ANNUAL CLINICAL REPORT

2004

Editors

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Janet Newall

Liverpool Women's NHS

NHS Foundation Trust

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FOREWORD

In 2003, we published the first Annual Clinical Report aiming to capture all clinical, audit and research activities within Liverpool Women's NHS Foundation Trust. The 2004 Report is even more comprehensive with two more chapters, Theatres and Anaesthesia and Clinical Genetics.

This publication reflects the quality and quantity of care we provide for the women and babies of Liverpool and the North West. We should be proud of our achievements and we urge all to share the data from this Report with colleagues and the public at large.

There is always room for improvement. Liverpool Women's NHS Foundation Trust is one of the largest, if not the largest, maternity teaching hospital in Europe. Working in such a hospital carries a duty to excel in our respective specialties, nationally and internationally, whilst providing the best care for women and babies of the North West. We are confident that our future Annual Clinical Reports will continue to be testaments to our success.

Professor Zarko Alfirevic
November 2005

1. MATERNITY SERVICES

Professor Zarko Alfirevic, Clinical Director
Sandra Shannon, Directorate Manager

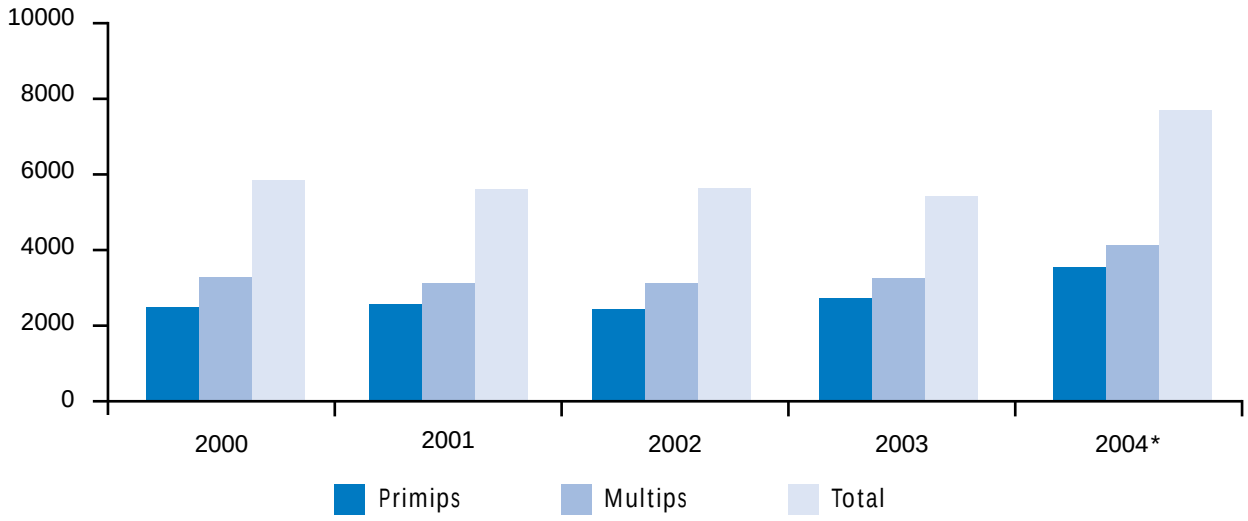
The year 2004 was a truly historic one for maternity services in Liverpool. On the 1st of March all inpatient maternity services from the Aintree site were transferred to the Liverpool Women's Hospital site. The process was quite stressful for all concerned, but the quality of care remained high throughout. The staff on both sites should be proud of their professionalism and achievements. The impact of this sudden concentration of 8,000 deliveries on one site is reflected in tables that follow and the numbers speak for themselves.

Community care, both antenatal and postnatal, is under represented in this report because our data collection is not yet sophisticated enough to capture the huge amount of maternity care that takes place outside of hospital. Two community centres were opened in Bootle and Kirkby providing antenatal booking appointments with ultrasound facility as well as blood tests and fetal and maternal monitoring. This high quality service was recognised with an award from the Royal College of Midwives for Innovation and Partnership working. Outpatient services at the Aintree site have been expanded to include fetal medicine and obstetric assessment unit, with midwives developing specialist roles to support the new services. The capital programme for the redesign and refurbishment of the Aintree site began in the summer of 2004 to bring all facilities up to the highest standard.

The numbers presented here have to be interpreted cautiously. There is an understandable interest in comparison between maternity units both nationally and internationally. The challenge, however, is to compare 'like with like'. Our hospital is a tertiary referral centre for women with high-risk pregnancies from the North West and North Wales. It is, therefore, not surprising that preterm deliveries, labour inductions, caesarean sections and pregnancy losses are higher than the national average. We did not attempt to correct these numbers by excluding in-utero transfers and women with high-risk pregnancies from other geographical areas who chose to have their baby in our hospital.

PERINATAL STATISTICS AND CLINICAL INDICATORS

Mothers delivered at Liverpool Women's NHS Foundation Trust



	Primips	Multips	Total
2000	2608 (44%)	3313	5921
2001	2678 (46%)	3142	5820
2002	2673 (46%)	3154	5827
2003	2866 (47%)	3271	6137
2004*	3561 (46%)	4147	7708

Babies born at Liverpool Women's NHS Foundation Trust

	Singleton	Twins	Triplets	Quads	Total
2000	5812 (96.3%)	204	21	0	6037
2001	5697 (95.7%)	230	24	0	5951
2002	5703 (95.7%)	234	21	0	5958
2003	6015 (96.1%)	236	9	0	6260
2004*	7573 (96.5%)	262	6	8	7849

* All inpatient obstetric services including deliveries at the Aintree Hospital were transferred to the Liverpool Women's NHS Foundation Trust on the 1st March 2004.

Onset of Labour

	2000		2001		2002		2003		2004	
		%		%		%		%		%
Spontaneous	3804	64.2	3726	64	3645	62.5	3787	61.7	4616	59.8
Induction	1598	27	1599	27.5	1654	28.4	1758	28.6	2110	27.4
Caesarean	519	8.8	495	8.5	528	9.1	592	9.6	982	12.8

Induction of labour (IOL)

	2000		2001		2002		2003		2004	
		%		%		%		%		%
IOL (all)	1598	27	1599	27.5	1654	28.4	1758	28.6	2101	27.3
IOL (post-term)	484	8.2	498	8.6	515	8.8	505	8.2	667	8.6
IOL (PROM)	359	6.1	357	6.1	332	5.7	347	5.6	337	4.3

Gestational age at delivery

	2000		2001		2002		2003		2004	
		%		%		%		%		%
Livebirths < 28+0	64	1.1	81	1.4	87	1.5	54	0.8	68	0.9
Livebirths < 34+0	269	4.5	260	4.4	254	4.3	235	3.7	276	3.5
Livebirths < 37+0	633	10.5	605	10.2	639	10.7	675	10.7	811	10.3

Mode of delivery

	2000		2001		2002		2003		2004	
		%		%		%		%		%
Normal vaginal	4090	67.7	4018	67.5	3878	66.2	4255	67.9	5202	66.2
Water births*	3		6		2		0		0	
Instrumental	597	9.9	641	10.8	574	9.7	499	7.9	758	9.7
Forceps only	217	3.6	275	4.6	337	5.7	254	4.0	316	4.0
Vacuum only	311	5.2	317	5.3	195	3.3	213	3.4	308	3.9
Vacuum to forceps	69	1.1	49	0.8	42	0.7	32	0.5	44	0.6
Failed instrumental delivery leading to CS	49	0.8	39	0.6	46	0.8	41	0.6	58	0.7
Total CS (mothers)	1285	21.7	1216	20.9	1392	23.9	1427	23.2	1796	23.3
Emergency CS (mothers)	766	12.9	721	12.4	864	14.8	835	13.6	1062	13.8
Elective CS (mothers)	519	8.8	495	8.5	528	9.1	592	9.6	734	9.5

*Water births included in normal vaginal births.

Deliveries at home/outside of hospital

	2000	2001	2002	2003	2004
Planned home birth	12	9	15	17	35
Transfer in labour/Delivered at LWH	0	2	12	0	0
Achieved home birth	12	7	3	0	35
Postnatal transfer	2	0	0	0	0
Unplanned (outside hospital)	16	23	26	28	63
Total: Planned /Unplanned	28	32	41	45	98

Caesarean sections

	2000		2001		2002		2003		2004	
		%		%		%		%		%
Primips,singleton, ceph,term, spont onset	138	9.6	142	9.8	157	11.1	170	11.3	194	10.8
Primips,singleton, ceph,term, IOL	159	21.8	165	22.2	214	27.5	195	24	253	14
Primips,term, not in labour	19		13		15		15		32	
Multip,singleton, ceph,term,spont onset	94	5.4	80	4.6	86	5.1	80	4.4	177	9.8
Multip,singleton, ceph,term IOL	74	10.8	62	9.7	65	10.5	56	7.8	76	4.2
Multip,term, not in labour	18		14		13		12		39	
Prev CS singleton, cephalic,term	365	67.2	358	71.1	395	73.1	402	70.5	524	71.6

Breech births

	2000		2001		2002		2003		2004	
		%		%		%		%		%
Breech births	236	3.9	201	3.4	212	3.6	233	3.7	304	3.9
Vaginal breech $\geq 37^{+0}$	9	5	3	2	5	3.2	7	4.4	14	6.5
Emergency CS $\geq 37^{+0}$	53	32	56	40	56	35.2	47	29.5	86	39.8
Elective CS $\geq 37^{+0}$	106	63	83	58	98	61.6	110	69.1	116	85.2
Vaginal breech $< 37^{+0}$	13	19	16	27	18	34	19	25.6	22	31.4
Emergency CS $< 37^{+0}$	42	62	30	51	27	51	46	62.1	41	58.8
Elective CS $< 37^{+0}$	13	19	13	22	8	15	4	5.4	7	10

Multiple births

	2000		2001		2002		2003		2004	
		%		%		%		%		%
Twin births (mothers)	102	1.7	115	2	117	2	118	1.9	138	1.8
Twin births $< 33^{+0}$	23	23	34	30	30	26	17	14.4	29	20.9
Spontaneous births $<33^{+0}$	16	70	24	71	18	60	7	41.1	17	17
Twins born vaginally	47	46	51	44	47	40	45	38.1	60	43.5
Twins by emergency CS	31	30	37	32	37	32	34	28.8	58	42
Twins by elective CS	21	21	25	22	24	20	36	30.5	39	28.3
CS for second twin	3	3	2	2	9	8	3	2.5	7	6
Triplet births (mothers)	7		8		7		3		3	

Standard primipara (cephalic, spontaneous onset of labour, >37^{+0})

	2001		2002		2003		2004	
	N=1149	%	N=1118	%	N=1240	%	N=1564	%
% of all births	1149/5820	19.7	1118/5827	19.2	1240/6137	20.2	1564/7708	20.3
% of all primigravida	1149/2678	42.9	1118/2675	41.8	1240/2866	43.2	1564/3561	43.9
Vaginal delivery	813	70.8	783	70	908	73.2	1137	72.7
Instrumental delivery	235	20.5	212	19	192	15.4	222	14.2
Caesarean section	101	8.7	123	11	140	11.2	142	9.1
3rd degree tears	15	1.3	27	2.4	27	2.1	32	2.0
Episiotomy	315	27.4	313	27.9	343	27.6	457	29.2
Apgar <7 at 5 minutes	22	1.9	11	0.9	24	1.9	30	1.9
Admission to SCBU	27	2.3	31	2.7	55	4.4	54	3.5

Pregnancy losses

	2001		2002		2003		2004	
		%		%		%		%
TOP 20-24 weeks	7	0.12	10	0.17	19	0.30	18	0.23
Late losses >20 weeks	13	0.22	15	0.54	14	0.22	4	0.05
Stillbirths (SB)	32	0.54	31	0.52	41	0.65	54	0.69
Early NND	34	0.57	31	0.52	32	0.51	43	0.55
Late NND	7	0.12	7	0.12	10	0.16	18	0.23
Perinatal Mortality (SB+early NND)	66	1.11	62	1.04	73	1.17	97	1.23
Wigglesworth classifications								
Malformations	27	0.45	29	0.7	30	0.48	29	0.37
Unexplained antepartum	30	0.5	34	0.6	34	0.54	43	0.55
Intrapartum	6	0.1	8	0.1	12	0.19	7	0.09
Immaturity	26	0.44	26	0.4	33	0.53	41	0.52
Infection	4	0.07	0		1	0.02	0	
Other	8	0.14	10		14	0.22	5	0.06
Accidental	0		0		0		0	
SIDS	3	0.05	0		0		0	
Unclassified	0		0		0		0	

Denominators are total number of babies born including in utero transfers.

