Dublin, 6th – 8th September 2005.

Tighe O, Bertorelle G, O'Neill C, Mayne P, Croke DT, European PAH VNTR cassette sequence variation study group.
Intraallelic variability in the R408W Phenylketonuria mutant lineage in Europe.
Irish Society of Human Genetics, 8th Annual Symposium, Dublin September 2005

Mullen E, O'Neill C, Bennett D, Naughten E, Croke DT, Mayne PD.
Maple Syrup Urine Disease: the Mutational Spectrum associated with MSUD in Ireland.
Irish Society of Human Genetics, 8th Annual Symposium, Dublin September 2005

Naughten, ER, Clark A, Kellett M, O'Shea A, Mayne PD.
Maple Syrup Urine Disease – adolescent growth Spurt.
SSIEM 41st Annual Symposium, Amsterdam The Netherlands September 2004

Naughten ER, Mayne PD, Walsh R, Howard P, Monavari AA.
Clinical Outconme of Glutaric Aciduria Type I in Ireland.
SSIEM 41st Annual Symposium, Amsterdam The Netherlands September 2004

Mohamed S, Mulhair P, O'Neill C, Naughten, Yap S, Treacy EP, Mayne PD.
Is high risk screening for Classical Galactosaemia in Ireland effective.
SSIEM 41st Annual Symposium, Amsterdam The Netherlands September 2004

Mohamed S, Ready, Yap S, O'Neill C, Rogers Y, Mayne PD, Treacy EP.
Long-term dietary management and outcome of Galactosaemia/Duarte (D/G) cases. variant
SSIEM 41st Annual Symposium, Amsterdam The Netherlands September 2004

Roche J, Greally P, Leen G, Dier J, Walsh L, Gaffney P, Srinivasan S, Mayne P, Boran G.
Using Sweat conductivity as a screening test for Cystic Fibrosis.
Irish Paediatric Association, Tallaght November 2004

POSTERS

A Canney[1], J Gillan[2], E Crushell[3], Corcoran D[1], T Clarke[1]
A complex metabolic disorder with a progressive phenotype: - Diagnosis suspected at 48 hours of life by routine placental histopathological examination.
Departments of [1]Neonatology and [2]Pathology, The Rotunda Hospital, Dublin and [3]National Centre for Inherited Metabolic Disorders, The Children's University Hospital, Temple Street, Dublin.
Submission for joint IPA/JIPA meeting November 25th 2005

INVITED LECTURES

Dr. J.E. Gillan
Chronic uteroplacental insufficiency causing IUGR in one of dichorial twins.
European Placental Group, Glasgow, Scotland, March 2005.

Dr. M. Cotter
A year of paediatric ITP - data from the Irish Paediatric Surveillance and Ulster Paediatric Society report card system
ITP Support Association National Convention (June) 2005, St. James's Hospital, Dublin.

BOOK REVIEW:

Dr. M. Cotter
Practical Algorithms in Pediatric Hematology and Oncology.
Editor R. H. Sills Publisher:
Karger Invited review by Irish Medical Journal 2005

Ultrasound, Fetal Assessment & Prenatal Diagnosis Clinics

CONSULTANTS:
Dr. Michael Geary
Dr. Carole Barry-Kinsella
Prof. Fergal Malone
Dr. Mary Holohan
Dr. Ronan Gleeson
Dr. Barry Gaughan

MIDWIFE SONOGRAPHERS:

Hilda O'Keefe	CMM2
Catherine Mulhare	CMS
Irene Twomey	CMS
Deirdre Nolan	S/M
Marian Gibbs	S/M

FAU/PND:

Nollaig Kelliher	CMM2
Jane Dalrymple	CMS
Helen Hartigan	S/M

MEDICAL SOCIAL WORKER:
Gerardine Parkinson

ADMINISTRATION
Geraldine Fay
Anita O'Reilly

2005 was a very busy year in the Ultrasound (USS), Fetal Assessment (FAU) and Prenatal Diagnosis (PND) clinics. Expansion and development within the department included:

1. Professor Fergal Malone joining the team in March 2005, increasing the consultant provided clinical sessions to 9 per week.

2. The official opening of the newly renovated Ultrasound & Fetal Assessment Unit by An Taoiseach Mr. Bertie Ahern in the 25th April 2005.

3. Increased ultrasound capacity with the purchase of a fourth Voluson 730 3D/4D machine.

4. Improved reporting system with the installation of Viewpoint computer software in December 2005. This was funded through patient donations and The Friends of the Rotunda Staff Car Draw.

5. Dr. Sharon Cooley and Dr. Jennifer Donnelly both awarded the Diploma in Advanced Obstetric Ultrasound.

The core ultrasound services in The Rotunda Hospital in 2005 were provided by Midwife Sonoghraphers: Hilda O'Keeffe, Catherine Mulhare, Irene Twomey, Deirdre Nolan and Marian Gibbs. Routine scans offered to all patients included a booking scan and a post date scan at term plus 10 days. Serial scanning was provided for patients attending the Diabetic, Twin, ECV and Medical Clinics. Non routine or emergency scan indications included problems in the first trimester and specific clinical problems in subsequent trimesters. The number of patients having gynaecological scans increased from previous years. These included patients from the general gynaecology clinics and from the infertility clinics for ultrasound follicular tracking with ovulation induction agents.

NUMBER OF OBSTETRIC SCANS

First Trimester	1,817
Booking Scan	4,117
Second Trimester	25,812

NUMBER OF GYNAECOLOGICAL SCANS

General	1,144
Infertility	1,868
Total	34,758

Drs. Holohan, Gleeson and Gaughan with CMM2 Kelliher and S/M Hartigan provided longitudinal follow up for women with high risk pregnancies in the Fetal Assessment. These were a diverse group of patients among which women with obstetric cholestasis, preterm pre-labour rupture of membranes, epilepsy, Rhesus iso-immunisation, IUGR, multiple pregnancies and post maturity featured. In addition to fetal biometry, biophysical score and CTG, serial laboratory evaluation largely facilitated outpatient management. 1,626 patients were seen.

In 2005, 685 new patients attended for Prenatal Diagnosis. Drs. Geary, and Kinsella and Prof. Malone with CMS Dalrymple operated 6 clinics per week.

There were 1,313 attendances as some patients were followed longitudinally. All patients had an ultrasound scan. In addition the following tests were performed:-

Nuchal translucency (NT) alone	10
NT & 1st trimester serum biochemistry	248
2nd trimester serum biochemistry	43
Amniocentesis	74
CVS	44
Cardiac Scans	65
Anomaly scans	564

Of the 118 diagnostic tests performed, 27 cases of chromosomal abnormalities were diagnosed. These include: -

Abnormality	CVS	Amnio	Total
Trisomy 21	6	1	7
Trisomy 18	3	6	9
Trisomy 13	1	3	4
Turners	2	3	5
Others	1	1	2

Excluding soft markers and chromosomal abnormalities, 69 cases of major structural abnormalities were detected and followed. These include:-

CNS	18
CVS	3
Urinary	16
GIT	15
Multiple	3
Cystic Hygroma	10
Skeletal	2
Other	2
Total	69

The following 31 patients with normal chromosomes and no structural abnormality were also managed.

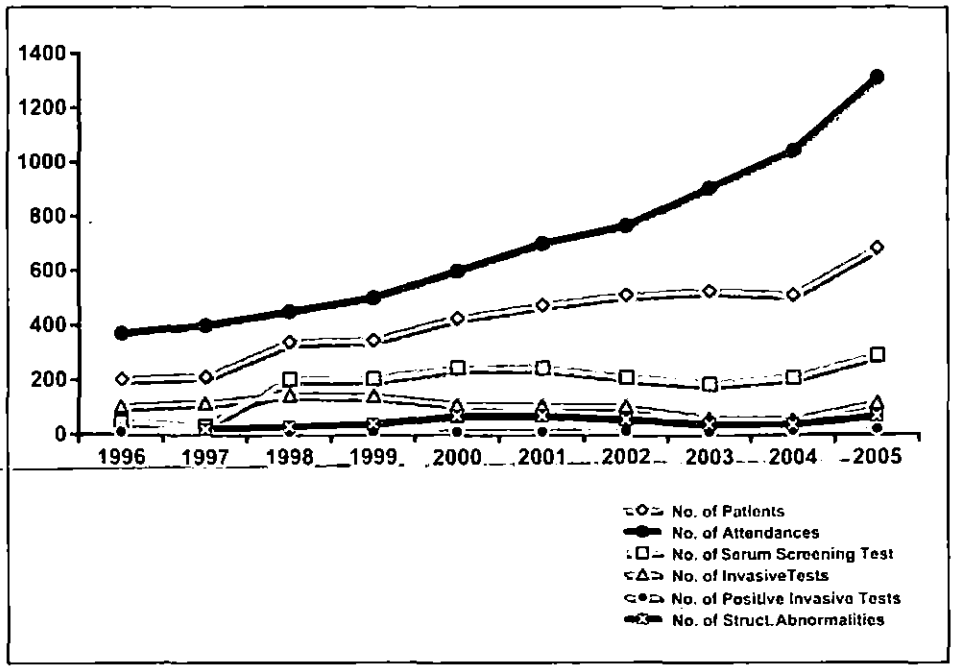
Twin to Twin Transfusion	2
Parvo-Virus	3
IUGR	8
PROM (<24/40)	3
Soft Markers with Normal Outcome	15

CPC	4
Nuchal Fold	7
Pyelectasis	2
Ventriculomegaly	2
Total	31

Since starting in 1996 the Prenatal Diagnosis Clinic has become busier each year.

