Womens Health Division

Annual Clinical Report 2003

Canterbury
District Health Board
Te Poari Hauora ō Waitaha

Our Vision – Te Matou Matakite

To promote, enhance and facilitate the health and wellbeing of the people of the Canterbury District

Ke te whakapakari, whakamaanawa
me te whakahaere i te hauora
Mo te orakapai o ka takata o te rohe o Wataha

Our Values – A matou uara

Care and respect for others
Manaaki me te kotua i etahi

Integrity in all we do
Hapai i a matou mahi katoa i ruka i te pono

Responsibility for outcomes
Kaiwhakarite i ka hua

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Women's Health Division Annual Clinical Report 2003

Contents

The **Christchurch Women's Hospital** and **Day Surgery** Development

The new Christchurch Women's Hospital will have 134 beds including:

- 32 gynaecological beds
- 42 neonatal beds
- 45 obstetric, antenatal, postnatal beds
- 15 delivery beds

The clinical levels include:

- Ground Floor – Outpatients, Fetal Maternal Medicine Unit, Radiology
- 1st Floor – Day Surgery
- 2nd Floor – Gynaecology
- 3rd Floor – Delivery, Consultants
- 4th Floor – Neonatal
- 5th Floor – Obstetrics

The project will include seven new theatres. Four will replace existing theatres at Christchurch Women's Hospital and three will be new day surgery theatres for Christchurch Hospital.

Women's Health Division **Vision Statement**
Wehenga Hauora Waahine **Korero Matakite**

"A Special Place For Women And Babies"
"*He Waahi Miharo Mo Nga Waahine Me Nga Peepi*"

- Women's Health Division aims to provide a level of clinical care that is the best available in the New Zealand Health System.

  Nga whainga a te Wehenga Hauora Waahine he whakaroto manaaki haumano e tino watea ana I roto I te Hauora Puunaha O Aotearoa.

- We will provide an environment that is welcoming to families, sensitive to the needs of women and oriented towards a safe and healthy future for babies.

  Ka whakaratohia e matou he taiao ki te maioha whanau, me te marama atu ki nga hiahia o nga waahine kia hangai atu ki te oranga pai mo nga peepi I te waa kei te haere mai.

- Our staff will work in partnership with patient/client to ensure they are fully informed of their condition(s), the care process(es) they can expect to be part of, and the anticipated outcomes.

  Ka mahi rangapu a matou kaimahi me nga turoro kia tino mata tau ai ratou ki nga tikanga, me nga whakahaere atawhai e tumanokotia ana e ratou e pa ana ki nga hua ka puta mai.

- We will work cooperatively with Lead Maternity Carers, community health providers and community-based support groups for the benefit of all who access the services of Women's Health Division.

  Ka mahi ngatahi matou me nga Kaiarahi Manaaki Oomahu, nga iwi whanui whakarato hauora, me nga iwi whanui roopu tautoko mo te painga o te hunga e whakauru mai ana ki nga ratonga Wehenga Hauora Waahine.

- Women's Health Division will strive to provide for the principles of the Treaty of Waitangi by being regardful of Mana Whenua and Maata Waka whilst working alongside their women, babies, families, staff and community.

  Ka takakawe te Wehenga Hauora Waahine ki te whakarato I nga tikanga o te Tiriti o Waitangi e pa ana ki te Mana Whenua me nga Maata Waka I nga waa e mahi ana ratou I te taha o a ratou waahine, peepi, whanau, kaimahi, me te iwi whanui.

- We will continually strive for excellence in the quality of the care and the services we deliver.

  Ka takakawe tonu matou mo te huhuatanga pai atawhi o nga ratonga e mahia ana e matou.

(from The Women's Health Division Vision Statement 2003)

Foreword

Jean O'Callaghan
Chief Executive

Canterbury District Health Board (CDHB) **Chief Executive**

This document is the third Annual Clinical Report produced by the Women's Health Division (WHD) of the Canterbury District Health Board (CDHB). I congratulate everyone involved for their continued emphasis on quality and safety in the important area of women's health particularly obstetrics and gynaecology and all the services that are in place to assist women through the birthing process.