Neonatal morbidity

	2001		2002		2003		2004	
		%		%		%		%
Shoulder dystocia	69/5951	1.2	71/5958	1.2	78/6260	1.2	111/7849	1.4
Shoulder dystocia after vaginal delivery	69/4604	1.5	71/4435	1.6	78/4754	1.6	111/5960	1.9
Erb's palsy			33/5858	0.6	15/6260	0.2	11/7849	0.1
Erb's palsy after vaginal delivery			33/4435	0.7	15/4710	0.3	11/7849	0.1
Apgar <4 at 5 minutes	37/5951	1	31/5958	0.5	27/6260	0.4	40/7849	0.5
Admission to SCBU	792/5951	13.3	781/5958	13.1	875/6260	14	984/7849	12.5
Cord pH $\leq$ 7.0	84/5951	1.4	77/5958	1.3	38/6260	0.6	57/7849	0.7

Maternal morbidity

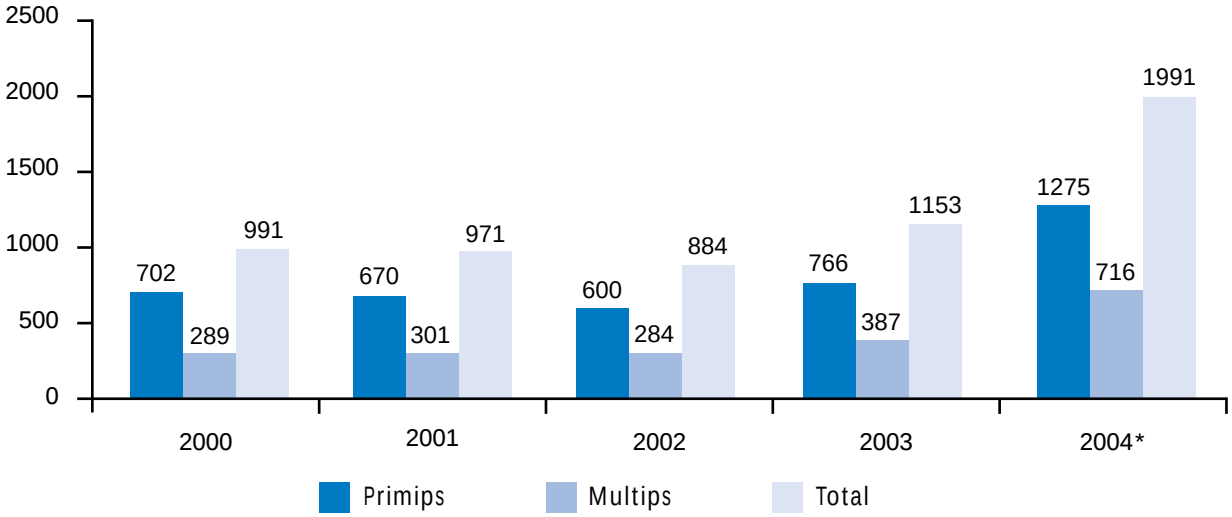
	2001		2002		2003		2004	
		%		%		%		%
3rd degree perineal tear	49/5820	0.8	76/5827	1.3	81/6137	1.3	106/7708	1.4
3rd degree tear after vaginal delivery	49/4604	1.1	76/4435	1.7	81/4710	1.7	106/5202	2.0
Postnatal DVT / PE	3		4		6		5	
Wound infections – Staph.aureus positive	9		8		14		12	
Transfer to ITU	-		-		-		14	
Maternal mortality*	0		0		0		0	

*Data from the Regional CEMACH office.

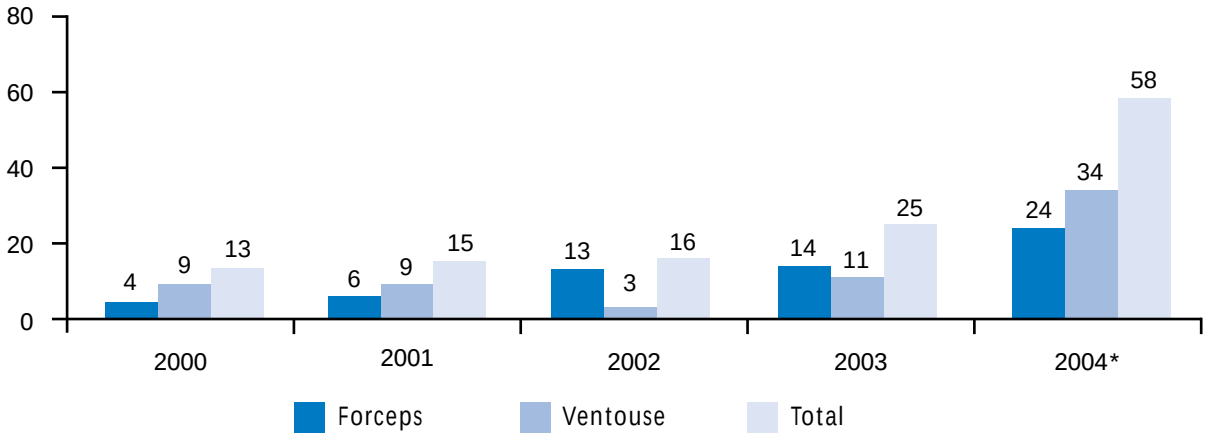
MIDWIFERY LED UNIT (MLU)

Sarah Farrell, Midwifery Led Unit Manager

Total Deliveries in MLU



Instrumental Deliveries in MLU



Overall, there was a very sharp rise in the number of women delivered in MLU. The proportion of primiparous births in MLU has risen slightly in the last 5 years, ranging from 29% in 2000 to 36% in 2004. There were very few instrumental deliveries in MLU, due to the concept of the unit as a non-interventional, low risk delivery area.

MATERNITY WARDS

Rose Douglas, Midwifery Matron for Inpatient Services

The average antenatal stay in a Liverpool Women's NHS Foundation Trust Maternity Ward was 1.6 days in 2004, 1.54 days in 2003 and 1.63 days in 2002. The average postnatal stay has remained at 1 day in 2002, 2003 and 2004.

OBSTETRIC OUTPATIENTS

Mary Macdonald, Antenatal Clinic Manager

Booking Clinics

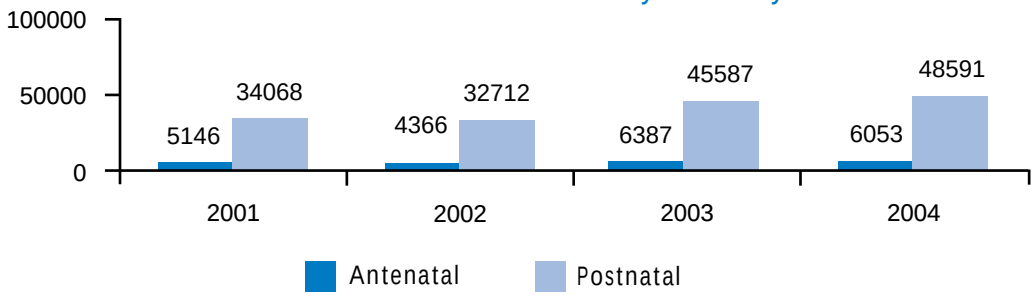
Antenatal booking clinics are held each weekday in Liverpool Women's NHS Foundation Trust. In 2004, there were 9690 appointments booked, with 8834 patients attending. This demonstrates a DNA rate of 9%. Community-based antenatal clinics are held weekly in Speke, Kirkby and the May Logan Centre in Bootle. In Speke there were 201 booking appointments in 2004 and a DNA rate of 20%. The DNA rate for the Speke clinic has improved since 2002, when 132 booking appointments were made, and the DNA rate ran at 30%. In 2004, 633 booking appointments were attended at the May Logan centre, with a DNA rate of 6%. There were 249 booking appointments at the Kirkby Suite, with a DNA rate of 4%.

Specialist Clinics

For those patients with complicated obstetric histories, there is a weekly joint midwife/consultant led clinic. In 2004, 849 patients attended for booking via this clinic, with a DNA rate of 12%. A weekly medical disorders clinic is held at Liverpool Women's NHS Foundation Trust, providing outpatient care for women with endocrinological problems (e.g. diabetes, thyroid disease), renal disease and other important medical conditions. In 2004, there were 308 appointments made for new patients, with a DNA rate of 11%. Separate monthly clinics are held for pregnant women with haematological disorders and epilepsy. A 'Link' clinic is held weekly for non-English speaking patients. In 2004, 220 patients attended new appointments. The DNA rate was 11% in 2004, 15% in 2003 and 10.5% in 2002. As a dedicated centre for the care of all women, the Trust provides a clinic specifically offered to young women. In 2004, 111 patients attended new appointments (DNA rate 15%).

DOMICILIARY VISITS

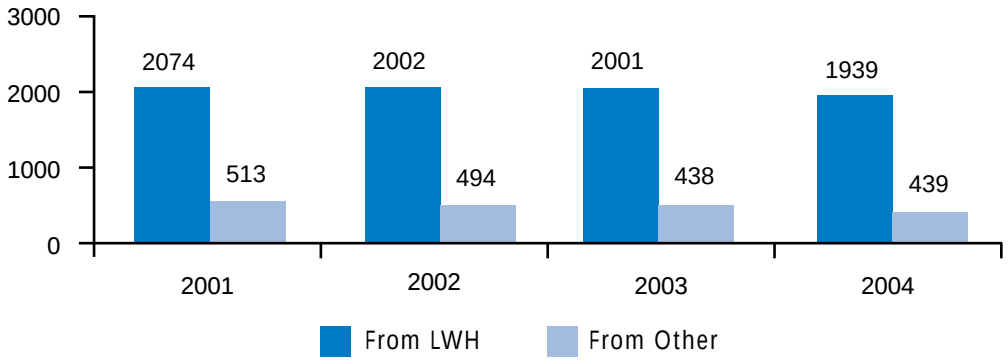
Antenatal and Postnatal domiciliary visits by midwives



FETAL CENTRE

Joan Kelly, Fetal Centre Manager

Referrals from LWH & other organisations



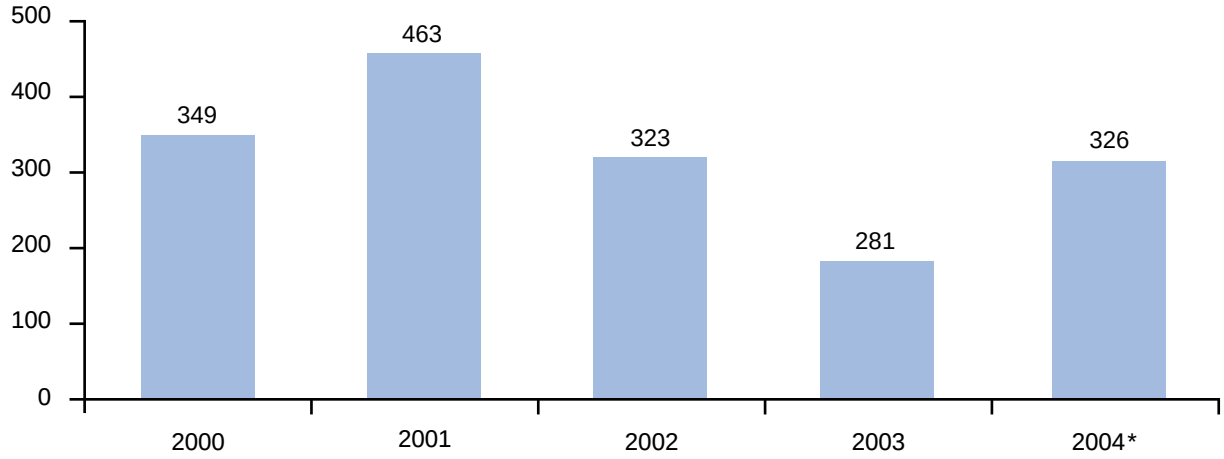
Consultant scans

Type of Scan	2002	2003	2004
Growth	988	1101	1104
Cardiac	-	-	310
Early Pregnancy	211	197	213
Anomaly	1807	1811	1564
Doppler	823	764	645
Multiple pregnancy	410	522	674
Total	4239	4395	4510