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
No. of Patients	202	211	338	344	426	473	510	526	512	685
No. of Attendances						700	765	905	1044	1313
No. of Serum Screening Tests	45	31	201	203	244	242	207	184	209	291
No. of Invasive Tests	102	115	144	140	109	104	102	58	55	118
No. of Chrom. Abnormalities	11	15	13	13	10	9	11	5	9	27
% of Positive Invasive Tests.	10%	13%	9%	9%	9%	9%	11%	9%	16%	22%
No. of Struct. Abnromalities	19	27	37	67	67	52	36	36	69	

Prenatal Diagnosis Clinic



Teenage Pregnancy Clinic

DR GERALDINE CONNOLLY
DEBORAH PAGE RM

This clinic was set up in January 2005 to serve the teenage mothers attending the Rotunda for antenatal care. Approximately 8% of all deliveries in the Rotunda in 2004 were to teenage mothers.

All girls aged 17 and younger attended the Teen Clinic in 2005. A total of 143 girls attended, with a mean age of 16.6 years. There were 13 girls aged 15 or younger. 91%per were primigravida, 9% were previously pregnant and 4 had a previous live birth. The mean gestation at booking was 17 weeks, 43% were unsure of their dates. Specific antenatal classes were developed for this group and had a 64% attendance rate.

46% of the girls were students, 14% were employed and 40% were unemployed. The majority, 80%, still lived at home, 15% were living with their partners, 5% were asylum seekers, one girl was living alone and one girl was homeless. 95% were unmarried with the partner being involved in 70% of the pregnancies. Two young prospective fathers committed suicide during the course of the pregnancy.

80% went into labour spontaneously. 18% were induced and 2% had an elective caesarean section. The epidural rate was 71%. Mode of delivery was spontaneous vaginal delivery in 66%, 21% had instrumental deliveries and 13% had emergency caesarean sections. The mean birth weight was 3.3Kg, the preterm delivery rate was 2% and there were no stillbirths. There was one neonatal death of a normally formed infant at age 5 days at home. This was considered a cot death.

MENTAL HEALTH SERVICES

DR JOHN SHEEHAN FRCP I M. MED SC., I MRC PSYCH.,
Consultant Psychiatrist.

In 2005, 528 patients attended the Health Promotion Clinic run by the Mental Health Support Midwife. 681 new patients and 591 follow-up patients were reviewed by the Mental Health Support Midwife on the Wards. A total of 114 new patients were assessed by the Consultant Psychiatrist in the Outpatients, as well as 252 follow-up patients.

2005 was a busy year for education and training. Dr. Sheehan gave a presentation at the Annual Conference of the "Out and About Association", in November on the Prevention and Detection of Postnatal Depression. He also was involved in 2 training courses for Public Health Nurses on the use of the Edinburgh Postnatal Depression Scale. During the year, he gave lectures to the final year medical students of UCD, TCD and RCSI on perinatal psychiatry. He also provided lectures to the Diploma in Gynaecology and Obstetric students. A Senior Registrar, using her Special Interest Session, attended the Outpatients Department with Dr. Sheehan, in order to gain experience of perinatal psychiatry.

Funding was obtained in December 2005 for a research project on Alcohol Use in Pregnant Women. It is planned to begin the research in 2006.

Combined Service For Diabetes Mellitus

DR RICHARD FIRTH BSc FRCPI Consultant Endocrinologist
DR BRENDAN T KINSLEY MD FRCPI
DR SAM COULTER SMITH MB MRCOG Consultant Obstetrician
MICHELLE FERGUSON, CMS Diabetes
LAURA HARRINGTON, Registered Dietitian

PREGESTATIONAL DIABETES MELLITUS

Rotunda Hospital 2005

Type I Diabetes

Pregnancies	n=21
Spontaneous Abortions	3/21 (14%)
Perinatal Death	n=1
Preterm Deliveries	n=4 1 @ 25 weeks
	1 @ 34 weeks
	2 @ 36 weeks
Term Pregnancies	n=14
Live Infants	n=17

Maternal Data (n=21)

Age	30±5 years
DM Duration	12.5±9 years
DM Complications	0/21
Hypertension	3/21
Gestation at OPD Booking	9±5 weeks
Booking HBA1c	7.3±1%
Booking Fructosamine	326±92
Delivery HBA1c	6.5±0.9%
Delivery Fructosamine	247±42
Caesarean Section	12/18 (66%)

Infant Data (n=18)

Gestation at delivery	36.5±4 weeks
Birth Weight	3.08±1.1 kg
Macrosomia 4-4.499kgs	1/18
Macrosomia ≥ 4.5kg	1/18
Congenital Anomalies	0/18
Neonatal Death	1/18 (Extreme prematurity)

Type 2 Diabetes

Pregnancies	n= 9 (8 T2 & 1 IGT)
Spontaneous Abortions	2/9 (22%)
Perinatal Death	n=0
Preterm Deliveries	n=2 1 @ 33 weeks
	1 @ 27 weeks
Term Pregnancies	n=5
Live Infants	n=7

Maternal Data (n=9)

Age	32±4 years
DM Duration	2±2 years
Gestation at OPD Booking	7±1.5 weeks
Booking HBA1c	6.9±1.2%
Booking Fructosamine	234±30
Delivery HBA1c	6±0.7%
Delivery Fructosamine	224±6
Caesarean Section	6/7 (86%)

Infant Data (n=7)

Gestation at delivery	36±5 weeks
Birth Weight	2.74±1.1 kg
Macrosomia 4-4.499kgs	0/7
Macrosomia ≥ 4.5kg	0/7
Congenital Anomalies	?1 Infant extreme prematurity with ?dys plastic kidneys, ?autosomal recessive polycystic kidneys, ? acquired.
Neonatal Death	0/7

GESTATIONAL DIABETES MELLITUS

Pregnancies n = 157

Age	32±5 years
Birth Weight	3.44±0.7 kg
Caesarean Section	65/157 (41%)
Perinatal Death	3/157 (1.9%)
Spontaneous Abortion	1/157 (0.6%)
Congenital Anomalies	2 + ?1/157

Insulin Treated n= 99 **(63%)**

Age	31±6 years
Seen at DM OPD	27±9 weeks
To Insulin	27±8 weeks
Gest at Delivery	39±2 weeks
Birth Weight	3.43±0.7 kg
Caesarean Section	46 (46%)
Intrauterine Death	1 (at 34 weeks) 1/99 (1%)
Neonatal Death	1 (Neurocutaneous melanosis sequence - oesophageal ateresia & tracheo-oesophageal fistula, died at 45 days old)
Spontaneous Abortion	0
Congenital Anomalies	3/157 (Duodenal atresia, diaphragmatic hernia, 3rd as above)

Diet Treated n=58 **(37%)**

Age	34±5 years
Birth Weight	3.45±0.7 kg
Caesarean Section	19/58 (33%)
Spontaneous Abortion	1
Neonatal Death	1 (Prematurity)

Birth Weights
Data based on 156 deliveries (160 Infants)

	N	%
<4.0kg	129	81
4.0-4.499kg	26	16
4.5-4.99kg	3	2
>5.0kg	2	1

ONE ABNORMAL VALUE ON OGTT

N=153
Rx with Diet n=135
Rx with Insulin n=18

TOTAL GROUP	N=153
Age	33±6 years
Birth Weight	3.6±0.57 kg
Caesarean Section	54/153 (35%)

DIET GROUP	N=135
Age	33±6 years
Birth Weight	3.64±0.6 kg
Caesarean Section	45/135 (33%)

INSULIN GROUP	N=18
Age	32±6years
To Insulin	32±2 weeks
Gestation at Delivery	39±1 weeks
Birth Weight	3.69±0.4kg
Caesarean Section	9/18 (50%)

Data based on 153 Deliveries (153 Infants)

	N	%
<4000g	113	74
4000-4499g	30	20
4500-4999g	8	5
>5000g	2	1

CLINICAL NUTRITION

LAURA HARRINGTON, RD

This was the first full year that the Rotunda had a full time dietitian. There was a marked increase in the number of new patients compared to the previous year.