This year has seen heightened public interest in such areas as non-resident women giving birth in New Zealand, breast feeding versus formula, and the increase in elective caesarean births. It is good to have informed public debate about these issues. Educating prospective mothers particularly on such topics as pregnancy, alcohol and smoking, is an important aspect of health promotion and must be taken seriously. It is all part of providing excellence in clinical care.

Like the previous reports, this document contains detailed information that has been written by clinicians, midwives, nurses, allied health specialists and support staff. It is a comprehensive account of the clinical activities in the Women's Health Division including Christchurch Women's Hospital, Lincoln Hospital, Rangiora Hospital, Burwood Birthing Unit and Lyndhurst Day Hospital. We need to remember too, that the staff at each of these facilities do not operate in isolation. Networking across many different Canterbury District Health Board departments particularly with the Paediatrics at Christchurch Hospital is an important part of the ongoing care of patients and clients.

As we examine the events and activities of the last year, we are starting to move towards a new era in women's health with the opening of the new Christchurch Women's Hospital in March 2005. Concentrating on clinical excellence will be a real challenge for all staff as they take on the additional responsibilities required of them in order to make a safe transition from the current site to the new campus.

The contribution that has been made by all staff involved in the production of this report deserves a high accolade.

Pauline Burt
General Manager
Women's Health Division

Women's Health Division **General Manager**

I am delighted to introduce the third Women's Health Division (WHD) Annual Clinical Report.

The first report was very difficult to produce but we did it, paving the way for a second. Now we recognise simply reporting what we do is not enough. We need to analyse what we do and ask why? Where is the evidence? What could we be doing differently and what outcomes would be affected? We have matured in how we use data to inform clinical practice and to me this is the real reason for producing a Clinical Report on an annual basis.

It is fitting that as we prepare to move to our new facility in March 2005 we acknowledge and understand that the Women's Health Division of the Canterbury District Health Board (CDHB) is about people and not bricks and mortar. Our strength is in multidisciplinary, culturally aware, appropriately skilled teams of health professionals.

Women and Women's Health Division staff will appreciate the improved facilities at our new hospital, however efforts to further improve clinical care will continue unabated and it is information such as that contained within this report which directs us to areas where focus might be clinically beneficial.

I acknowledge the daily efforts of Women's Health Division staff, clinical and non-clinical, who make such a positive contribution to patient care – thank you.

I acknowledge too, the efforts of Women's Health Division staff to turn data into information and ultimately produce this third Annual Clinical Report.

Special thanks to:

- The many contributors (and their supporters) of articles for the report, it doesn't happen without you
- Helene Frapwell – a master when it comes to data and her protegee Timi Boddington
- The Project Co-ordination Group, Nerilee Kidd, Sharron Bolitho, Suzanne Richards and Rayoni Keith for getting it done
- Diane Rodgers and the Women's Health Division Clinical Records team for their unstinting contribution
- The Canterbury District Health Board Communications team for their help in getting this report published
- John Kenny, Quality Facilitator and proud father of three annual clinical reports, who promoted our "we can do it" attitude and who leaves us now in good shape to go on from here.

I commend this report to you.

Gillian Bohm
Principal Advisor
Quality Improvement and Audit
Clinical Services Directorate
Ministry of Health

Ministry of Health **Comment**

The Ministry of Health (MOH) congratulates the Canterbury District Health Board (CDHB) for supporting this programme of clinical audit. In particular, we acknowledge the management team and staff of the Women's Health Division (WHD) for their commitment to improving quality.

In September 2003 the Minister of Health launched Improving Quality (IQ): A Systems Approach for the New Zealand Health and Disability Sector. The document highlights the importance of a culture of quality improvement and an environment that enables the sharing of information and learning.

Creating this supportive environment is identified as one of the key elements in fostering successful quality improvement. The projects reported in this document show that both these features are fostered in the Women's Health Division.

Quality improvement projects are reported from the front of house (e.g. the outpatients) to the back of house (e.g. the laboratory services) and all the clinical services in between.

They do this by systematically examining all aspects of what they planned for yesterday, the care they deliver every day, and using this knowledge to learn how to do it better tomorrow.

The importance of teamwork is another theme of improving quality. Most of the activities reported clearly show that teamwork was central in the delivery of services to the women and babies of Canterbury.