Invasive Procedures

	2000	2001	2002	2003	2004
Amniocentesis	300	363	297	308	264
Amnioreduction	3	14	14	34	5
Amnioinfusion	2	12	10	20	13
CVS	65	46	59	66	72
Fetal Blood Sampling	13	18	16	9	16
Chest Shunt	1	2	0	0	2
Bladder Shunt	1	0	1	1	0
Intra Uterine Transfusion	29	16	35	28	16
Fetocide	13	10	18	15	23
Platelet Transfusion	-	20	4	0	5
Total	427	501	454	477	416

Fetal Centre Counselling Referrals



Rhesus Disease

		MCA only	MCA + amnio	Fetal transfusions
Antibodies	Women referred	Women (procedure)	Women (procedures)	Women (procedures)
Anti-D	11	8 (25)	3 (12+6)	4 (8)
Anti-E	2	1(5)	1 (2+1)	1 (2)
Anti-C	3	3 (12)	0	1 (2)
Anti-c	2	0 (0)	2 (11+2)	1 (2)
Kell	2	2 (2)	0	0 (0)
Total	17*	12 (63)	5 (8)	5 (10)

*2 patients had D & C antibodies and 1 patient had E & c antibodies
MCA – Middle Cerebral Artery Doppler.

OBSTETRIC ASSESSMENT UNIT

Maureen Macfarlane, Obstetric Assessment Unit Manager

Reason for Visit	2002	2003	2004
Abdominal pain	10	2	1
Antenatal check	16	19	23
? Antepartum Haemorrhage	3	0	3
Raised blood pressure	710	688	696
CTG ? fetal tachycardia	52	57	72
CTG ? fetal bradycardia	33	24	27
CTG diabetics	103	228	187
CTG twins	102	154	150
CTG triplets	0	1	0
CTG post fetal transfusion	21	8	8
CTG irregular fetal heart	65	45	22
CTG reduced fetal movements	389	407	355
Twin Doppler	0	2	1
IUGR	83	84	39
? IUGR	301	423	320
? labour	1	2	1
? large for dates	8	28	28
Oligohydramnios	60	47	10
Polyhydramnios	75	84	20
Thrombophilia bloods	33	23	3
Cholestasis	85	226	103
Cx assessment prior to IOL	0	0	2
Normotensive – symptomatic	8	4	0
Viability scan	15	12	8
Glucose tolerance test	478	465	488
Injection – Betamethasone	15	21	19
Injection – Fragmin	6	6	1
Injection - other	1	1	0
Routine Bloods	2848	2472	-
Post dates protocol	800	852	786
Presentation scan	295	361	434
? SROM	52	41	37
SROM monitoring	9	5	8
Paternal bloods	6	11	1
Reduced fetal movements	44	37	53
? UTI	0	1	0
Other maternal reason	160	118	80
Other fetal reason	59	29	43
CTG, previously failed criteria	34	26	10
Pregnancy itch	25	3	13
Proteinuria	195	108	137
Total	7700	7125	4189

PUBLIC HEALTH ISSUES IN MATERNITY SERVICES

Grace Edwards, Consultant Midwife

The Government's White Paper *Choosing Health* sets out a rationale for supporting the public in making healthy lifestyle choices that will improve their health.

Six key priority areas have been highlighted:

- Tackling health inequalities which for maternity services include smoking during pregnancy, breast feeding initiation rates and teenage conception rates.
- Reducing the number of people who smoke.
- Tackling obesity.
- Encouraging and supporting sensible drinking.
- Improving sexual health.
- Improving mental health (DoH 2005).

As a result the targets set out by the *Priorities and Planning Framework for the NHS 2003-2006 (DoH 2004)* will remain as key targets for maternity services.

1. To reduce by 1% per year the proportion of women continuing to smoke throughout pregnancy, focusing especially on smokers from disadvantaged groups.
2. Increase of breastfeeding initiation rates by 2% per year, focusing especially on women from disadvantaged groups.
3. To reduce the number of teenage pregnancies by 15% by 2004 and half the rate of conceptions among 18 year olds.

Smoking in pregnancy

Work to reduce smoking in pregnancy is continuing within the Trust. Several study days have been arranged to equip clinical staff in advising women about smoking in pregnancy. Although rates are improving, there are still some areas of concern, where targeting is needed. The rates for South Sefton PCT show a rise for 2004, but it is thought that this may be due to changes in collection of data since the transfer of births from the Aintree site in March 2004.

Pregnant women who smoke at booking at Liverpool Women's NHS Foundation Trust

Area	% of pregnant women who smoke 2003	% of pregnant women who smoke 2004
Central Liverpool PCT	30.6%	29.5%
North Liverpool PCT	28.7%	27.7%
South Liverpool PCT	26.5%	25%
South Sefton PCT	22.2%	26.3%
Southport & Formby PCT	5.5%	5.4%
All women booked at LWH	27.3%	26.5%

Breastfeeding

Work is continuing in the Trust towards gaining Baby Friendly Initiative (BFI) status. Breast feeding initiation rates are rising slowly. Like other public health targets there are clear links between breast feeding initiation and deprivation.

Pregnant women booked at LWH who initiated breast-feeding at LWH

Area	% of pregnant women who B/F 2003	% of pregnant women who B/F 2004
Central Liverpool PCT	39.1%	42.5%
North Liverpool PCT	28.7%	30%
South Liverpool PCT	41.6%	45%
South Sefton PCT	41.8%	40.1%
Southport & Formby PCT	54.8%	62.9%
All women booked at LWH	47.9%	47.4%

Pregnant teenagers

A dedicated team is being established to support young women who continue with their pregnancies. Collaborations have been established between Liverpool Women's NHS Foundation Trust, Southport and Formby Primary Care Trust (PCT) and the Teenage Pregnancy Co-ordinator for South Sefton to establish funds for a dedicated midwife to provide care for young women in Sefton. This will support the young women's midwife working in Liverpool. Work will now concentrate on working towards the Teenage Pregnancy Units guide on caring for teenagers.

Teenagers who gave birth at Liverpool Women's NHS Foundation Trust

Area	% aged 18 and under 2003	% aged 18 and under 2004
Central Liverpool PCT	6.2%	5.6%
North Liverpool PCT	6.2%	4.2%
South Liverpool PCT	5.7%	5.2%
South Sefton PCT	4.7%	4.9%
Southport & Formby PCT	0	2.1%
All teenagers booked at LWH	5.2%	4.8%

ADVERSE CLINICAL REPORTING IN OBSTETRICS

Dr Helen Scholefield, Clinical Risk Management Lead

The Adverse Clinical Event (ACE) System was formalised in April 2002. There has been a continued rise in the number of forms completed from 969 in 2003 to 1245 in 2004. This is likely to be a result of increased activity and staff awareness of ACE reporting, and obvious actions taken as a result of recording improving reporting rates, rather than an increase in the rate of adverse events themselves.

A small number of serious cases undergo formal review. There were 16 of these completed in 2004, compared with 11 in 2003 and 3 in 2002. Staff involved, although initially anxious about the process, have found them a valuable means of debriefing. The findings and recommendations have prompted a number of important audits and changes in practice.

Themes in ACEs and near misses in 2004

i) Transfer of inpatient obstetric services

The centralisation of these on the Liverpool Women's Hospital site in March 2004 has been a major challenge. The high activity has at times resulted in difficulty in transferring patients to and from Delivery Suite (DS) when required. A number of ACES have highlighted the importance of triage, hand over and fluctuations in staffing levels.

ii) Sample losses and delayed arrival of blood

It was agreed to appoint a staff member to transport out-of-hours samples for cross matching to the RLBUHT in a dedicated Trust vehicle.

iii) Medication error

This is the commonest error within the Trust, and reporting through pharmacy has shown this to be the case within Obstetrics. There have been problems with electronic prescribing and the module has now been configured to require the unit number and patient name as identifiers to reduce this risk.

iv) Fetal monitoring

The commonest problem was failure to use an FSE in the second stage and, therefore, not obtain an adequate CTG trace. Documentation of monitoring to the standard required by our own and national guidelines proved difficult to achieve. Documentation aids have been implemented to facilitate this and on the whole have been well received and have improved recording.

v) Baby issues

The number of cold babies has improved on last year following improved skin-skin practice but hypoglycaemia remained a problem. Labelling of cord blood samples has been improved by introducing paediatric sample bottles to avoid confusion with maternal bloods. The new tagging system is in place to improve security.

vi) Community issues

An electronic postnatal discharge notification system has been developed, and the community office centralised to allow it to be staffed seven days a week. The community midwives also identified problems with the suture material used in perineal repair which have led to the guideline being revised and new suture material purchased.

Overview of Adverse Clinical Events (ACEs) and Near Misses

	2003	2004
Total (ACEs & Near misses)	976	1245
Type		
Adverse Event	481 (49%)	547 (44%)
Near-miss	495 (51%)	698 (56%)
Category of Risk		
Very Low	79 (9%)	72 (5%)
Low	586 (67%)	1095 (89%)
Moderate	202 (23%)	70 (6%)
High	8 (1%)	0 (0%)
Assessment of Care		
Appropriate care, good outcome	258 (41%)	546 (45%)
Appropriate care, bad outcome	165 (26%)	290 (24%)
Potential for improvement, good outcome	184 (29%)	332 (27%)
Potential for improvement, bad outcome	25 (4%)	44 (4%)
Most frequent categories		
Drug error	40	157
3rd degree tear	63	74
Unexpected admission to NICU	43	74
Failed instrumental delivery	47	69

2. NEONATAL SERVICES

Dr Ben Shaw, Clinical Director of Neonatology
Penny Newmarch, Directorate Manager

Denominator data

	TOTAL			
Booked pregnancies	2004	2003	2002	2001
Live births	7619	8350	8320	8054
Stillbirths (excluding TOPs)	51	47	40	40
Early neonatal deaths	15	22	28	30
Late neonatal deaths	6	4	3	5
Perinatal deaths	72 (0.9%)	73 (0.9%)	71 (0.9%)	70 (0.9%)
Post neonatal deaths (in hospital)	4	1	2	4

Deaths (non-booked pregnancies)	2004	2003	2002	2001
Stillbirths	3	4	-	-
Early neonatal deaths	18	12	9	16
Late neonatal deaths	9	6	4	3
Post neonatal infant deaths	2	7	5	2

Neonatal Unit Activity

Babies admitted	2004	2003	2002	2001
Admission episodes	1038	890	797	813
Babies admitted more than once	11	23	16	18
Babies admitted	1027	865	781	792

Transfers in to the service	2004	2003	2002	2001
In-utero transfers to LWH	70	81	85	120
Post-natal transfers to LWH	94	57	56	66

Dependency levels

BAPM levels	2004	2003	2002	2001
Special / Normal Care	8319 (56.3%)	8963 (68.5%)	7711 (60%)	8487 (69.3%)
High Dependency	3820 (25.8%)	2206 (16.8%)	2481 (19.3%)	1390 (10.5%)
Intensive Care	2637 (17.9%)	1931 (14.7%)	2661 (20.7%)	2578 (19.4%)