In 2005, the dietitian saw a total of 571 new patients and 388 reviews. Patients cared for can be classified in the table below:

Referring Service	Number of Patient Visits (Combined in- and outpatients)	Percentage of Total Patient Visits
Antenatal	290	30.2 %
Diabetes	595	62.0 %
Gynaecology	61	6.4 %
Neonatology/Paeds	13	1.4 %

The majority of Dietetic referrals are for the following conditions:

- Antenatal: Hyperemesis, maternal underweight, overweight or obesity, poor diet, poor weight gain, anaemia and vegetarianism
- Diabetes: Gestational diabetes, Type 1 diabetes during pregnancy and impaired glucose tolerance
- Gynaecology: Polycystic ovary syndrome, overweight, obesity and infertility
- Neonatology/Paeds: Poor weight gain or faltering growth

The dietitian is involved in group work for both adult and teenage antenatal classes and employee in-service talks.

Service expansion is planned based on the balance between resources and local needs assessment.

Links are maintained with the dietitians at The Coombe Women's Hospital, The National Maternity Hospital and Mount Carmel Hospital to create best practice guidelines, create and update patient education materials and encourage continuing education.

Epilepsy Clinic

DR MARY HOLOHAN

In 2005, 68 patients were seen at the Epilepsy Clinic.

51 of these patients delivered in 2005. For all of these patients a pre-natal diagnosis was performed and anti-convulsant and folic acid medication optimized. 33 of the patients were currently on anti-convulsant medication during the pregnancy. A delivery plan was determined for each patient, often in conjunction with their neurologist. All patients were urged to link with the Epilepsy in Pregnancy Register in Beaumont Hospital.

2 patients, who were on anti-epileptic medications for neuropathic pain, were also seen at the Clinic.

None of these mothers or babies had serious morbidity during pregnancy and delivery or in the early post-delivery time.

PHYSIOTHERAPY

ANNE DE LACY MURPHY

The physiotherapy department had a challenging year in 2005. In most areas of our work there have been some increase in patient numbers, despite the fact that throughout the year we were without our full compliment of physiotherapy staff.

OBSTETRIC PHYSIOTHERAPY

URINARY INCONTINENCE

I note that there has been some increase in the number of patients referred with urinary incontinence during pregnancy and the postnatal period.

	2004	2005
Antenatal	25	44
Postnatal	54	59
TOTAL	79	103

However the low numbers being referred is of great concern to our department. There is much research to show that pregnancy and childbirth cause pelvic floor damage. Intervention with an appropriate physiotherapy programme at this early stage can prevent a high proportion of women suffering long-term incontinence in later years.

ANTENATAL PHYSIOTHERAPY

The majority of patients presenting during pregnancy to the Physiotherapy department attended with pelvic girdle pain. Many were seen on an individual basis while others responded well to our group sessions. These sessions continue to be held on a fortnightly basis.

	Patients	Attendances
Pelvic Girdle Pain	240	398
Urinary Incontinence	44	87
Carpal Tunnel Syndrome	21	34
Bells Palsy	1	5
Chest Physiotherapy	23	48
Pelvic Girdle Pain Class	73	150

PREPARATION FOR PARENTHOOD CLASSES

There has been an increase in the number of Mums attending antenatal classes this year. The first class is attended ideally in early pregnancy between 12-18 weeks gestation. Subsequent classes, for primips, commence at 30 weeks and are held on a weekly basis. There continues to be 20 percent non-attendance at these subsequent classes.
Special courses of classes were held for teenage mums attending the teen clinic. Mums with special needs were seen on a one to one basis for their classes.

	Number of Mums
Courses for Primips	85
Number of Primips	1338
Courses for Teen Mums	5
Number of Teen Mums	80
Courses for Multips	12
Number of Multips	169

POSTNATAL PHYSIOTHERAPY

Inpatients:

- An appropriate exercise programme is commenced following delivery. We aim to see all Mums at least once.
- 5192 Mums were seen as inpatients and 1444 Mums were seen twice prior to discharge.
- Mums who have taken early discharge are invited to attend the postnatal outpatient class.

Outpatients:
A total of 132 postnatal mums attended as outpatients for one to one treatment.

	Patients	Attendances
3rd degree tears	73	128
4th degree tears	10	22
Postnatal Incontinence	59	98

GYNAECOLOGICAL PHYSIOTHERAPY

The physiotherapists aimed to see all patients admitted for major surgery for anti DVT exercises and pelvic floor exercises. Advice was also given re further exercises.

Outpatients	83
Outpatient Treatments	253
Inpatients	237
Inpatient Treatments	253

PAEDIATRIC PHYSIOTHERAPY

There continues to be a large number of babies presenting with plagiocephaly and torticollis. This is despite advice being given to mums both antenatally and postnatally regarding positioning and handling of baby.

	Patients	Attendances
Torticollis	62	252
Feet	33	85
Neurodevelopment	22	123
Erbs	16	84
Chest	1	4

TEACHING/LECTURES

- Manual Handling training sessions were provided twice monthly for all members of staff who wished to attend.
- Clinical experience was given to UCD and RCSI physiotherapy students.
- Womens Health lectures to UCD and RCSI school of Physiotherapy, including setting and correcting exams.
- Lecture to Public Health Nurses on the role of Physiotherapy in the management of urinary incontinence

In conclusion I would like to thank all the physiotherapy staff, in particular the senior physiotherapist Valerie McConnell, for their continuing hard work and support throughout the year.

Sexual Assault Treatment Unit

DR MARY HOLOHAN

In 2005, there were 293 attendances to the Sexual Assault Treatment Unit. These were made by 277 females and 16 males. Evaluation of long-term sexual abuse was required for 8 cases. Of 285 attendances following a recent incident, 247 were seen within 72 hours. The Gardaí were involved in 98% of these very recent cases. 14 clients were hospitalised for injury in relation to the assault, 4 further clients were hospitalised for alcohol toxicity and 2 clients were hospitalised with acute psychiatric symptoms. 20 clients had significant general trauma managed by the Sexual Assault Treatment Unit. 6 assaults had occurred in another country.

The ages of female clients seen after a recent incident are shown in Table 1. In this group of 267 clients, 25 were married or co-habiting; 47 were unemployed; 56 were in second level and 46 were in third level education. A psychiatric disorder, other than addiction, was present in 39 cases, 9 attendees were in special schools or workshops and 30 clients were not Irish born. Only 18% of the acute assaults in females were between 0900 hours and 2100 hours and 32% occurred in May-August inclusive. 11% of the attendances were in the month of December.

Post-coital contraception (PCC) was given to 119 of 240 females seen within 72 hours of the assault. It was not given to 121 women seen early, because they were already using effective contraception (56), were post-hysterectomy or post-menopausal (8), had received treatment prior to attending the Unit (19), the nature of the assault did not require a treatment (13) or PCC was contra-indicated (4). Treatment was refused by 11 clients and 8 clients had menses. 2 patients were pregnant at the time of attendance at the Unit and one of these pregnancies was as a result of the assault.

The alleged assault, in acute attendances, occurred in the victim's home in 55 cases and in the assailant's home in 62 cases. The single assailant was a stranger in 89 cases, an acquaintance of less than 12 hours in 56 cases and the long term partner in 13 cases. There was more than one assailant in 25 cases.

More than 4 units of alcohol had been consumed by the victim in 172 (60%) of the acute cases (female and male) and drug abuse occurred in a further 14 cases, with drug and alcohol abuse in 14 cases. In 42 cases the possible use of Rohypnol was considered by the client or the doctor. There was a background of considerable alcohol intake in 35 of these cases. Toxicology was not positive for Rohypnol in any of these cases. In 92 cases the Unit saw clients to evaluate the possibility of a sexual crime because of memory loss, most after ingestion of large amounts of alcohol.