I hope that the Canterbury District Health Board continues its success at the national awards with one of this year's projects.

2003 Review of Events, Achievements & Acclamations

John Kenny
Women's Health Division Quality Facilitator

Our 2003 Annual Clinical Report contains many more examples of activities and achievements within our Division.

Alongside these examples lives an ever-increasing list of success stories from, and acclamations for, the services, groups and teams within Women's Health Division (WHD).

At Division level, some of the numerous significant events from the year include:

- Certification to the New Zealand Health and Disability Sector Standards – the legislation that replaced hospital licensing. Women's Health Division was the first Division of the Canterbury District Health Board (CDHB) to successfully achieve certification status
- A second 3-year accreditation status with the New Zealand Healthcare Standards
- Improved levels of 'patient/clients' satisfaction levels throughout the year and throughout all the Division's services and locations
- The award-winning 'Tongue-tie' project (championed by the Lactation Co-ordinator, Dawn Hunter and the Clinical Director, Neonatal Service, Nicola Austin) was placed runner up for the Maternity and Neonatal Services in the Quality Health New Zealand Quality Improvement Awards.
- The publishing and presentation of the second Women's Health Division Annual Clinical Report – the 2002 Report
- Baby Friendly Hospital Initiative (BFHI) status conferred on Burwood Birthing Unit, Lincoln Hospital and Rangiora Hospital…completing the accreditation status for all Women's Health Division maternity facilities.

Many achievements are created at service or location level within the Division. And, while they are specific to a service or location, the achievements themselves are of great significance to the patients/customers of, and staff involved in, the service or location.

Many of these achievements resulted from the nearly 2000 quality projects, audits and improvement initiatives that we co-ordinate through the quality planners. A significant commitment by all staff involved.

Some of the highlights for 2003 (by service or location) include:

- Neonatal Service producing a range of parent information pamphlets for families with babies in the Neonatal unit. The information was developed with a high level of parent involvement and consultation
- 'Baby feeding cues' poster developed at Burwood Birthing Unit and now used throughout the Maternity Service
- Continued progress on Active Review of Waiting List/Elective Services
- Development of the Gynaecology Clinical Practice Guidelines (currently undergoing evaluation)
- Significant improvement in the management of the processes associated with Induction of Labour (IOL) especially in relation to 'post date' IOL
- Patient information has been developed and published for mothers admitted to the Gynaecology Unit with boarder babies. This has proved a significant issue for the Unit and the pamphlet is a useful resource in setting expectations and better informing our patients.
- Improved patient facilities at Burwood Birthing Unit

All of the achievements from services, teams or locations are recorded on location improvement and achievement registers. Some of the other developments and achievements you will read about in this report.

Enjoy reading the report, and as you read and perform the necessary 'mental gymnastics' to digest it, think of/imagine the many people who have helped make it happen. Not just the writers, the editorial team and report co-ordinators (them as well…and the photographs help). Think also of the many staff whose work has helped create the stories, has helped realise the goals and has facilitated achievement, success, recognition and, ultimately, safer and better clinical care and service for our patients.

Congratulations to us all!

Women's Health Division Profile – **Staff Demographics**

Nerilee Kidd
Clinical Projects Facilitator

Data for 2002 relating to 375 FTE (equalling 675 people)
Data for 2003 relating to 390 FTE (equalling 718 people)

Table 1: Staff Demographics – Profession

Staff Group	2002 %	2003 %
Midwives and Nurses	53	55
Administration and Non-clinical Support Services	34	31
Medical	7	5
Clinical Support Staff	6	9

Table 2: Staff Demographics - Work area/Service

Service	2002 %	2003 %
Maternity	36	39
Gynaecology	24	31
Neonatal	20	19
Administration	20	11

Table 3: Staff Demographics - Employment Contract

Employment Contract	2002 %	2003 %
Full Time	37	24
Part Time	52	52
Fixed Term Contracts	1	3
Casual Staffing	21	21

Table 4: Staff Demographics - Length of Service

Years of Service	2002 %	2003 %
0 – 2	37	34
3 – 5	14	16
6 – 10	24	24
11 – 15	11	9
16+	14	17