LWH Transfers

	Postnatal Transfers			In Utero Transfers			Totals		
Hospital	2004	2003	2002	2004	2003	2002	2004	2003	2002
Mersey Region									
Whiston	19	18	20	8	17	12	27	35	32
Crewe	4	6	2	4	3	5	8	9	7
Warrington	4	4	2	3	11	13	7	15	15
ACWH*	12	19	19	23	27	19	35	46	38
Chester	3	1	1	0	2	2	3	3	3
Arrowe Park	2	3	3	0	5	1	2	8	4
Southport	5	0	3	6	3	2	11	3	5
Macclesfield	4	1	0	0	0	3	4	1	3
Subtotal	53	52	50	44	67	57	97	119	107
Wales									
Bangor	3	1	1	1	4	3	4	5	4
Glan Clwyd	6	2	14	0	3	5	6	5	19
Wrexham	0	2	0	1	1	4	1	3	4
Subtotal	9	5	15	2	8	12	11	13	27
North West Region									
Barrow	3	0	0	0	0	1	3	0	1
Bolton	3	1	1	1	0	0	4	1	1
Billinge	0	0	3	1	1	2	1	1	5
Blackpool	2	1	0	1	1	0	3	3	0
Blackburn	0	2	1	1	0	4	1	2	5
Burnley	1	1	0	0	0	0	1	1	0
Lancaster	2	1	1	0	1	2	2	2	3
Manchester	0	0	2	0	2	2	0	2	4
Oldham	3	0	0	2	2	0	5	2	0
Preston	4	1	0	1	0	0	3	1	0
Rochdale	0	2	1	1	1	0	5	3	1
Stockport	1	1	0	0	2	0	2	3	0
Tameside	0	1	0	1	2	0	0	2	0
Trafford	0	0	0	0	1	0	0	1	0
Subtotal	21	15	13	9	17	16	30	32	29
Others									
Isle of Man	1	0	0	1	4	3	1	4	3
Elsewhere	10	5	7	15	12	16	25	17	23
Subtotal	11	5	7	15	16	19	26	21	26

* Aintree Centre for Women's Health.

NEONATAL SURVIVAL

Booked Pregnancies (all live births)

VLBW Survival	Births			D/S Deaths		NNU Deaths		Survivors		Survival %		
	2004	2003	2002	2004	2003	2004	2003	2004	2003	2004	2003	2002
<500 g	5	8	7	4	7	1	1	0	0	0	0	0
500 – 749 g	19	6	16	0	0	7	3	12	3	63	50	38
750 – 999 g	23	23	27	0	0	4	4	19	19	83	83	78
1000 – 1249 g	44	23	22	0	0	3	3	41	20	93	87	95
1250 – 1500 g	48	46	37	0	1	0	0	48	45	100	98	97
Total	139	106	109	4	8	15	11	120	87	86	82	77

In-utero transfers (all live births)

	Births			D/S Deaths		NNU Deaths		Survivors		Survival %		
	2004	2003	2002	2004	2003	2004	2003	2004	2003	2004	2003	2002
<500 g	0	1	0	0	1	0	-	0	0	0	0	-
500 – 749 g	6	8	10	1	1	3	1	2	4	63	50	90
750 – 999 g	5	5	20	0	0	3	2	2	3	83	60	85
1000 – 1249 g	4	13	8	0	1	0	0	4	12	93	92.3	100
1250 – 1500 g	8	10	9	8	0	0	0	8	10	100	100	100
Total	23	37	47	9	3	6	3	16	29	86	78	90

All live births at Liverpool Women's NHS Foundation Trust

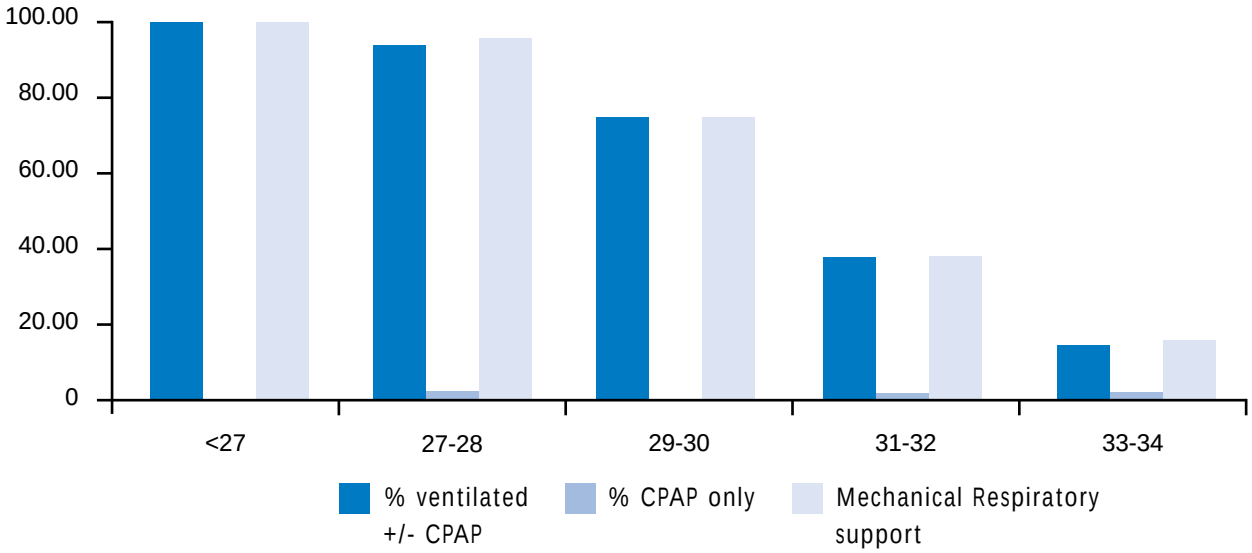
	Births			D/S Deaths		NNU Deaths		Survivors		Survival %		
	2004	2003	2002	2004	2003	2004	2003	2004	2003	2004	2003	2002
<500 g	5	9	7	4	8	1	1	0	0	0	0	0
500 – 749 g	25	14	26	1	1	10	6	14	7	56	50	58
750 – 999 g	28	28	47	0	0	7	6	21	22	75	78.6	81
1000 – 1249 g	48	36	30	0	1	3	3	45	32	94	88.9	97
1250 – 1500 g	56	56	46	8	1	0	0	56	55	100	98.2	98
Total	162	143	156	13	11	21	16	136	116	84	81.1	81

Postnatal transfers

	Admitted			Deaths		Survivors		Survival %		
	2004	2003	2002	2004	2003	2004	2003	2004	2003	2002
<500 g	1	1	0	1	0	0	1	0	0	0
500 – 749 g	17	7	9	9	5	8	2	47	28	89
750 – 999 g	15	5	7	3	1	12	4	80	80	29
1000 – 1249 g	11	8	9	3	1	8	7	73	88	78
1250 – 1500 g	9	9	11	0	2	9	7	100	78	91
Total	53	30	36	16	9	37	21	70	70	75

RESPIRATORY MORBIDITY

Need for Respiratory support by gestation



Bronchopulmonary dysplasia (BPD) rates for VLBW babies*

	Death		Survival with BPD		Survival without BPD	
	2004	2003	2004	2003	2004	2003
<500	1 (100%)	1 (100%)	0	0	0	0
500-749	7 (37%)	3 (50%)	9 (47%)	3 (50%)	3 (16%)	0 (0%)
750-999	4 (18%)	4 (17.4%)	12 (55%)	17 (73.9%)	6 (27%)	2 (8.7%)
1000-1249	3 (7%)	3 (13%)	8 (18%)	7 (30.4%)	33 (75%)	13 (56.5%)
1250-1500	0 (0%)	0 (0%)	7 (15%)	11 (24.4%)	40 (85%)	34 (75.6%)
Total	15 (11%)	11 (11%)	35 (26%)	38 (38.8%)	83 (62%)	49 (50%)

* NNU admissions from booked pregnancies only.

NEUROLOGY

Hypoxic Ischaemic Encephalopathy in Term and Near Term babies

HIE Grade	1	2	3
Born LWH	10	5	3
Born Elsewhere	0	3	5

Cranial Ultrasound abnormalities in Preterm babies.

- 174 babies less than 32 weeks admitted to the NNU survived.
- 13 survivors (7.5%) had a major abnormality on cranial ultrasound scan (parenchymal haemorrhage, cystic periventricular leukomalacia or post haemorrhagic hydrocephalus requiring shunt insertion).

RETINOPATHY OF PREMATURITY (ROP)

There were 242 babies admitted who were eligible for ROP screening (<32 weeks or <1501 g).

- 11 babies did not have their early care at LWH
- 7 were actually referred for treatment of ROP
- 37 babies died
- 22 survivors were transferred to hospitals out of region
- would therefore receive ROP treatment elsewhere if needed
- 172 babies who received their early care at LWH and were eligible for ROP screening survived to receive later care at LWH or in hospitals that would refer to LWH for ROP treatment.
- 4 (2.3%) of these babies received laser treatment for ROP.

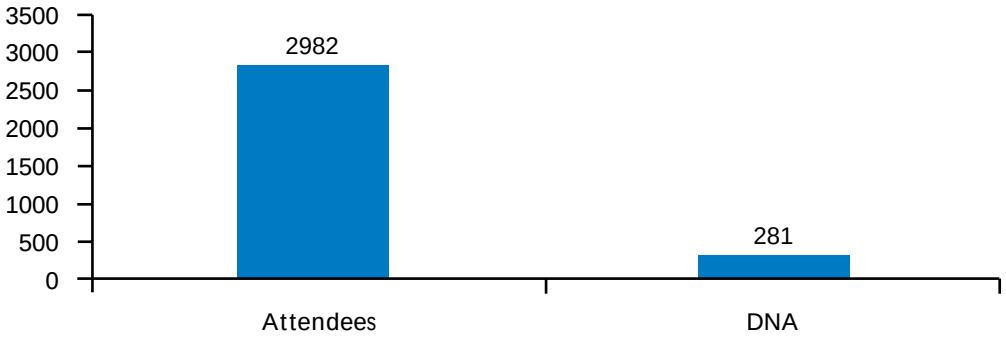
3. GYNAECOLOGY SERVICES

Mr Roy Farquharson, Clinical Director of Gynaecology
Sheila Townley-Wells, Directorate Manager

Liverpool Women's NHS Foundation Trust provides a wide range of gynaecology sub specialities including menopause, urogynaecology, infertility, oncology, colposcopy, early pregnancy assessment and the Emergency Room.

ONCOLOGY

Following the regional implementation of the Calman-Hine report the Trust has been accredited as a Gynaecology Oncology Centre within the Mersey Gynaecological Network.



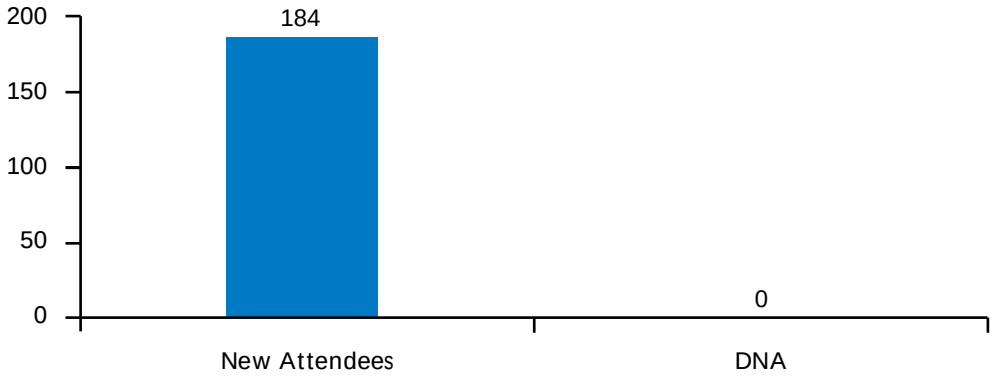
The Oncology Combined Clinic

The Joint Oncology Clinic is a multi-professional clinic, held weekly on a Wednesday morning. The purpose of this clinic is to plan and assess the treatment of women with a diagnosis of gynaecological cancer, offering patient and family support throughout the treatment and follow up stages. In 2004, there were 2982 appointments attended, of these 678 were new appointments, with a DNA rate of 5%; 2304 appointments were follow-ups with a DNA rate of 10%. In all 2982 appointments were attended, 77% of these being follow-up appointments.