All clients were offered screening for sexually transmitted disease. 4 refused an appointment and 20 attended another service. 118 clients did not attend for the arranged appointment. In 145 clients, there were 44 abnormal results (Table 2).

In January 2005, Miss World, Ms. Rosanna Davison opened the new medical examination facility of the Sexual Assault Treatment Unit. Ms. Davison spoke of her delight in being asked to open the Unit, whose presence is needed by young women at a time of great distress in their lives. This purpose-built suite of rooms comprises an interview area, an examination room and full bathroom facilities. The suite is used for all new attendances to the Unit and there is a special cleaning regime to ensure that this is a forensically clean space. This development was made possible due to financial support from The Friends of the Rotunda Hospital and also support from the Health Service Executive and the Unit would like to extend their thanks to The Friends of the Rotunda Hospital and to Karen Burke of the H.S.E. for their support in this endeavour.

During 2005 recruitment and training took place for the dedicated nursing staff for the Unit. In October 2005 this service commenced and the nursing care for attendees at the Unit is now provided by nurses, who have undertaken very specific training for this task. The nurses are on-call from home for this work and the service is no longer provided by nurses on ward duty within the Hospital. We are grateful to Ms. Pauline Treanor, Director of Nursing and Midwifery in the Rotunda Hospital and Karen Burke in the H.S.E., who supported this initiative. Very special thanks are extended to Moira Dolan, Nurse Manager for the Unit, who undertook all of the training required to establish the service and for her ongoing work in the management of this very successful project.

In 2005, a representative from those groups involved in the front line evaluation of a victim of sexual crime set up a Guidelines Committee. Guidelines for use nationally by forensic medical and nursing services. An Garda Siochána, Rape Crisis support services and forensic laboratory services were prepared and presented to the Department of Health and Children and the Department of Equality, Justice and Law Reform. This initiative was appraised and supported and it is hoped that these guidelines will be published and circulated nationally in 2006. Under the auspices of the Department of Health and Children and the Department of Justice, Equality and Law Reform, all stakeholders in the management of sexual crime nationally in Ireland, were brought together to work on a document outlining the strategy for improvement of national services. This task was completed in late 2005 and the document will be presented to the Minister for Health and the Minister for Justice in 2006.

Liaison between the different disciplines involved in the care of victims of sexual crime continued at a local level also. In 2005 the Sexual Assault Treatment Unit did not hold a training course for doctors. Such a course was organised but had to be cancelled due to a lack of interest in the course. The policy change regarding younger teen attendances to the Sexual Assault Treatment Unit was enacted in 2005. Recruitment of doctors for the service continued to be a problem in 2005 and there were unavoidable delays from the time of contact to the time of examination through the early months of 2005. Due to the commitment of Dr. G. Columb and Dr. J. Moloney to the service in the later months of 2005 there were essentially no gaps in the service and I am most grateful to the medical staff of the Unit for this.

Again this has been a very busy year on all fronts for the Unit. Thanks are extended to all who have assisted in the care of the clients. A very special word of thanks to Rita O'Connor and Eileen Tunney, who have provided such tremendous administrative support for all of the work of the Unit.

Table 1 FEMALE CLIENTS TO S.A.T.U. 2005

Age (Years)	≤16	16-19	20-29	30-39	40-49	50-59	≥59
No.	34	58	109	34	22	6	4
%	13	22	40	13	8	2	1

Table 2 ABNORMAL STD RESULTS	SATU 2005
Chlamydia	8
Chlamydia + Anaerobes	6
Candida	7
Anaerobes	13
Hepatitis B ± C Positive	4 (not new diagnosis)
Herpes II	2 (not new diagnosis)
HIV	1 (new diagnosis)
Candida and Anaerobes	1
Beta Haemolytic Streptococcus	1
HIV and Hep C	1 (not new diagnosis)

MEDICAL SOCIAL WORK

EILISH MC DONNELL (HEAD MEDICAL SOCIAL WORKER)

INTRODUCTION

2005 sees Ireland ranked as one of the most developed economies in the OECD and this should be reflected in the standard of living we provide to all who live here. Positive socio-economic and socio-demographic changes, coupled with declining unemployment and reduced levels of dependency on social welfare, are proof that the rising tide has lifted many boats. However, the incidence of poverty amongst those in employment has increased in recent years, despite strategies in many government and voluntary agencies to eliminate poverty and promote social inclusion.

Poverty and social exclusion are inextricably linked. The CSOU Survey on Income and Living Conditions shows that 19% of Ireland's population is living in relative income poverty, i.e. below sixty percentile of the median income, and a further 7% live in consistent poverty; which is a more extreme measure of poverty, i.e. a household that is both income poor and deprived of basic necessities. Tackling poverty is not just about income measures, it is about addressing exclusion and inequality so that everyone has an opportunity to participate in ordinary living patterns, customs and activities of society. Those on One Parent Family Payment (OFPP) are most at risk of poverty. More than half of those on OFPP(c. 48,000, mainly women) are in low paid employment. 47% of those on the OFPP have below Leaving Certificate qualifications, 50% children under the age of eight and 60% have just one child.

Social Inclusion Units were established in 2001 to develop pathways to inclusion, which is a clear political priority. The newly formed **Health Service Executive (HSE)** cites tackling health inequalities as one of its principal objectives and 'Equality Competence' will mean that health service providers are now required to take action to ensure that our services

- are free from discrimination, sexual and other types of harassment and victimisation;
- address the practical implications of the diversity of service users;
- proactively promote equality for service users on the nine grounds covered by the equality legislation.

STATISTICS

Total number of births in Ireland for 2005 was 61,042 and of these 19,938 births were to parents not married to each other i.e. 32% of all births. There were 2,427 births to women under the age of 20 in 2005, representing a reduction in the rate in 2004 and 13,208 babies were born to mothers aged 35-39, an increase of over 600 on the 2004 figure. In 2005, 6804 babies were born in the Rotunda, and c.40% of our patients were unmarried.

ALLIED HEALTH PROFESSIONALS MANAGEMENT GROUP

The HSE recognises the importance of the largely untapped expertise of allied health professionals in population health and in holistic health care provision. The first AHP group in the Rotunda was convened by the Hospital Manager and the inaugural meeting was held on 20 Oct 2005. This will be a forum for information sharing, service planning, and for identification of resource needs across radiography, physiotherapy, pharmacy, dietetics and medical social work departments and it is a very welcome development. The aspiration for this group is that we will bring our knowledge base of the impact of interventions on individuals and groups of patients to the areas of planning and implementation, and in particular to service development.

TEAM BASED PERFORMANCE MANAGEMENT

The Medical Social Work Department fully support the aspirations and values of quality and excellence in patient care. We are particularly committed to working in partnership with patients across multi-disciplinary teams. This team also has a commitment to assessment and monitoring of patient needs/ satisfaction with our service. We have identified some significant gaps in our service provision:

- Gaps due to expansion in Fetal Assessment Unit (FAU) and Infectious Disease clinic
- Changes in demography i.e. increased population of migrant workers with complex needs
- Changes in level of demand from patients i.e. FAU, Infectious Disease clinic, Teenage Pregnancy clinic
- Changes in dependency levels of clients i.e. DOVE and Infectious Disease Clinic
- Need for evidence-based practise ie ongoing research required

These gaps underlie our submission to management of the first Service Plan for the Dept. The MSW team undertook training in team based performance management and identified the following 5 Key Performance Areas in which we hope to make progress in 2006:

1. Child Protection work
2. Bereavement counselling service
3. Crisis counselling service for FAU, and HIV/NICU patients
4. Teenage patients
5. Evaluation of MSW service –service use/uptake, quality, appropriateness

ASYLUM SEEKERS AND REFUGEES

The number of asylum applications for 2005 was 3,927which was down from 4,766 in 2004 - the highest number recorded was in 2001 when 11,634 applications were made. There is also a reduction in the number of asylum seekers in direct provision.

MIGRANT WORKERS

The significant influx of migrant workers since the Accession Treaty in May 2004 has caused the profile of our service users to change again with a remarkable increase in the number of service users from minority ethnic groups and from far-flung places eg Peru, Togo, Mexico. Strong inward migration flows are having a big impact on the composition of our population:

- By nationality, non Irish nationals now account for 7% (179,000) of the population aged between 15-64 years and almost 10% of those aged between 25-44 years.
- EU Directive 2000/43/EC contains measures towards implementing principals of equal treatment between persons, irrespective of racial or ethnic origin – imple mented in July 2003 and holds significant implications for provision of services to persons of the ethnic minority groups.
- Increase in migrant workers includes significant population of returning Irish workers, workers from accession states, those admitted with permits to specific employers, non EU/accession state migrants from China and former USSR coun tries.
- Entitlement to health care are complicated by conditions imposed under Habitual Residence and changes relating to 'Irish born child' qualification.
- Expectations informed by customs and patterns of care in the patients' countries of origin.