Cultural Perspective

Annette Finlay
Cultural Advisory Komiti

Membership of Komiti

Canterbury District Health Board (CDHB) Kaumatua
Tahi Takao
CDBH Taua
Mrs Ruahine Crofts
CDHB Executive Director Maori
(when appointed)
Pakeke Te Korowai Atawhai
Lucy Bush
Christchurch Hospital Te Kai Hapai Tikanga Maori
Annette Finlay
Kaiawhina Whaea Me Nga Peepi
Doris Tamarapa
Women's Health Division (WHD) Quality Facilitator
John Kenny
WHD staff who Identify as Maori

Purpose of Komiti

The Komiti have two key roles within the WHD

- To create and evaluate a cultural advisory process for use within WHD
- To plan and facilitate the WHD Cultural Advisory Programme in consultation with Maori

The Cultural Advisory Komiti meets monthly. We are now revisiting our Terms of Reference to ensure that they truly reflect the development and maturation of the role within the Division.

Staff Changes

Sue Woods, Sterile Services has moved to Burwood Hospital. Ruth Chisholm, Diana Keepa-Hunuhunu midwife/registered nurse and Justine Kariauia joined the Komiti.

Rayoni Keith announced her resignation and shifted to Planning and Funding CDHB as Contracts Manager for the Elderly. John Kenny (Quality Facilitator) replaced Rayoni. The Komiti members who have worked closely with Rayoni over the past few years are indebted to her enthusiasm and professionalism and great support that has been required for the process of documentation and policies to be brought into WHD.

We also farewelled our CDHB Maori Manager Janice Donaldson who was a central part of our Komiti. Both Janice and Rayoni leave Maori health at WHD in a state of readiness for further development in the future.

Doris Tamarapa- Kaiawhina Whaea me Nga Peepi

Doris has become an integral part of our Komiti and is highly regarded in her role as Kaiawhina Whaea me nga Peepi (Maori Health Worker). The demand for her role is growing and she can be accessed in regards to any cultural concerns or issues that may arise. This may also be in the form of communication, both for the woman and their whanau (family). She can provide awhi (help) and tautoko (support) with cultural issues, education on tikanga (values and beliefs) and referral to the appropriate resources available in the community for both Maori and mainsteam organisations. Doris brings her own original warm touch to all those who work here, one of them being waiata practice for the staff, who under her guidance are now able to provide a cultural presence at many WHD functions.

Maori Midwives

Tahi has recommended the Komiti supports the Maori midwives to help them with their focus and direction, it is sad that there are so few of them though.

Maternity Services Manager Jane Waite must be thanked for her support and financial assistance with funds and study leave for Ruth Chisholm, Lianne O'Brien, Erica Lobb and Diana Keepahununuhunu to attend the College of Midwives Hui. The komiti has also been made aware of scholarships being offered at times to some expensive conferences by the organisers to encourage staff to attend. Hopefully these avenues can be utilised as well.

Ruth was a guest on the 'Pacific Women on Air' radio programme and spoke about the value of breastfeeding.

Diana attended a Smoke Change programme, as part of team care midwives who focus on mothers who are at high risk, health-wise and economically. This team is one of the highest referrers of mothers to outside agencies. The focus of this programme is to reduce the amount smoked rather than ceasing it.

The Maori midwives believe a support service available for young mothers within WHD may be helpful but before this occurs the cultural aspects must be addressed.

Unfortunately Diana has left WHD and Ruth is also moving on.

New Opportunities

The Komiti recognise that we need more Maori staff with clinical backgrounds, and that alongside the clinical aspect there needs to be some acknowledgement of their individual strengths, i.e. being Maori. There is also a place for Maori staff who are here for specifically Maori issues to have some form of clinical based education in the most common areas of their mahi to enable them to work more closely and effectively with whaea and their whanau.

Te Whare Mahana

Te Whare Mahana, (Maori style accommodation, situated at Christchurch Hospital) has been utilised by WHD whanau at times throughout the year, Lyn Jarman Kaiawhina Tautoko Te Whare Mahana is part of the Cultural Advisory Komiti as well.

Accreditation

The "Baby Friendly Accreditation" ceremony was held in May.