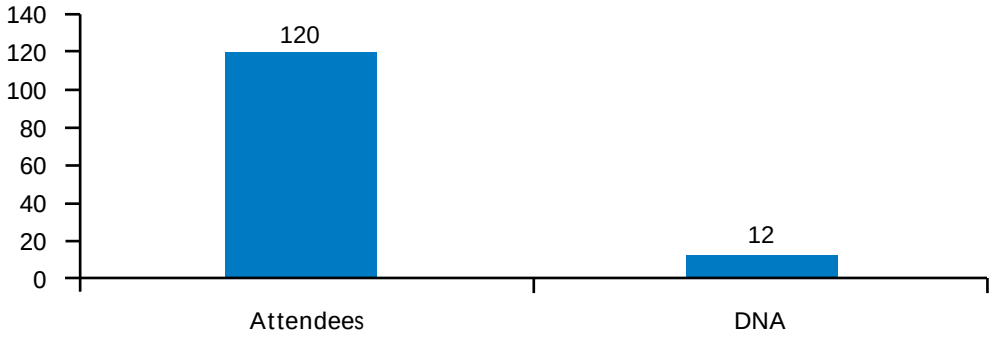
Macmillan Clinic

Liverpool Women's NHS Foundation Trust provides a Macmillan Clinical Nurse Specialist team of three nurses specialising in the care and support of women (along with her partner and family) who have been diagnosed with a gynaecological cancer. All oncology patients' and their families are given information about the Macmillan service. This is a unique role in that it offers both gynae-oncology and specialist palliative care support. There were 184 new appointments made for the Macmillan service in 2004, with a 0% DNA rate. Altogether there were 2330 appointments attended, 92% of these being follow-up.

Palliative Care Clinic



Ovarian Screening Clinic



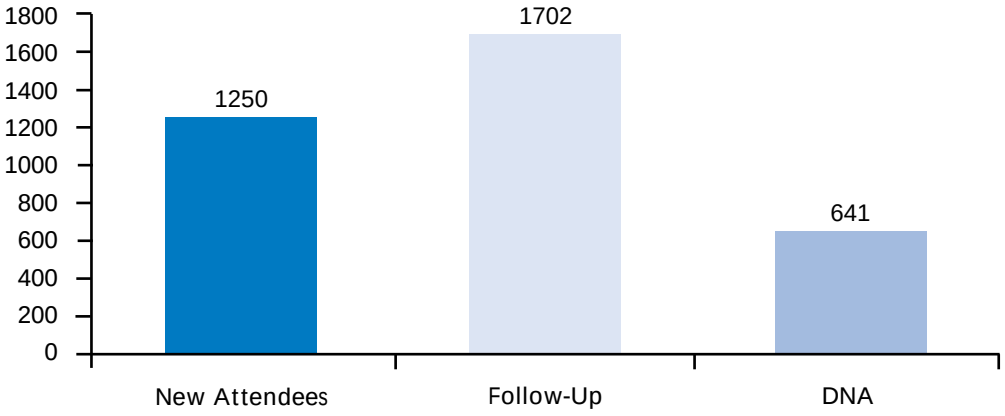
OUTPATIENT ENDOSCOPY CLINICS

Hysteroscopy Clinics

The Hysteroscopy clinic offers the opportunity to investigate the causes of heavy periods or post-menopausal bleeding in outpatient settings. All procedures in the clinic are carried out under local anaesthetic. Patients are seen for follow-up in the general gynaecology clinics.

Colposcopy Clinic (Nurse led)

The Trust provides outpatient services for the full range of Colposcopy services, which is the largest in the North West. The Colposcopy clinic is a dedicated area within the Gynaecology Outpatients department. There are 14 Colposcopy clinics per week. 40% of all appointments in 2004 were new appointments, and 60% were follow-ups. The DNA rate for new appointments was only 17% in 2004, but 25% of follow-up appointments were DNA, resulting in a relatively high overall DNA rate of 22%.



REPRODUCTIVE MEDICINE

The Hewitt Centre for Reproductive Medicine continues to thrive as the UK's largest NHS provider of specialist fertility treatments, and has recently expanded physically by opening a 'satellite' semen analysis lab at Ormskirk Hospital. The success and reputation of the Hewitt Centre has facilitated local implementation of the Government's desire to increase the availability of fertility treatments and is also helping provide treatment to patients from North Wales. Success rates remain high, but the desire to improve still further is backed up by several ongoing clinical and academic research studies. The Hewitt Centre also expects to become one of the few centres nationally to have achieved the prestigious ISO 9001 quality management award. Significant changes in laboratory practice are likely in the near future as a result of an impending EU Directive, but the Hewitt Centre is well placed to accommodate these.

In addition to the assisted reproduction clinics conducted in the Hewitt Centre there are dedicated infertility and andrology clinics conducted by Mr C R Kingsland, Mr R Gazvani, Mr N Aziz and Dr I Lewis-Jones.

IVF treatments and results for the twelve month period ending 31 March 2004*

	Clinical pregnancy rates		Live birth rates	
	Below 38	All ages	Below 38	All ages
Treatment cycles started (IVF & ICSI)	26.4% 202/766	22.9% 223/972	25.3% 194/766	22.1% 215/972
Egg collection	27.9% 202/725	24.2% 223/921	26.8% 194/725	23.3% 215/921
Embryo transfer	31.4% 202/644	27.4% 223/814	30.1% 194/644	26.4% 215/814
IVF only (per embryo transfer)	31.5% 95/302	27.7% 108/390	29.8% 90/302	26.7% 104/390
ICSI only (per embryo transfer	31.3% 107/342	27.1% 115/424	30.4% 104/342	26.2% 111/424
Frozen embryo replacements (per embryo transfer)	17.6% 37/210	17.4% 46/265	16.7% 35/210	15.9% 42/265

* Format approved by the Human Fertilisation and Embryology Authority.

IVF treatments and results for the 12 month period ending 31 March 2005*

Clinical Pregnancy rates	Below 38	All ages
Treatment cycles started (IVF & ICSI)	24.8% 210/846	21.3% 238/1116
Egg collection	26.7% 210/787	23.0% 238/1036
Embryo transfer	29.1% 210/723	25.3% 238/941
IVF only (per embryo transfer)	27.8% 90/324	24.0% 103/429
ICSI only (per embryo transfer)	30.1% 120/399	26.4% 135/512
Frozen embryo replacements (per embryo transfer)	18.6% 35/188	17.4% 41/236

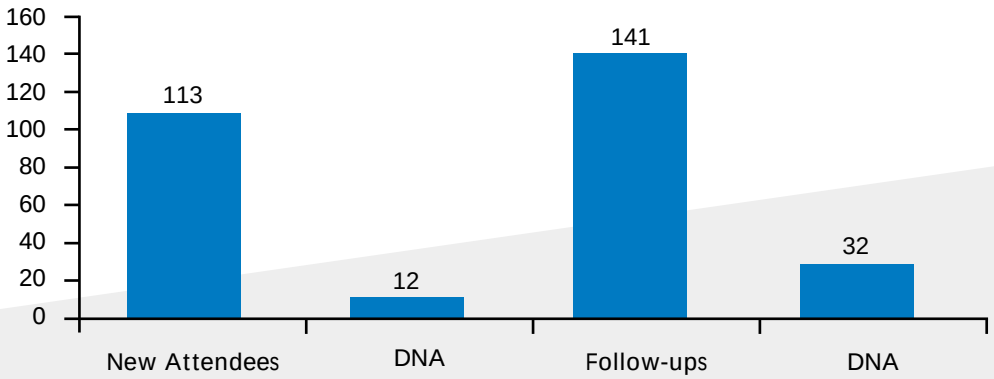
Other results for all IVF treatments (incl FETs)	
Patients treated	1112
Singleton births/ongoing pregnancies	191
Twin births/ongoing pregnancies	86
Triplet births/ongoing pregnancies	1
Cycles where 2 embryos transferred	999
Cycles where 3 embryos transferred	16
Abandoned treatment cycles	185
Treatments with donated eggs or embryos	
Cycles with donated eggs	20
Cycles with donated embryos	8
Number of live births/ ongoing pregnancies	6

* Format approved by the Human Fertilisation and Embryology Authority.

GYNAECOLOGICAL ENDOCRINOLOGY

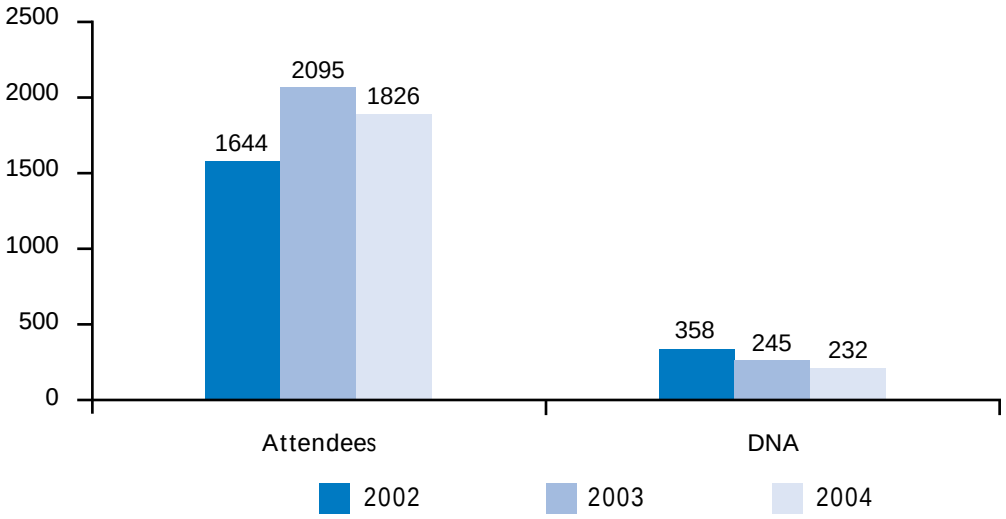
Gynaecological endocrinology clinic

A dedicated weekly clinic for polycystic ovarian syndrome and hyperprolactinaemia is held by Mr N Aziz.



Menopause Clinics

Menopause Clinics are an important resource of advice and support to both General Practitioners and their patients and there is a great demand for the service. Over 2,000 women a year attend for screening, advice and treatment.



In general the women who will benefit from attending the Menopause clinic fall into the following groups:

- Women who have specific medical problems that require specialist advice concerning the use of Hormone Replacement Therapy HRT
- Women who are having difficulty in finding a suitable preparation of HRT
- Women who are having problem bleeding whilst on HRT
- Women who have gone through an early menopause or who have had their ovaries removed surgically.

THE COMBINED BREAST CLINIC

This is a monthly clinic for the management of the menopause in patients treated for breast cancer. The consultant gynaecologists, (Mr N Aziz and Mr C R Kingsland) are joined by the consultant breast surgeon (Miss A Waghorn) to offer the patient the best and most up-to-date advice on the management of the menopause.

MISCARRIAGE CLINIC

The Miscarriage Clinic was created in 1986 with the aim of supporting women who suffer recurring pregnancy loss. Over the years, it has run on a basis of interested Clinicians and Research Fellows sponsored by research monies and, in the past, Trust Fund monies, based at the Liverpool Women's Hospital site. Recent analysis shows that a considerable number of patients are referred from outside our catchment area and the clinic now receives regular referrals from the North of England and occasionally from the rest of England. Sixty percent (60%) of referrals arrive from outside Liverpool. The commonest source of referral is through General Practitioners, as well as Consultant colleagues from other hospitals.
The Miscarriage Association often uses our clinic for referral of patients and also help in information distribution and patient education. Approximately 300 new patients are referred every year.