1,775 foreign national patients attended the hospital in 2005. This included 1,364 non European patients -795 of whom were from Nigeria, Romania, and China and 414 European patients.

PSYCHOSOCIAL ISSUES FOR MIGRANT WORKERS IN MATERNITY SETTING:

Crisis pregnancy – patients from China and eastern European countries present seeking immediate resolution to unplanned/unwanted pregnancy. In their country of origin, ter-mination may be freely available. However, under current Irish law the only service we can offer is information, which can leave then vulnerable in other jurisdictions to exploitation.

Antenatal care – the main issues that arise during the antenatal period are benefits and entitlements especially when unable to work, problems regarding accommodation for self and baby following delivery, access to antenatal education if language skills are not very good, access to income support if needed.

Special needs babies – patients can become aware during the antenatal period following diagnostic scan that babies will have special needs. In some cultures this is extremely problematic and even unacceptable.

Bereavement – miscarriage and stillbirth have huge impact on all patients, however, the practices and approach used in the hospital do not correspond to those in country of origin and similarly bereavement counselling following a loss has different emphasis. Language is particularly important in counselling work and the use of interpreters does not lend itself to a good counselling relationship.

Postnatal Issues – the most frequently presenting issue is the lack of support following the birth of baby. In most cultures first time mothers have primary dependence on fam-ily in the immediate aftermath of birth. Many non Irish patients expect far greater involvement from Public Health Nurses than is ordinarily given. When problems arise e.g. post natal depression or mental health difficulties there is a vacuum in services.

Income maintenance – under Habitual Residence conditions, many of our first time non-Irish parents are not entitled to any income support. They are obliged to rely on their community and to return to work as quickly as possible in order to survive here. They are not entitled to supplementary welfare payments. Dependence on community can render them vulnerable and open to exploitation. In some cultures, non-marital children are still extremely unacceptable so some patients would not disclose the pregnancy in their own community. If for any reason they have to return to their family of origin there can be difficulties about the Irish born child. Also in the absence of adequate and affordable childcare in this country, some patients are opting to send their newly born infants to their family of origin to be reared

To meet the needs of this patient group, we must consider testing our hospital policies and procedures on migrant friendly measures and provide on-going cultural competence training and education for all staff.

CRISIS PREGNANCY

We continue to provide counselling to patients for whom a positive pregnancy test represents a crisis in their lives. The Crisis Pregnancy Agency (CPA) media campaigns have raised the profile of this issue and are encouraging women in crisis to avail of professional counselling. We explore all three options and support women in their decisions. CPA/UCD research on 12,693 women who experienced crisis pregnancy in 2002 showed that 162 seriously considered adoption but only 3.8% actually placed. The number opting to travel abroad for termination remains at approx 6,000.

ADOPTION

In 2005, the numbers considering adoption remained static but only 2 babies were placed (4 were placed in 2004). We work closely with Adoption agency staff in Cunamh and PACT who provide excellent services to our patients. We also meet with colleagues from our sister maternity hospitals and adoption agency staff periodically to review issues affecting our patients.
The Adoption Board's National Contact Preference Register was launched in March 2005. Every household in the state received an application form to register their information and decision regarding the choices available. This welcome development means that people affected by adoption and seeking information and contact with birth families have an opportunity to register their details - this confidential data is being processed by Adoption Board staff.

Number of Patients Considering Adoption	Number of Patients who Placed	Number of Patients who Kept	Number of Babies in Long-Term Foster Care	Outcome Unknown
17	2	13	2	

Only 2 of those who considered adoption were aged under 18.

DRUG MISUSERS

At the end of 2004, a total of 7,301 clients were registered on the national list of individuals receiving methadone. This represented a 6% increase from the year before. Only 5% of those accessing methadone services lived outside the HSE Eastern Region. There has been a rise in the number of methadone clients testing positive for cocaine use between 1998 and 2005. There is conclusive evidence that babies born to cocaine using mothers are smaller, weaker, prone to withdrawals and may have permanent brain damage and developmental problems. A range of studies indicate that substance-abusing women are at increased risk of poverty, homelessness, mental health difficulties, social isolation and infectious diseases.

In 2005, 86 women on a methadone treatment programme delivered their babies in the Rotunda .The Medical Social Worker offers psychosocial assessment and support to these patients, including counselling during the ante-natal period, risk assessment and referral to community services if there are child protection issues. Child protection issues are identified at pre-birth meetings, case conferences and discharge planning meetings. Approximately 22 of these meetings were held in the Rotunda Hospital

For many substance-abusing women, becoming pregnant will provide the pathway for treatment for opiate addiction. Pregnancy can act as a positive motivation to reducing or ceasing drug use or can create barriers to accessing services and even lead to women increasing their drug use to cope with guilt. We acknowledge the invaluable service provided by the Drugs Liaison Midwife with whom we work very closely.

INFECTIOUS DISEASES

In 2005 the number of patients attending with blood born viral/bacterial infections specifically HIV, Hep B and C, and TPHA continues to be high.

YEAR	Hep B	HIV	Hep C	Syphilis2004
1997	3	3		3
1998	16	4		3
1999	27	8		2
2000	31	18	67	10
2001	60	23	71	19
2002	99	50	79	38
2003	94	55	83	38
2004	89	39	74	13
2005	74	42	52	19

Hepatitis C is the most common viral infection among drug users in Ireland. Of the estimated 13,500 intravenous drug users in the Dublin area, approximately 80% are believed to be hepatitis C positive. In the Rotunda, a committed multi-disciplinary team ensures the delivery of a high quality, comprehensive care package to DOVE patients attending for obstetric care. In October 2005, Dr Jack Lambert was appointed to a joint consultant's post between the Rotunda and the Mater Hospital working with pregnant women with infectious diseases.

A total of 318 HIV infections, newly diagnosed during 2005, were reported to the Health Protection Surveillance Centre (HPSC). This represents a reduction compared to 399 diagnosed in 2003 and 356 in 2004. Of the159 cases of HIV infection acquired through heterosexual contact in Ireland in 2005, 101 were born in sub-Saharan Africa, 65 of whom were women. This reflects demographic changes such as increases in immigration and mobile populations. The high prevalence of HIV in foreign national populations creates a need for culturally appropriate support services. The Medical Social Worker will address concerns of special populations including ethnic minorities and asylum seekers.

There were 105 babies born to HIV infected mothers during 2005, of these 90 are not infected and 15 remain of indeterminate status (i.e. do not meet the criteria for HIV infection and are <18 months at the time of test). 42 HIV positive women attended the Rotunda in 2005, 17 of whom were newly diagnosed through routine ante-natal testing.

HIV is a disease that has important psychosocial consequences. The Medical Social Worker provides immediate post-test counselling to all women who receive a positive HIV result. Issues specific to patients of the DOVE clinic such as stigma, possible denial, the need to access supports and disclosure to partner are addressed. Also covered are issues specific to pregnancy such as fear of premature maternal death, risks of transmission to the unborn baby, decisions about ART treatment. The Infectious Disease Midwife provides essential support and information to ensure high quality care is offered to these patients.

NEONATAL UNIT

2005 was another busy year for medical social work involvement in the Neonatal Unit. We provide support and practical assistance to parents of sick babies in the unit both during the time their babies are in the Hospital and also post discharge. We continue to rely on the support of our medical and nursing colleagues to help us ensure a comprehensive package to parents in a wide range of circumstances, and thank them for their assistance. In addition we rely hugely on the help of our colleagues in the community such as Public Health Nurses, Community Social Workers, Community Welfare Officers as well as staff in a wide range of voluntary and statutory agencies to ensure the continued well-being of our babies and their families. The Jack and Jill Foundation in particular deserves special mention due to the invaluable service it provides to some of our more ill babies when they are discharged from the unit.

This year we welcomed the introduction of 'G.P only' medical cards, which provide free G.P care to our patients on higher incomes and in more varied social circumstances than the general medical card provided for. Accommodation expenses for parents who have been transferred from hospitals outside of Dublin continue to be a problem. In some cases babies have remained in the Unit for several months, leaving parents facing a regular commute to visit their baby or having to incur the financial burden of paying for alternative accommodation. This serves only to add to their stressful situation. We are grateful for the support of the Sick & Indigent Roomkeepers Society, Protestant Aid and the Glorney Foundation who have given financial support to these families.