The WHD Accreditation survey was held in August, the Cultural Advisory Komiti met with the surveyors. Overall feedback is that culturally WHD is ahead of many other hospitals and is recognised to have achieved a lot over the last 3 years, and it is still growing and developing from this respect.

Pamphlets, Posters and Ukaipo

Human Resources have a new booklet for staff. This contains a brief introduction to Doris's role and the waiata sessions, there is also a letter of introduction from the Cultural Advisory Komiti for new staff as well.

Ngai Tahu Communications and Fleur King at the Corporate office, have assisted in putting together a website on the intranet which introduces us and our roles.

Kaiawhina Whaea me nga Peepi posters are now being printed and pamphlets are but a step away from printing.

The Ukaipo books are now distributed throughout the Division.

Policy

- A Tikanga Policy has been developed at CDHB to be used throughout all the hospitals.
- All WHD policies are now being reviewed by the Cultural Advisory Komiti, whilst they may not have a cultural perspective, some do require our input i.e. Restraint Policy, Signage Policy, to ensure we will have uniformity with te reo for the new Christchurch Women's Hospital (CWH).

Site Development

We continue to offer site advice on re-development of the new CWH.

Normalising Maori Process

- Tikanga courses have been held at WHD. These were purchased from the Maori Department of the Christchurch Polytechnic Institute of Technology by Corporate.
- It is now becoming the norm to organise blessings when we have special events. The next one will probably be the fetal monitoring equipment that the Division is purchasing.
- Staff are keenly attending waiata practice.

Ethics and Research

Researchers have submitted four studies to us over this year to consider the Maori issues that may arise from them.

- The expression of a peptide protein (NT-CNP) in pregnancy long bone tissue
- The endometriosis study
- The stimulation and suppression of angiogenic factors in cultured endometrial cancers
- Temporal contouring and rhythm in face-to- face interactions

The Canterbury Ethics Committee is now asking what Maori community involvement there is attached to this committee. I think we look at our membership and know that most of us are the links to the community and know when to request advice around the hard questions. This is still ongoing.

University Department of **Obstetrics & Gynaecology**

Professor Pippa Kyle
Head of Department
University Department of Obstetrics and Gynaecology

Introduction

The University Department is part of the Christchurch School of Medicine and Health Sciences of the University of Otago. It is staffed by clinicians contracted by the University and Canterbury District Health Board (CDHB). The department's primary roles are:

- To co-ordinate, deliver and supervise the clinical training of undergraduate medical students in the specialty of obstetrics and gynaecology (O&G).
- To provide postgraduate educational opportunities in obstetrics and gynaecology through the University of Otago papers 702, 703, 704 and the University of Otago Diploma of Obstetrics and Gynaecology.
- To perform clinical and laboratory research in obstetrics and gynaecology.
- To link with the clinical, midwifery and nursing staff to provide an environment of learning and research, in order to optimise care of both pregnant women and those with gynaecological problems.

The departmental staff are also closely involved in the postgraduate teaching of registrars and other staff, College and National Advisory matters as well as clinical roles. The clinical roles of the university consultants are largely concentrated in the subspecialty areas of maternal and fetal medicine, and gynaecological oncology although general obstetrics and gynaecology, and reproductive medicine are also covered.

Staffing

Clinical staff
Professor Pippa Kyle (Head of Department)
Dr Peter Sykes
Dr Rosemary Reid
Dr Lynda Croft
Dr Peter Benny
Dr Di Poad

Support staff
Jane Marriner

Research staff
Professor John Evans
Mr Chris Rait
Ms Niere Kitson
Ms Donna Willcocks
Dr John Connolly
Dr Maysoon Abbas
Mr James Muys
Ms Dianne Harker

We are very grateful for the teaching assistance of the following staff in 2003;

Mr Harry Bashford, Mr Colin Conaghan, Mr John Doig, Dr Sharron Bolitho, Dr Simon Jones, Dr Helene Macnab, Mr David Peddie, Mr Greg Phillipson, Dr Anne Sissons, Dr Sarah Wakeman, Wendy Kean.

We also wish to thank all other staff for their support, which is essential in the training of medical students. The university department recognises the support of the Women's Health Division (WHD) General Manager, Ms Pauline Burt.