URODYNAMICS DEPARTMENT

The Urogynaecology Department is a multidisciplinary unit for the management of patients with urinary, lower bowel and anorectal dysfunction. The Department staffing includes 3 permanent medical staff: Mr D Richmond (5 Clinical sessions), Miss Elizabeth Adams (6 sessions) and Mr J Sutherst (2 sessions). Mr George Rowlands provides the urogynaecological service at Aintree. There is a Clinical nurse specialist (7 sessions), a Grade G sister (9 sessions), a Grade E nurse (9 sessions) a "Link" midwife (9 sessions) and an auxiliary nurse (7 sessions).

The Clinical Nurse Specialist carries out cystometric testing and anorectal physiology. She has her own Continence Clinic providing advice and follow-up of patients, including teaching clean intermittent self-catheterisation and providing stoma services for the hospital. She is available to provide advice on urinary/faecal problems to the Gynaecology and Obstetric wards. There are three designated physiotherapists who provide 4 sessions.

Perineal and Prolapse Clinics have been developed to provide follow-up for urinary and ano-rectal dysfunction in the immediate puerperium and have facilities for endo-anal ultrasound and neurophysiological testing

In the calendar year of 2004 there were approximately 2000 patient episodes as new referrals, urodynamic/anorectal tests and follow-up visits. A breakdown of the main diagnostic categories, urodynamic procedures and operative interventions is provided below.

There has also been an increase in referral of patients with ano-rectal dysfunction, either from the postnatal ward or as direct referrals from GPs. This has prompted the development of combined Surgical/Gynaecological Clinic with Mr Paul Carter (Consultant Colo-rectal Surgeon RLUHT) which are held every 3 months. The Perineal Clinic provides advice to the postnatal wards and follow-up for patients with perineal, urinary and bowel dysfunction (e.g. following third degree tears) in the immediate puerperium.There is close liaison with Mr A Desmond, Consultant Urologist at the Royal Liverpool University Hospital and Mr Gurprit Singh, Consultant Urologist at Southport when urological advice/combined procedures are required.

STATISTICS FOR 2004 - Liverpool Women's Hospital

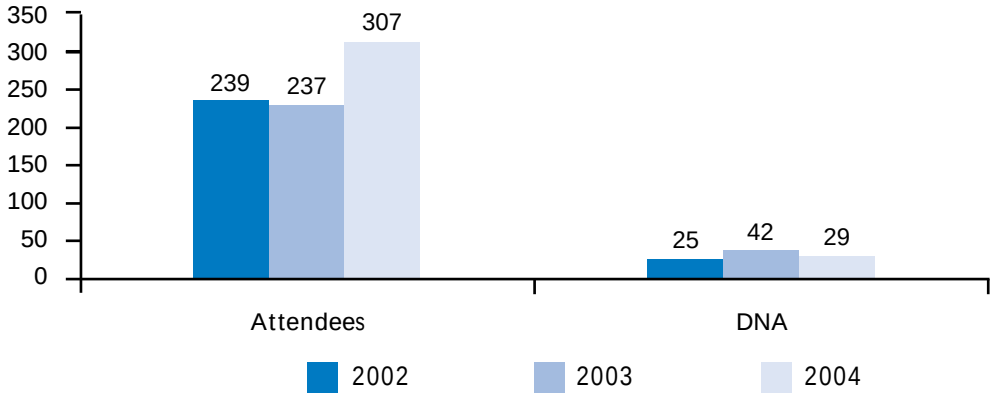
Case Load	No.
New referrals for investigation and treatment:	DHR – 590 New, 964 F/U EJA – 280 New, 486 F/U
Other patients investigated in the Unit- Postnatal referral ie 3rd/4th degree tears	150
Nurse:	750
Physiotherapist:	343 New and 1319 F/U
Investigations:	
Cystometry:	417
Uroflowmetry:	598
Urethral closure studies:	40
Cystourethrography:	130
Diagnosis:	
Stress urinary incontinence:	200
- primary	160
- previous surgery	87
Detrusor over activity:	90
Mixed incontinence (USI + DO)	80
Voiding difficulties (including retention):	80
Fistulae:	1
Prolapse: Not coded	95 % DHR/EJA referrals are incontinent and or prolapse patients
Other: Sensory urgency	96

2004 Gynaecological Surgery LWH

UROGYNAECOLOGY DEPT	S1	S2	Total
Burch colposuspension	4	4	8
Cervix minor	3	2	5
Cystoscopy excluding TVT	93	35	128
Cyst. plus urethral diverticm.	3	1	4
Hysteroscopy	42	42	84
ERPC	35	30	65
Laparoscopy	36	33	69
Laparotomy	8	2	10
Macroplastique	5	0	5
Manchester repair	2	0	2
Paravaginal repair	2	1	3
Sacrospinous fixation	9	28	37
Sacrocolpopexy	9	4	13
Subtotal hysterectomy	2	0	2
Third/fourth degree tear	0	0	0
TCRE/MEA	19	8	27
TVT Primary	38	21	59
TVT secondary	10	0	10
TVT refashion	5	0	5
Total abdo hysterectomy	11	9	20
Vaginal hysterectomy +repair	22	28	50
Vaginal hysterectomy	11	5	16
Vaginal repair excluding VH	40	19	59
Total	429	287	716

VULVAL CLINIC

Vulval clinic is led by Mr M Kidd and caters for patients referred with vulval problems due to age or metabolic disorders.

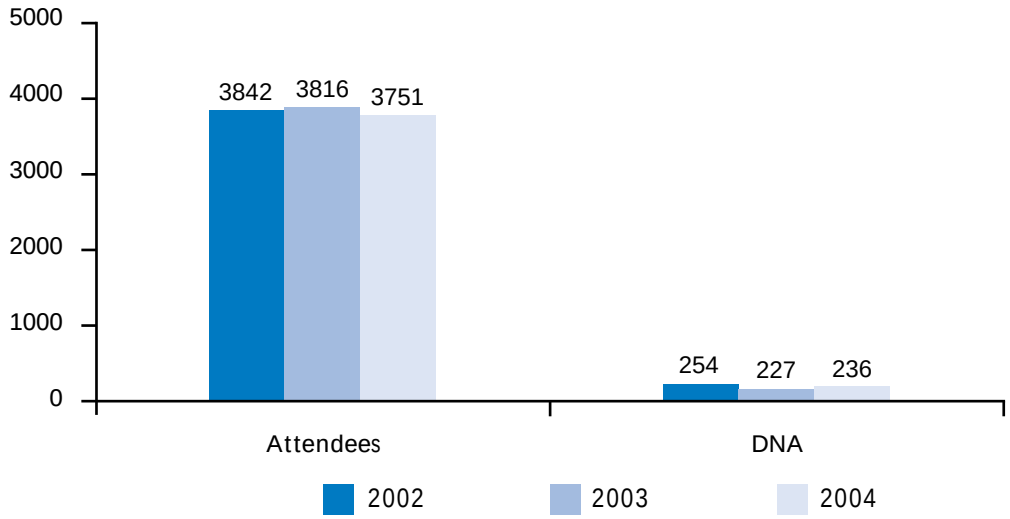


PRE-OPERATIVE CLINIC

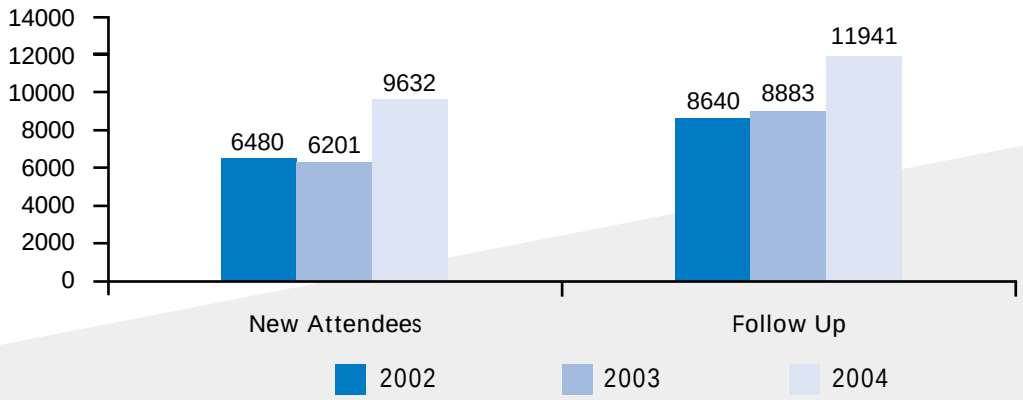
All patients, who have been booked for gynaecological surgery, including day case surgery, are invited to attend our pre-operative clinics.

The aims of this service are:

- To provide patients with verbal and written information regarding planned surgery and pre-operative and post operative care.
- To give the patient time to discuss the planned surgery and answer any questions.
- To involve the multidisciplinary team, e.g physiotherapists, if this is needed.
- To prepare the patient for surgery, arranging blood tests and investigations as appropriate.
- To commence discharge planning and arrange care as necessary.



GENERAL GYNAECOLOGY CLINICS



In addition to specialist clinics the hospital receives in excess of 9000 new general gynaecological referrals each year. There are almost 12000 patients seen for follow-up appointments.

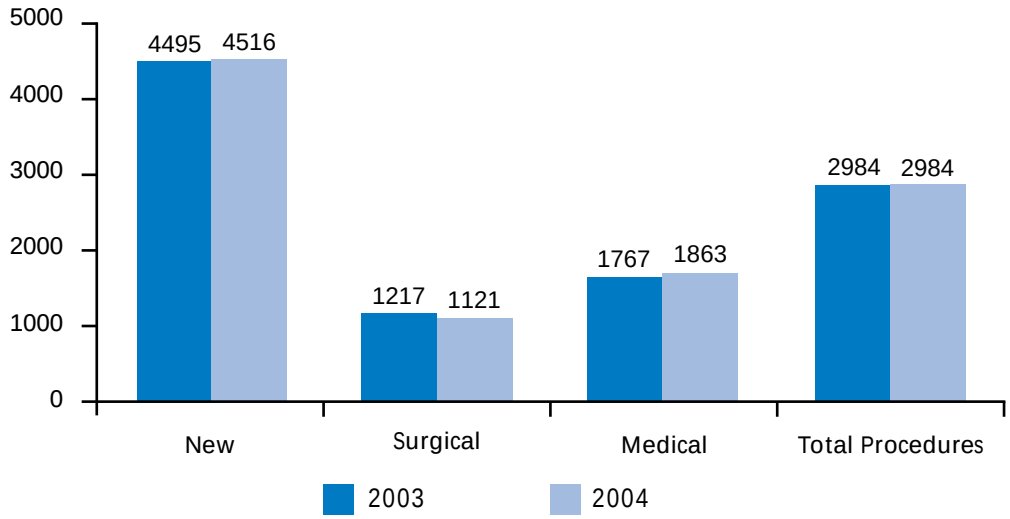
GYNAECOLOGY WARDS

The gynaecology ward consists of 45 beds divided into 6 bedded bays and single rooms. The ward has been divided into 2 dedicated areas: Gynae Base 1 and Gynae Base 2, each having its own team of nursing staff. Rosemary Ward houses 35 beds, 21 of which are inpatient beds and 14 of which are dedicated to day surgery. There are also 2 en-suite side rooms. The average weekday bed occupancy for 2004 was 70%.