The accreditation process gave the multi disciplinary team a chance to examine the overall service offered to our babies and their families. Thankfully the feedback from the assessors was extremely positive but we look forward to implementing our quality improvement plans, particularly the development of a parent support group in the coming year.

BEREAVEMENT COUNSELLING

The Social Work Department provides a bereavement counselling support service to the FAU, NICU, Early Pregnancy Clinic, patients with recurrent Miscarriage, and the Emergency Room.

Grieving for a lost baby is a very private and often lonely experience, which can be frightening and can cause enormous despair. At some point following a loss, parents bereaved by a miscarriage, stillbirth, or neonatal death may wonder if their thoughts and feelings are 'normal' and whether their sadness and yearning will ever become bearable. The process of counselling offers parents the opportunity to explore their feelings about their loss and to work through their grief in a safe and supported environment.

The Social Work Department meet women who have experienced a loss irrespective of gestation. Many women now seek counselling shortly after their loss as they believe by talking through their experience their pain will ease and they may find new ways to cope with their loss. Bereavement Counselling can assist the bereaved in understanding their reactions, working through their unique issues and finding meaning in their grief experience.

Liaison with voluntary specialist services in the community remains a vital part of our work. We are grateful to the Irish Stillbirth and Neonatal Society (ISANDS), Miscarriage Association and Barnardos who provide essential support to our clients and their families.

FETAL ASSESSMENT UNIT

Parents who receive a difficult and distressing diagnosis while attending for ante-natal care are offered support and counselling in the Social Work Department. The number of patients receiving pre-natal diagnosis is increasing. Parents experience a range of emotions once a diagnosis is delivered, these may range from shock, disbelief, guilt, anger, despair and denial. Parents are offered the opportunity to meet with a Social Worker and explore their feelings in relation to the information they have received. Contact is maintained throughout their pregnancy which enables them to feel supported and allows them to express their changing worries, fears and anxieties as the pregnancy progresses. Also, information regarding support services in the community is offered to parents where appropriate, and referrals are made to these services if deemed helpful.

TEENAGE PREGNANCY

407 of patients who attended the hospital were under age 20. Of this group, 173 were aged 19 and 127 were aged 18. This is an increase on the numbers for 2004 when 352 under 20 year olds attended.

	1	2	3	4	5	6	7	8	9	10	11	12	Sum:
15				1	1							2	4
16	1	3	1	3	3	5	3	4	4	3	2	2	34
17	4	4	5	8	8	4	8	6	5	4	6	7	69
18	9	8	11	13	7	15	13	12	16	12	5	6	127
19	9	16	9	15	13	13	13	15	19	13	15	23	173
Sum:	23	31	26	40	32	37	37	37	44	32	28	40	407

The Teen Ante-natal Clinic in the Hospital was set up to offer teenagers (under the age of 18 years) a more coordinated and user-friendly antenatal service.
Within the multidisciplinary team, psychosocial support and counselling is provided by Deirdre Keegan (Medical Social Worker) who joined our team in March 2005.

The Clinic has now been running for over a year and in 2005 a total of 143 teenagers attended. All teenagers who attend the clinic meet with the social worker who carries out a psychosocial assessment to:

- Establish the needs of the young person
- Identify strengths and positives, as well as looking at any areas of difficulty
- Look at family and community based supports available
- Gather information about the putative father
- Consider any potential child protection concerns and family support needs in relation to the unborn child and the young person

Having completed the assessment, a personal support plan is identified and agreed with the young person.

In Ireland, one-parent families continue to predominate in poverty statistics and the links between teenage pregnancy and reduced life outcomes have been well documented. As a group, young parents are at risk of having lower educational qualifications, higher unemployment rates and have been shown to suffer as a result of poverty, social isolation, low self-esteem and poor health. Statistics maintained by the Social Worker throughout the first year, in relation to the following key areas, reflect some of these areas of concern:

1. Accommodation

Fortunately, the majority of teenagers we met with last year were living in the family home and were well supported by parents or other carers/ family members. However, there were still a significant group of vulnerable teenagers, not living in the family home in need of high levels of support throughout their pregnancy.

Family Home	115
Living with PF	14
Separated Children/ Asylum Seekers	7
In care of HSE	7
Homeless	2
Own accommodation	1

2. Education

Of major concern was the high number of teenagers not at school, attending any course, or linked into their local community in any meaningful way.

Not in school/ on course/ working	59
Secondary school	53
Youthreach/ FAS course	15
Working	11
College	5

3. Supports Needed

For all teenagers who attend the Clinic, having access to practical information that is easy to understand is extremely important to them in ensuring that they are well equipped to make decisions about and plan for their future.

Information on benefits and entitlements	All
Remaining in education/ starting courses/ childcare	All
High levels of MSW support throughout the pregnancy in relation to:	
Significant relationship difficulties with parents	8
Second baby	4
Parents unaware of pregnancy	3
Miscarriage	3
Parents RIP	3
PF RIP through suicide	2
Considering adoption	2

A smaller group of teenagers needed a lot of support throughout their pregnancy due to a range of difficulties they were experiencing at the time. The Social Worker has also been able to build good working relationships with support groups for young parents in their local communities. Where possible and where projects are available in the local area, the Social Worker has aimed to link teenagers in with local projects for on-going support once they return home with their baby.

As the Clinic has been up and running for over a year, it is planned to complete an evaluation of all parts of the service provided to teenagers, using a questionnaire. We hope to elicit from teenagers themselves what they like about the service and what they would like to see changed.

DOMESTIC VIOLENCE

Statistics for domestic violence in the population indicate that one in five women have experienced such violence and that pregnancy is a time of increased risk, potentially affecting both mother and unborn child. Health professionals are in a unique position to identify potential victims of this crime and to offer support, encouragement and beneficial advice. The hospital staff has over many years striven to provide sensitive responses and appropriate intervention to patients disclosing domestic violence.

Previous research in the Rotunda had posited the value of routine enquiry during the booking visit to enable us to provide information, counselling and support to those victims of domestic violence who wished for it. However concerns were raised about the possible reactions of patients to such questioning. Our research in 2003/04 established that routine enquiry regarding partner abuse was acceptable to 99% of our patients and perceived by them to be worthwhile (this research will be published in the IMJ in 2006). In July 2005, we introduced routine enquiry by a doctor regarding partner abuse when alone with the patient. Guidelines for staff dealing with patients disclosing abuse are in place and staff training is on-going. The next step will be to evaluate this development – perhaps our next research project?

TEAM

In Febuary 2005, we bade farewell to Sarah Connolly and want to acknowledge her excellent contribution with Team A – Sarah is now working in Melbourne.
Sinead Devitt was appointed to the long awaited senior post and Ger Parkinson continues to chair the hospital Health and Safety Committee. MSW offices were renovated and upgraded so our work environment is greatly improved.

ACKNOWLEDGEMENTS

We are grateful for the continuing financial assistance to our patients from the Friends and the Samaritan Fund. We also appreciate the dedicated volunteers in ISANDS and the Miscarriage Association whose members respond so well to the frequent calls we make on their services. In 2005, ISANDS completely reinstated the 'old' Angels burial ground in Glasnevin and held an Inaugural Blessing ceremony on 19 June 2005 there. Director of Midwifery Pauline Treanor and HMSW attended.