Teaching

Table 1: Teaching numbers

	2003
5th Year	62 (6 groups)
Trainee Intern	62 (10 groups)
New Zealand Registration Exams (NZREX)	10

Table 2: Residential Courses for the Diploma of Obstetrics and Gynaecology

Diploma Residential Courses	Course	Month	Numbers Attending
Introductory	718	June	9
Introductory	718	Nov	10
Exit	719	Dec	14 (incl. 9 GPs)

The new Modular Diploma course commenced in July, 2003. The first Introductory residential course was held in Christchurch in June, 2003, and again both Introductory and Exit courses were run in November / December 2003 in Christchurch. Feedback showed that they were both extremely successful, overseen by Drs Di Poad and Lynda Croft. The Introductory course (718) enrolled new diploma students and house surgeons whereas the Exit course enrolled final diploma students and general practitioners (GPs).

Research
Grants active 2003

- Lottery Health
  "The regulation of peptide release from the endothelial cells of blood vessels"
- Heart Foundation
  "Influence of sex steroids on endothelial cell secretion of vasoactive peptides"

- University of Otago
  "Regulation of luteinising hormone and follicle stimulating hormone from the pituitary gland"
- McDiamid Institute
  "Using an Atomic Force Microscope to look at the very detailed structure of cells"
- CMRF
  "Using mathematics to reveal underlying mechanisms involved in luteinising hormone release from the pituitary gland"
- University of Otago Summer Studentship Projects
  - "Luteinising hormone receptors in endometrial cancer." (Supervisor: Dr Sykes)
  - "Do luteinising hormone receptors and cAMP-dependent factors have an important relationship to endometrial cancers." (Supervisor: Professor Evans)
  - "Review of procedures performed at Christchurch Women's Hospital to diagnose chromosomal abnormalities in fetuses, 2000 – 2003" (Supervisor: Dr Reid)

2003 Publications: Journal Articles – Refereed Article

JJ Evans, RA Reid, SA Wakeman, LB Croft, PS Benny
Evidence that oxytocin is a physiological component of LH regulation in non-pregnant women. *Human Reproduction Vol 18, No7: 1428 – 1431 (2003).*

P Sykes, D Allen, C Cohen, J Scurry, D Yeo
Does the density of lymphatic vascular space invasion affect the prognosis of stage Ib and IIA node carcinoma of the cervix? *International Journal of Gynaecological Cancer 2003, Vol 13: 313 – 316.*

MM Abbas, JJ Evans, IL Sin, A Gooneratne, A Hill, PS Benny
Vascular endothelial growth factor and leptin: Regulation in human cumulus cells and in follicles. *Acta Obstetrica et Gynecologica Scandinavica (2003) 82: 997 – 1003*

JJ Evans, AH Youssef, TG Yandle, LK Lewis, MG Nicholls
Endothelin – 1 directly modulates its own secretion: studies utlilising the cell immunoblot technique. *Regulatory Peptides (2003) 113: 149 - 153*

Bartha J, Wood J, Kyle P, Soothill P
The effect of metabolic control on fetal nuchal translucency in women with insulin dependent diabetes: a preliminary report. *Ultrasound Obstetric Gynecology 2003; 21: 451-4*

Nanal R, Kyle P, Soothill P
Fetal Loss after Invasive Procedures: A new method for classification. *Prenatal Diagnosis 2003; 23 :488-92*

Bartha JL, Harrison G, Kyle P, Soothill PW
Fetal serum alpha-fetoprotein in alloimmunised pregnancies. *Prenatal Diagnosis 2003;23:917-20*

Other involvement of University Staff

Reviewer of scientific journals
Postgraduate examiner
Member of a number of Christchurch School of Medicine and Health Sciences & University committees
Member of scientific societies
Training Supervisor – Registrars
NZREX Examiners

2003 Year Highlights

Professorial Appointment

Professor Pippa Kyle was appointed Head of Department in September 2003. This is an exciting expansion for the department, increasing both clinical and research expertise. After initial undergraduate and registrar training in O&G in Auckland, Pippa completed her specialist training in the United Kingdom, including subspeciality training in maternal and fetal medicine, and was Director of the Regional Unit in Bristol, United Kingdom, for seven years. She completed a Doctor of Medicine thesis in Oxford, investigating pre-eclampsia. She has a major clinical and research interest in both fetal complications, and maternal medical disorders in pregnancy. Her aim is to establish a tertiary Fetal Maternal Medicine Unit for the South Island, based at Christchurch Women's Hospital, enabling Christchurch to be a centre of specialised care. CDHB is investing in this with the purchase of a high-level ultrasound machine, database, and staffing, which should be available in 2004.