BEDFORD CLINIC

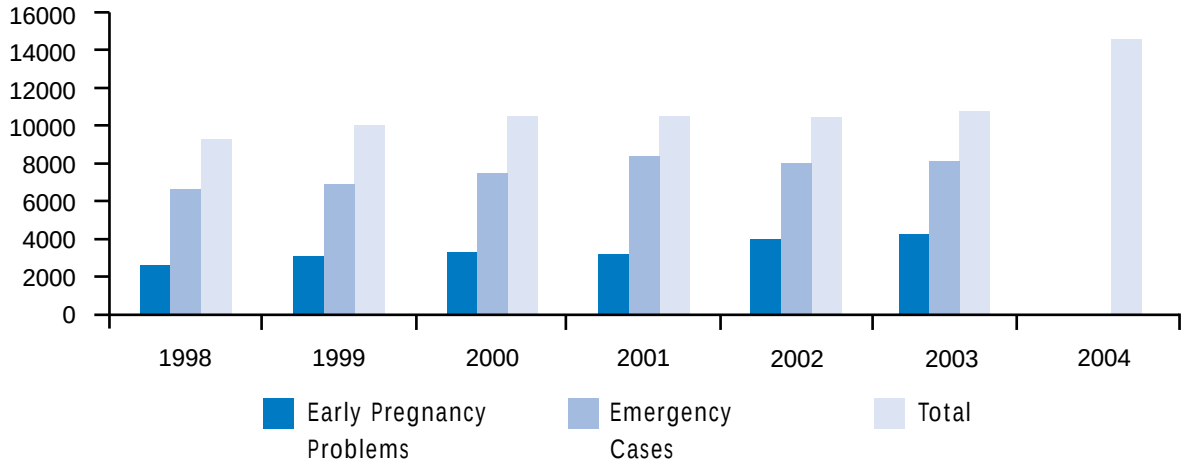
Bedford Clinic is a nurse led day case termination of pregnancy unit and the development of this service is an ongoing process. During 2004, many changes were implemented, attempting to improve the quality of our service. In response to the *National Strategy for Sexual Health and HIV* document, (DOH 2001) and research findings by Power and Campbell (2002), an abortion services providers' committee, chaired by the local PCT Sexual Health lead was created to address issues surrounding service provision throughout Merseyside. Collaborative working within this group culminated in the redesigning of the referral system into Bedford Clinic, streamlining patient access and ensuring that waiting time targets set by the *National Strategy for Sexual Health and HIV* would be met.
A dedicated telephone appointment line, a standardised referral letter and a fax-only arrangement for referrals came into operation in 2004. An information pack for referrers was sent to all users and patient information leaflets were updated.

Procedures in Bedford Clinic 2003/2004



EMERGENCY ROOM

The Emergency Room is open 7 days a week, 24 hours a day for women who have emergency gynaecological problems or women under 16 weeks pregnant and have a pregnancy related problem. Over the years there has been a significant rise in the number of early pregnancy complications seen and treated in the Emergency Room, as the following chart indicates.

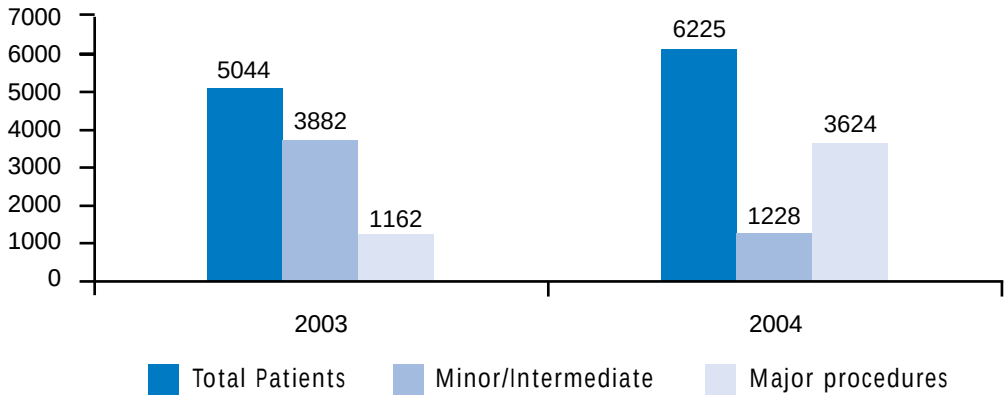


	1998	1999	2000	2001	2002	2003	2004
EPP	2625	3200	3532	3516	4106	4355	5012
Other	6716	7022	7618	8152	7620	8325	9842
Total	9341	10222	11150	11308	11726	12680	14854

4. THEATRES AND ANAESTHESIA

Mr Terry Ryan, Clinical Director
Joanne Wildman, Directorate Manager

Liverpool Women's NHS Foundation Trust provides a wide range of gynaecology sub specialities including menopause, urogynaecolocy, infertility, oncology, colposcopy, early pregnancy assessment and the emergency room.



OBSTETRIC AND GYNAECOLOGY TRANSFERS TO ITU IN 2004

There were 14 transfers to ITU in 2004. 13 were obstetric cases, 1 was gynaecology.

Diagnosis was as follows:

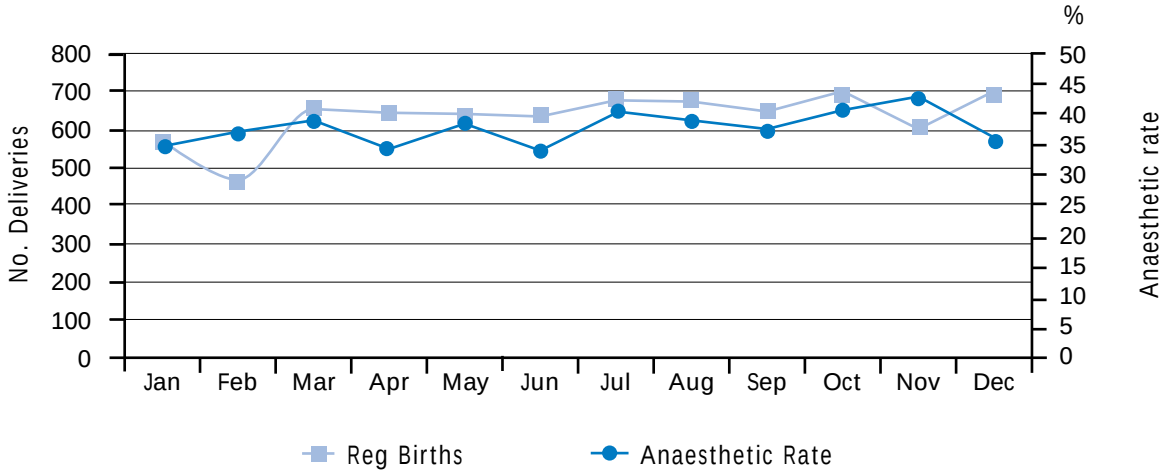
- Unknown x 4
- Cardiomyopathy x 3
- Respiratory failure x 2 (including gynaecology case)
- TTP for plasmapheresis x 2
- Pulmonary collapse x 1
- Septicaemia and cardiogenic shock x 1
- Eclampsia, cerebral infarcts and unexplained seizures x 1

The patients were transferred to Aintree Hospitals Trust in 3 cases, the Royal Liverpool Hospital in 10 cases and Walton Centre for Neurology in 1 case.

In Obstetrics the anaesthesia, analgesia, high dependency care and theatre work has seen a massive increase in throughput since the transfer of services from Aintree.

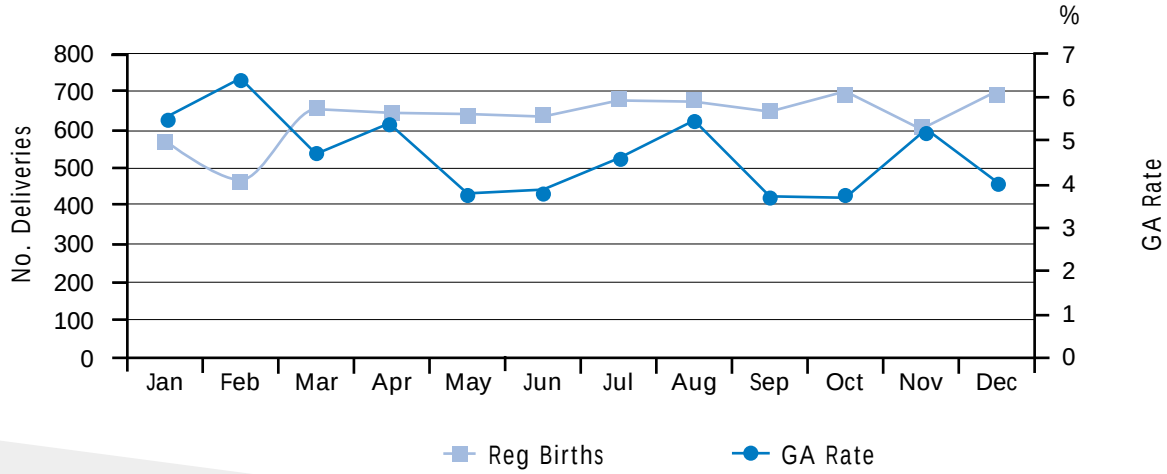
The overall anaesthetic intervention rate has shown a steady increase throughout the year (Fig 1 - see overleaf).

Fig 1 - Proportion of deliveries with anaesthetic interventions



The incidence of general anaesthesia on delivery suite remained low (Fig 2).

Fig 2 - Proportion of deliveries with general anaesthesia



5. CLINICAL GENETICS

Dr Ian Ellis, Clinical Director
Ms Angela Douglas, Directorate Manager

The regional Clinical Genetics Service for Merseyside and Cheshire is managed by Liverpool Women's NHS Foundation Trust and based at Alder Hey Hospital. The service is delivered via peripheral regional clinics including Chester, Clatterbridge, Warrington, Widnes, Southport, Ormskirk and Crewe. The Consultant Geneticists work closely with clinical colleagues within other medical specialities and often see patients in joint clinics. Currently the joint clinics range from the Craniofacial clinic at Alder Hey, which is a nationally recognised centre for Craniofacial work; joint surgical clinic for breast cancer cases; Intersex clinic at Alder Hey, many paediatric clinics across the region including Warrington, Widnes, Clatterbridge, Ormskirk and Crewe as well as joint Opthalmic clinics for genetic eye disorders.

Referrals are split into adult, paediatric, cancer and urgent pre-natal as well as ward referrals and the service receives approximately 70% tertiary referrals, 20% GP and 10% ward (mostly from Alder Hey) and self referrals.

The service is an 'opt in' service and we have about a 10% attrition rate as not all patients that are referred choose to continue for personal reasons. Clinically the service is delivered by Consultant Geneticists, Specialist Registrars and Genetic Counsellors who are H grade nurses or Clinical Scientists grade B15-17.

The service is for patients requesting genetic counselling because they have a personal or family history of a known genetic condition or syndrome or a family history of a relative or relatives with a possible genetic disorder such as those with learning difficulties or birth defects or a strong family history of common cancers (such as breast, bowel or ovarian cancer). The service also investigates patients who are displaying characteristics of a particular syndrome. This would include children (for example those with dysmorphic features, developmental delay or learning difficulties) through to adults, including older adults with, for example, features of an inherited dementia.

Some of the more common genetic or possible genetic conditions for which families are referred include Huntington's Disease, the muscular dystrophies, fragile X syndrome, inherited visual impairment (e.g. retinitis pigmentosa), inherited hearing impairment, cystic fibrosis, Marfan syndrome, cardiomyopathies, Adult Sudden Death Syndrome, polycystic kidney disease, tuberous sclerosis, neurofibromatosis, and chromosome abnormalities. Patients who are planning to become pregnant or who are already pregnant and have worries regarding a familial genetic disorder would also be referred to our service. Patients who have known genetic causes of infertility or recurrent miscarriage may be referred.

NUMBER OF REFERRALS

The demand on the Clinical Genetics Service increased by 35% in 2004 and is on a steady increase. This is due to the establishment of a cancer service and a general increase in the awareness regarding genetics. It is anticipated that the number of referrals will continue to rise due to the introduction of the National Cystitis Fibrosis Screening Programme in April 2006 and also the Department of Health initiative to mainstream genetics within the NHS. The department has employed a Liaison Genetic Counsellor for two years starting in September 2005, to educate and train specialist nurses and other staff within medical specialities in genetics, starting with cardiology and neurology.

Referral Type[1]	2003-2004	2004-2005
Adult	270	381
Paediatric	411	541
Cancer	397	551
Ward	43	88
Self-referral	98	81
Total	1219	1642

[1]This does not currently include prenatal referrals.