LECTURES/PRESENTATIONS 2005

5th March	Presentation to RCSI student doctors re social issues
11th May	Presentation to Joint Hosp Standing Committee with HMSW's from Coombe/HMH
18th August	Presentation to student midwives re social issues in pregnancy
15th September	Domestic Violence :Presentation to Doctors
13 October	Drug Use in Pregnancy and the Psychosocial Aspects of HIV - DGO
8th November	Presentation to Paediatric Tuesday Conference- breaking bad news and experience of loss in neonatal unit

CONFERENCES ATTENDED 2005

17-19th May	UCD practice teacher training
15th June	Team based performance management training Training /CPD 2005
02 February	Service Planning Training (IPA) SMSW
7th March	Motivational interviewing skills: HSE, Park House
11th March	Hosted Meeting for HMSW Group and 3rd Level Colleges MSW Competency Framework Document' Pillar Room
4- 20th Apri	I.P.A service Planning workshop HMSW
23rd May	Team Based Performance Management training

MEETINGS/SEMINARS/WORKSHOPS ATTENDED IN 2005

23 March	Islam and Muslims in Ireland Today', ICCI Clonskeagh.
5 April	TREOIR AGM, Dublin
7/8 April	HMSW Annual Conference, Portumna
8 June	Meeting, Ombudsman for Children, Tullamore
28 June	CPA/Adoption Board Research Report on Adoption
29/30 June	HSE/ National Group Liaison Officers "Learning from Experience-Developing responses for the Future" (EMcD and F Lyons attended)
5 July	'Domestic Abuse of Women and Men in Ireland' National Crime Council/ESRI
26 August	Womens Refuge, Rathmines Open Day
26 Sept	One Parent (Cherish) Launch, Dublin
3 October	ISANDS Meeting., Dublin
18 October	Refugee Integration Agency meeting, Dublin
13 November	Annual service of remembrance, Miscarriage Association The HIV Counsellors Group, SWD, Guide Clinic, St James's Hospital, Dublin 8
20 October	Intercultural and Equality Training Course
04 November	HIV Service Network (HSN) - Review and Evaluation, Dublin Castle.
22 November	Team-based Performance Management Training

4

Friends of the Rotunda

MRS BERNADETTE KEOGH — Chairperson & Treasurer
MRS JEAN DIX — Honorary Secretary

The Friends of the Rotunda was founded in 1971 to assist the Hospital by financing research, supporting voluntary work and improving amenities for patients and staff.

Research projects approved for funding by the Friends during 2005 were:

Research Project 1

Iron Physiology in Pregnancy

Principal Investigator: Dr. T. Walsh

Funding Approved €44,000.00

Research Project 2

Neonatal BNP Study

Principal Investigator: Dr. Ireti Farombi-Oghuvbu

Funding Approved €15,040.00

Research Project 3

Prevention of Postnatal Depression Study

Principal Investigator: Margaret Sheridan

Funding Approved €16,787.00

Research Project 4

Thrombophilia Research Study

Principal Investigators: Dr. Michael Geary, Dr. J. Gillan.

Funding Approved: €50,000.00

Fund-raising events in 2005 included:

Arnotts Fashion Show
Balbriggan Ladies Captain Day
Christie's Jewel Luncheon
Sale of Charity Wrist Bands
Sale of Hospital Art
Rotunda Golf Classic Milltown Golf Club
Race Day Leopardstown
Flora Mini Marathon - Dublin
Christmas Card Sale

- The 2005 Rotunda Race Day raised over €70,000 in aid of the Rotunda Hospital Neonatal Brain Injury Research Unit. Significant and permanent brain injury is a continuing problem both in premature and full term infants. Despite massive advances in neonatal care and survival rates in recent years, there has been little impact on the number of brain-injured babies surviving and living with cerebral palsy and mental handicap. The focus of this research initiative is to precisely document the extent of this problem and to link pregnancy and placental research to neonatal neurological complications.

- The Christie's Jewel Luncheon raised approximately €83,000.
- The Rotunda Golf Classic raised approximately €28,000.

A Total of €196,000 has been committed for Research funding in 2005.

The Hospital Shop in the Main Reception area of the Hospital provides a service to all in the Hospital and annual rental income provides extra revenue for the Friends' Research Fund.

Another substantial source of revenue each year is generated through the Hire of The Pillar Room as a facility for external functions. It is also used by the Hospital as a teaching centre. Bookings are made through in the Friends of the Rotunda office on 01 872 2377.

The Council for the Friends of the Rotunda wishes to extend its gratitude to all those who organised and supported fundraising activities during 2005.

5

Publications & Presentations

STAFF PUBLICATIONS 2005

Allen, C. Reardon, W
Assisted reproductive technology and defects of genomic imprinting.
BJOG : An International Journal of Obstetrics and Gynaecology 2005, 112(12): 1589-1594.

Breathnach, F., Daly, S., Griffen, E., Gleeson, N.
Intra-cervical application of synthetic hydrogel sealant for pre-term pre-labor rupture of membranes : a case report.
Journal of Perinatal Medicine 2005, 33 (5): 458-460.

Connolly, G., Shuhai, ZM. , McKenna, P. and Geary, M.
Birth weight trends in primiparous women in the twentieth century.
Irish Medical Journal 2005, 98(1): 6-7

Connolly, G., Shuhai, Z Mohd. , McKenna, P., Geary, M.
Birth weight trends in primiparous women in the twentieth century.
Comment in : Irish Medical Journal 89(4):125, 2005
Irish Medical Journal 2005, 98(1): 6-7.

Cooley, S., Yuddani, V., Walsh, T., Geary, M. and McKenna, P.
The medium and long term outcome of endometrial ablative techniques.
European Journal of Obstetrics, Gynaecology & Reproductive Biology 2005, 121(2):233-235.

Harney, D., Moran, CA., Whitty, R., Harte, S., Geary, M., Gardiner, J.
Influence of posture on the incidence of vein cannulation, during epidural catheter placement.
European Journal of Anaesthesiology 2005, 22(2): 103-106.

Joffe, TH., Tarantal, AF., Rice, K., Leland, M Oerke, AK. and Rodeck, C.
Fetal and Infant head circumference sexual dimorhism in primates.
American Journal of Physical Anthropology, 2005, 126 (1): 97-110.

Khawaja, N., Walsh, T., Gleeson, R., Geary, MP.
Tubal Abscess in Pregnancy.
Journal of Obstetrics & Gynaecology 2005, 25(2): 210.

Khawaja, N., Walsh, T., Coulter-Smith, S., Geary, MPP.
Induction of labour practice in a primigravida with prolonged pregnancy.
Irish Medical Journal 2005, 98(7): 218-219.

Knowles, SJ., Grundy, K., Cafferkey, MT. and Geary, M.
Low cytomegalovirus sero-prevalence in Irish pregnant women.
Irish Medical Journal 2005, 98(7): 210-212.

Loughrey, JP., Yao, N., Data, S., Segal, S., Pian-Smith, M. and Tsen, LC.
Hemodynamic effects of spinal anaesthesia and simultaneous intravenous bolus of combined phenylephrine and ephedrine versus ephedrine for cesarean delivery.
International Journal of Obstetrics and Anaesthesia 2005, 14(1): 43-47.

McCarthy, A., Millar, S. and Evans, D.
Maternity Services in the Health Service Executive Western area; a survey of Midwifes and Consumer's Views.
NMPDHU HSE Western Area, 2005.

McKenna, P.
Second opinions on the prevention of caesarean sections.
Irish Medical Journal 2005, 98(10): 229.

Malone, D., Canick, JA., Ball, RH., et al.
First or Second Trimester Screening, or both, for Downs Syndrome
New England Journal of Medicine 2005, 353(19): 2068-2070.

Matthews, TG.
Unexpected infant death: infanticide or SIDS? (Comment).
Lancet 2005, 365 (1): 3

Millar, S., and Daly, P.
Processing pregnancy or meaningful Midwifery?
Ireland's Annual Joint Midwifes Conference: RCN Northern Ireland and Midwifes Section, Irish Nurses Organisation, Ireland, 2005.

Millar, S. and Biesty, L.
Developing skills and decision making for clinical Midwifes.
Workshop, Florence, Italy, December 2005.

Molelekwa, V., Akhter, P. , McKenna, P., Bowen, M., and Walsh, K.
Eisenmenger's Syndrome in 27- week pregnancy-management with bosentan and sildenafil.
Irish Medical Journal 2005, 98(3): 87-88.

O Brien, D., Aquilina, K., Farrell, M., Breathnach, F., and Allcutt, D.
Cervical lipoblastomatosis producing quadriparesis: case report of surgery with chemotherapy and 10 year follow up.
Child Nervous System 2005, 21(2): 165-170.

O Donovan, M. and Harrison, R. F.
Preservation of fertility in women affected by cancer. An audit of the cryopreservation services provided for women at Human Assisted Reproduction Ireland.
Irish Medical Journal 2005, 98(9): 265-267.

O Halloran, DM. and Cafferkey, MT.
Multiplex PCR for identification of seven streptococcus pneumoniae serotypes targeted by a 7-valent conjugate vaccine
Journal of Clinical Microbiology 2005, 43: 3487-3490.

Pringle, P J., Geary, MP., Rodeck, CH., Kingdom, JC., Kayamba, K. and Hindmarsh, PC.
The influence of cigarette smoking on antenatal growth, birth size, and insulin-like growth factor axis.
Journal of Clinical Endocrinology and Metabolism 2005, 90(5): 2556-2562.