NUMBER OF CONTACTS

The service is delivered in different ways tailored to the patient. These range from a telephone counselling session to find out more information regarding the family history of the patient, through to a home visit and then a clinic appointment generally with a consultant and a genetic counsellor.

Location	2003	2004
Alder Hey	471	406
Alder Hey Ward	35	32
Arrowe Park Ward	5	10
Clatterbridge Ward	47	48
Counselling Room	269	288
Countess of Chester	202	210
Neonatal Unit, ACWH	1	0
Foetal Centre	8	1
Home Visit390	543	
Leighton Clinic	19	19
Liverpool Women's Ovarian	226	251
Neonatal Unit, LWH	5	5
Royal Liverpool	200	247
Southport and Ormskirk Cancer	66	70
Telephone Contact	95	168
Triage	4	6
Widnes	11	9
Total	2054	2313*

* Craniofacial activity not counted unless referred separately to the Department – this will be looked at in the coming year.

Due to the increased demand on the service the waiting times for first clinical contact in 2004 rose to 17 weeks. Genetics is currently outside the national targets for waiting times, however, this is not good clinical practice and the service is looking to reduce this wait time significantly in the coming year.

6. RADIOLOGY

David Ednay, Acting Departmental Manager

Obstetric Ultrasound

Type of scan	2003/2004	2004/2005
Booking scan	5227	5950
Anatomy scan	5469	5752
Later scan	8200	9263
Doppler scan	1758	1920
In-patient scan	541	479
Biophysical profile	131	161

Gynaecology Ultrasound

Type of scan	2003/2004	2004/2005
In-patient scan	578	842
Out-patient scan	8086	8732
Emergency Room	3717	4467

Neonatal Examinations

Type of examination	2003/2004	2004/2005
Cranial scan	771	943
X Ray On Call	907	1068
X Ray Daytime	1003	1232

X Ray Examinations

Type of examination	2003/2004	2004/2005
Plain Radiography	669	826
I.V.P	33	32
Bone Densitometry	2993	2742
Hysterosalpingography	395	408
Cystograms	9	0
Enemas	12	15

7. CLINICAL AUDIT

Janet Newall, Clinical Audit Manager

Clinical Audit is a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change. Topics accepted for audit reflect national guidance as well as the requirements of the specialities. The Clinical Governance Committee approves the annual Clinical Audit Programme.

AUDIT PROJECTS IN 2004

In 2004 there were 71 audit projects undertaken across the Trust:

- 31 projects relating to maternity services
- 8 projects within the neonatal directorate
- 18 gynaecology audit projects
- 2 projects from the theatres and anaesthesia directorate
- 4 projects were undertaken from support services
- 4 projects related to the directorate of Clinical Genetics
- 4 audits were Trust-wide

Obstetrics

Author	Topic
Papaniny, Lalitha	Routine re-scanning of the placenta at 20 week scan – is it mandatory?
Koyilla Njiforfut, E	The outcome of vaginal leaks and fluid loss in pregnancy
Mudenha, Roslyn	Management and perinatal outcome of women with reduced fetal movements
Guppy, Caroline	The role of selected GTT in pregnancy
Clarke, Emma	Supra-district audit of antenatal and perinatal HIV
Reddy, Monica	Fetal monitoring in the second stage of labour
Wilson, Susan	Substance misuse during pregnancy
Bakhtiary, Meena	Management of polyhydramnios
Douglas, Rose	Care received by women who have suffered antenatal fetal loss or intrapartum stillbirth
Cooper, Catherine	Indications for the induction of labour
Richardson, Amanda	Management of massive PPH
Paton, Mark	Amniocentesis at Aintree Centre for Women's Health
Comber, Karen	Privacy and Dignity benchmarking audit
Collier, Jenny	Umbilical cord prolapse
Moore, Sophie	Uptake of smoking cessation services in pregnant women
Cawley, Nicola	Antepartum Haemorrhage
Carlin, Andrew	Management of thyroid disease in pregnancy
Povall, Vickie	Supplementation rate (Baby Friendly initiative)
Stewart, Joy	Audit of breastfeeding statistics

Author	Topic
Povall,Vickie	Antenatal and postnatal infant feeding checklists
Artingstall, Elizabeth	Stillbirths in patients who have had recurrent miscarriages
Galliard, Brigitte	Profile of women who DNA at Speke clinic
Patel, Salvi	Diabetes in pregnancy
Saukila, Tadala	The interpretation of abnormal EFM in extremely pre-term births
Stewart, Joy	Breastmilk expressing equipment
Nelson, Chris	Evaluation of home births
Hernon, Mary	Mental health in pregnant women
Remmington, Sharon	Audit of maintaining lactation
Koyilla Njiforfut, Eric	Cholestasis in pregnancy
Tang, Ai Wei	Indications for the induction of labour
CNST audit	Decision to delivery interval in emergency caesarean section

Neonatology

Author	Topic
Tan, Maw	Insulin use on the neonatal unit
Bennett, Eileen	Neonatal use of dummies
Subhedar, Nim	Medication errors on the neonatal unit
Subhedar, Nim	Acute renal failure in neonates
Richardson, Julie	Audit of neonatal transportation
Bennett, Eileen	Support offered to mothers whilst breastfeeding on the neonatal unit
Waugh, Jan	Audit of the neonatal environment
Yoxall, Bill	Bilicheck implementation: a non-invasive method of assessing serum bilirubin in near-term babies

Gynaecology

Author	Topic
Finney, Victoria	Microwave endometrial ablation use and outcomes
Smith, Jennifer	The management of patients undergoing hysterectomy following delivery
Ormandy, Judy	Medical management of miscarriage
Farquharson, Roy	Baseline bone density readings within miscarriage clinic
Tattersall, Mark	Reversal of sterilisation
Bell, Emer	Urinary catheter audit
Garcia, Kathie	Medical termination early pregnancy
Craig, Liz	Gynaecology activity in patients aged 18 and under
Schnauffer, Karen	Evaluation of patients views of a new system of electronic identification and witnessing
Bakhtiary, Meena	Ovarian cysts in pregnancy
Webster, Chris	Audit of support provided to families around bereavement and anniversaries
Rambolas, Niala	Postpartum urinary retention
Kayani, Salma	Consent practices in Gynaecology
Loganathan, Suganthi	Anaesthesia for loop excision
Kordt, Annette	Self-referrals to the Emergency Room
Craig, Liz	Case-note audit of patients aged 18 and under
El Diaf, Sami	Management of ectopic pregnancy

Theatres & Anaesthesia

Author	Topic
Haeck Kathy	Theatre reception audit
Jones, Pam	Blood transfusion audit

Genetics

Author	Topic
Higgins, Catherine	Clinical genetics protocol for urgent prenatal referrals
McCann, Emma	Audit of patients with Trigonocephaly
Warwick, David	Patient satisfaction with the service offered by the Clinical Genetics department
Day, Ruth	Ward Referral audit

Support Services

Author	Topic
Smith, Jacqueline	Pharmacy patient questionnaire
Court, Gillian	Standards for storage and supply of drugs to wards and departments
Edzes, Liz	Information Quality Assurance – completeness and validity checks
Jump, Shelia	Physiotherapy obstetric outpatient client satisfaction survey

Trust-wide

Author	Topic
CNST audit	Health records / documentation
CNST audit	Consent audit
CNST audit	Discharge audit
CNST audit	Audit of “Do not resuscitate” policy

The Annual Clinical Audit Report (2004/05) and the Clinical Audit Forward Plan (2005/06) can be obtained from the Clinical Audit Department (janet.newall@lwh.nhs.uk).

8. RESEARCH & DEVELOPMENT

Lynne Webster, Research and Development Manager

NHS Research & Development (R&D) aims to support a knowledge-based health service in which clinical, managerial and policy decisions are based on sound information about research findings and scientific developments. The R&D Committee scientifically reviewed all research activity initiated in the Trust during 2004 prior to submission to the appropriate Research Ethics Committees. Relevant approvals were gained to achieve regulatory compliance.

PROGRAMMES OF RESEARCH

During 2004 all R&D projects undertaken at Liverpool Women's Hospital contributed to one of twelve different NHS R&D Priorities and Needs Programmes. The Trust was the administrative lead for four programmes, all rated strong by the Department of Health, and a collaborative site for a further eight. A total of 115 research projects were underway during 2004 covering all Directorates of the Trust.

Lead site	Projects
Involving Maternity Service Users/Improving the Health of the Public	14
Evaluating New Technologies, Treatments, and Interventions in Perinatal Care	21
Reducing Mortality, Morbidity and Disability in Preterm Populations	23
Assisted Reproduction, Reproductive Failure and Dysfunctional Labour	27
Collaborative site	
Integrated Cancer Research Programme for Merseyside & Cheshire	21
Merseyside & Cheshire Continence Research Programme	
Paediatric Respiratory Medicine and Cystic Fibrosis	
Diabetes and Obesity Research	
Comprehensive Epilepsy Programme	
Digestive Diseases Research	
Metabolic, Nutrition and Bone Disease	
Vascular Disease and Haemostasis	9
Total number of ongoing projects in 2004 at LWH	115

The R&D Department produce an R&D Annual Report for submission to the Department of Health at the end of every financial year. Copies of the Report for 2004/5 and associated documents can be obtained from the R&D Department (lynne.webster@lwh.nhs.uk).

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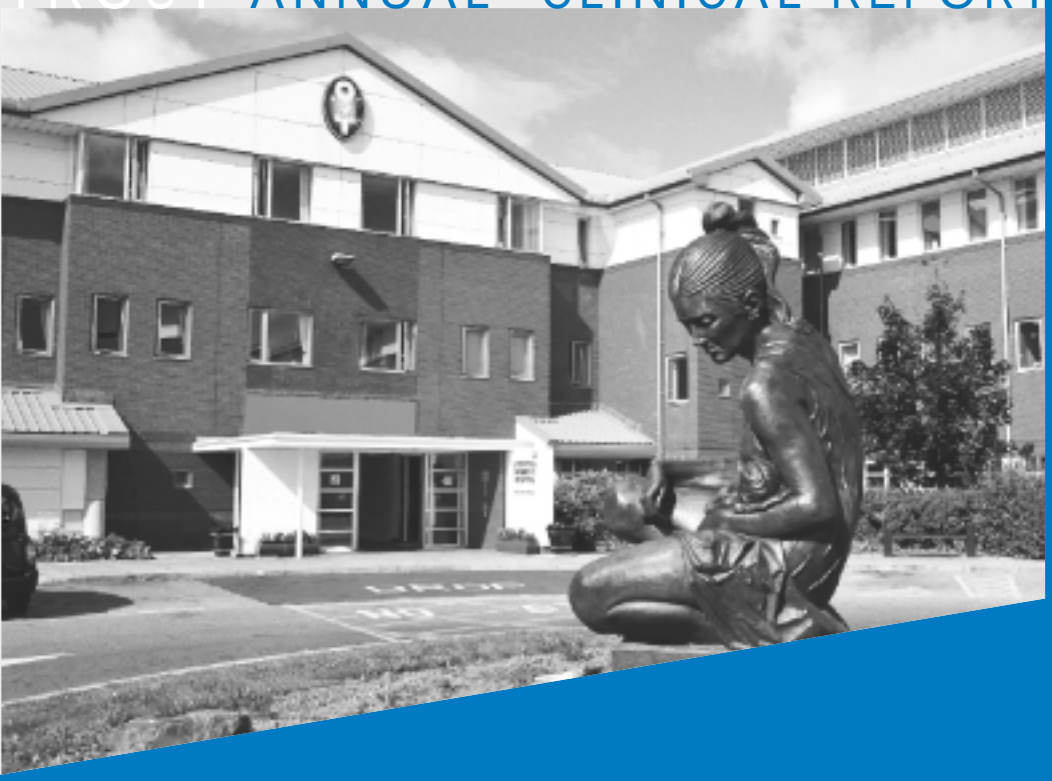

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