Rohininath, T., O Connell, LA., Sheehan, K., Corcoran, D., Matthews, TG., Clarke, TA.
Workload and short term outcome of babies weighing 2,500 grams or more at birth admitted to the paediatric unit of the Rotunda Hospital.
Journal of Maternal-Fetal and Neonatal Medicine 2005, 17(2): 139-143.

Singh, J., O Donovan, M., Coulter-Smith, SD., Geary, M.
An audit of the use of magnesium sulphate in severe pre-clampsia and eclampsia.
Journal of Obstetrics and Gynaecology 2005, 25(1): 15-17.

Sayers, G., McCarthy, T., O Connell, M., O Leary, M., O Brien, D., Cafferkey, M. and McNamara, E.
Haemolytic uraemic syndrome associated with interfamilial spread of E- Coli 026:H11.
Epidemiology and Infection 2005.134 (4): 724-728, Dec 22nd (E-publ).

Taha, MK., Alonso, JM., Cafferkey, M., Caugant, DA., Clarke, SC., Diggle, MA., Fox, A et. al.
Inter-laboratory comparison of PCR-based identification and geno-grouping of Neisseria meningitides.
Journal of Clinical Microbiology 2005, 43: 144-149.

Notes

Notes

MASTER
Dr M Geary

Secretary /General Manager Mr F Fagan
Director of Midwifery/Nursing Ms P Treanor

Director of Paediatrics
Dr D Corcoran

Director of Anaesthetics
Dr J Gardiner

Director of Pathology
Dr J Gillan

Director of Gynaecology
Dr R Gleeson

Director of Obstetrics
Dr. M Geary

MIDWIFERY

Senior Staff

Ms K Ruddy(Assistant Director) Ms P Williamson (Assistant Director) Ms M Philbin (Assistant Director)

Ms G Birrane (Night Superintendent)
Ms M Gannon (Night Superintendent)
Ms D Daly (Principal Midwife Teacher)

Clinical Midwife Manager III

Ms B Beirne-Moore Ms O O'Byrne Ms A Keenan Ms M O'Reilly Ms A Reid

PARAMEDICAL HEADS OF DEPARTMENT

Chief Pharmacist	Senior Physiotherapist	Senior Radiographer	Senior Technologist
Ms A Frankish	Ms A De Lacy Murphy	Ms S Gibson	Ms G O'Connor

Head Social Worker
Ms E Mc Donnell

Dietitics
Ms L Harrington

ADMINISTRATIVE HEADS OF DEPARTMENT

Patient Services Manager	Ms G Estridge
Financial Controller	Mr B Keane
Human Resources Manager	Mr P Burke
Information Manager	Ms L Jordan
Materials Manager	Mr S Williamson
Information Technology Manager	Mr N Carberry
Head Librarian	Ms H Delaney
Statistician	Ms C Collins
Accreditation Manager	Ms S Breen

SUPPORT DEPARTMENT STAFF HEADS

Technical Services	Mr R Schindler
General Services	Mr R Philpott
Catering Officer	Ms P Ryan
Clinical Engineering	Mr H Gelera
Household Services Officer	Ms M McCarthy
Head Porter	Mr M McGrath

CHAPLAINS

Fr C Sheridan Rev T Haskins

Lecturers (RCSI)
Dr T Walsh. Dr H McMillan

Specialist Registrars/Registrars in Obstetrics & Gynaecology

Dr E Babiker	Dr V Wong	Dr C Murphy
Dr R Triga	Dr R Roopnaresingh	Dr S Said
Dr P Akhter	Dr M Gannon	Dr W Smith
Dr V Molelekwa	Dr A O'Neill	Dr V Sharma
Dr S Moss	Dr M De Tavernier	
Research Registrars	**Clinical Tutor**	
Dr J Donnelly	Dr S Cooley	
Dr F Breathnach		

Senior House Officer in Obstetrics & Gynaecology

Dr F Ogunlewe	Dr C Walsh	Dr C O'Dowd
Dr R Al Mannai	Dr M Dumbleton	Dr H Butt
Dr E Gaughan	Dr M Mc Menamin	Dr M P Murphy
Dr A Paul	Dr Bolger	Dr M Duane
Dr O Nimbe	Dr H Rajab	Dr U Durnea
Dr A Robinson	Dr G Cantwell	Dr I Ibrahim

Specialist Registrars in Anaesthetics

Dr V Zutshi	Dr R Balasingam	Dr Q Sindhu
Dr M Maghrabi	Dr A Nabil	Dr C Burlacu
Dr P Ecimovic		

Senior House Officers in Anaesthetics

Dr H Samir	Dr J Lynch	Dr A Masdar
Dr T Purat	Dr E Casey	

Specialist Registrars in Paediatrics

Dr S Rehan	Dr I Farombi	Dr D Bux
Dr M Stack	Dr M Rehman	Dr J Janota
Dr B Hayes	Dr L Hickey	Dr M Stack
Dr M Doddakula	Dr P Fleming	Dr T Prendeville
Dr M Williamson	Dr C Blackburn	

Senior House Officer in Paediatrics

Dr Varghese	Dr O Neylon	Dr L Hanlon
Dr C Hughes	Dr S Aslam	Dr G Mustafa
Dr C Onwumeme	Dr Abdelrahim	Dr S Detho
Dr C Fitzgerald	Dr A Canney	

Clinical Assistant
Dr A Chong

Specialist Registrar/Registrars in Pathology
Dr A Murphy Dr O'Riain

Infectious Diseases
Dr W Ferguson

Acting Clinical Risk Manager
Ms G Farren

Pharmacist
Ms A Frankish Mr D Dalton Ms F Perira

Medical Social Workers
Ms E McDonnell (Head). Ms S Devitt Ms G Parkinson
Ms F Lyons Ms S Connolly

Physiotherapists
Mrs A deLacy Murphy Ms V McConnell Ms J Barry Ms A Samuel

Radiographers
Ms S Gibson Ms S Johnson Ms M McGuckian Ms A Mooney Ms K Farrell

Nutritionist
Ms L Harrington

Bartholomew Mosse Lecture

Prof. Robert Harrison	*The Governance of Infertility Treatment in Ireland, Past, Present and Future*	2005
Prof. David Hardwick	*Pathology & Society*	2004
Prof. Knox Ritchie	*Maternal Fetal Medicine - A Growth Industry*	2003
Prof. James Drife	*Maternal Mortality - Past, Present & Future*	2002
Prof. Robert Shaw	*Endometriosis - How far have we advanced in its understanding?*	2001
Prof. James Robert	*Whither Toxaemia? - New Insights on an Ancient Disorder.*	2000
President Mary McAleese	*A Healthier Century Ahead?*	1999
Prof. J. Bonnar	*New Insights into Pregnancy Thrombosis*	1998
Mr Peter McLean	*Reforms in Surgical Training & Examinations*	1997
Dr N. Patel	*The Work of the President*	1996
President Mary Robinson	*Reflections on Maternity Care*	1995
Prof. G. Chamberlain	*"We and the Labouring World are Passing" WBY*	1994
Prof. David T. Baird	*Infertility & Contraception in an Overcrowded World*	1993
Sir Peter Froggatt	*Wakley's Lancet & Jacob's Dublin Press: Instruments for Medical Reference*	1992
Hon. Mr Justice Ronan Keane	*Medical Negligence - A Question of Balance*	1991
Prof. V. Tindall	*A Speciality in Distress*	1990
Prof. H. Fox	*A Symbiotic Relationship*	1989
Prof. J.S. Scott	*The Third Sex - Sociology is out of step with Biology*	1988
Prof. A.D.H. Browne	*A Magnificent Recklessness for Philanthropy*	1987
Prof. Sir Malcolm Mac Naughton	*Obstetric Audit - 50 Years On*	1986
Dr R. G. Edwards	*Current Clinical, Scientific & Ethical Situation of Human In Vitro Fertilisation*	1985
Prof. Kieran O'Driscoll	*Obstetrics - Subject under siege*	1984
Prof. J.H.M. Pinkerton	*Evory Kennedy: A Master Controversial*	1983
Mr R.M. Feroze	*The Training of a Gynaecologist*	1982
Prof. John A. Davis	*Survival of the Fittest*	1981
Prof. G.S. Dawes	*Analysis of the Human Fetal Heart Rate Antenatally*	1980
Mr E.A.J. Alment	*Fetus & Family*	1979
Prof. P.B.B. Gatenby	*Medicine & the Third World*	1978
Prof. C.J. Dewhurst	*The Menopause*	1977