Gerald Duff Research Prize

The Gerald Duff research prize presentations were held on 11th September 2003. Four high quality presentations were delivered, and Professor Pippa Kyle gave an invited address. The prize was awarded to:

Dr Sarah Wakeman for her presentation entitled "A Randomised Controlled Trial of Vaginal Lignocaine Injection Prior to Transvaginal oocyte Recovery in an IVF Cycle"

We were pleased that Mrs Gaynor Duff and Professor Don Aitken could attend.

Undergraduate Teaching Award

Departmental Administrator, Jane Marriner was awarded the 'Best Support Staff' award, as the 5th year Co-ordinator for 2003, this was for the 6th year in succession. A great accolade to all her hard work!

Tutor Specialist Report

Sharron Bolitho
Tutor Specialist

The role of Tutor Specialist is unique in the Women's Health Division (WHD). It is a consultant clinical role with special responsibilities for medical education, medical administration, and medical quality and audit activities. It may in fact be unique in obstetrics and gynaecology in New Zealand, as there does not appear to be an equivalent in any of the other major centres.

Traditionally, this position has been filled by a senior registrar advancing to consultant status, whose main role was to supervise and teach resident medical officers (RMOs). Over the years the role has expanded greatly to now also include:

RMO Administration

- Rostering, recruitment, leave cover and trouble-shooting human resource issues for RMOs
- Liaison between junior and senior medical staff
- Running a formal RMO orientation programme
- Reviewing incident reports and patient complaints involving RMOs
- Organisation of RMO service provision on a daily basis

Medical Education

- Organisation/ participation in formal weekly tutorial programmes for registrars and senior house officers (SHO).
- Organisation/ facilitation of the medical education monthly Rolling Half Day programme.
- Teaching of medical students and teaching in the University Diploma programmes.

Clinical Audit and Practice Improvement Activities

- Involvement in the co-ordination and review of the Annual Clinical Report.
- Supervision and review of RMO audit projects.
- Guideline development and review.
- Participation in various committees including, Maternity Standards, and Methadone in Pregnancy.
- Involvement in issues of clinical governance and risk management with respect to review and planning.

As can be seen from the list of activities above, 2003 was a busy and productive year. Items of particular note for 2003 were: the development of the handbook 'Management Guidelines for Common Gynaecological Conditions', the production of the second ever Annual Clinical Report, the continuing success of the 'Rolling Half Day' medical education programme and the introduction of a multi employer collective agreement (MECA) compliant roster for SHOs.

During 2003 we were often very short staffed especially with respect to registrars. Thanks to all medical staff who have worked hard to fill the gaps and ensure that patient care has not suffered during this time. Thanks also to everyone who has participated in the teaching and audit programmes. In particular the increased consultant input into teaching, especially in the Rolling Half Day programme has been greatly appreciated.

Maternity Service

Maternity Service

Harry Bashford
Clinical Director
Obstetrics

Overview of the **Obstetric Service**

It is my pleasure to report, as Obstetric Clinical Director.

The past 12 months have indeed been extremely busy with the number of women having babies at our facilities continuing to rise. Despite the increased numbers, the high quality of care provided by all staff, including antenatal, intrapartum and postnatal care has been maintained.

The appointment of Professor Pippa Kyle who has a major interest in perinatal medicine will add another dimension to the strength of obstetric services as we look to become the South Island Centre of Excellence in this sub specialty. I was fortunate to be able to attend her inaugural professorial lecture recently and can attest to her passion for fetal maternal medicine.

The instigation of the increased consultant cover at Christchurch Women's Hospital (CWH) based in the Birthing Suite, has enhanced the high quality care, teaching opportunities and availability of experienced assistance when emergencies arise.

Women's Health Division (WHD) is also fortunate in having an effective General Manager to whom the clinical staff can relate and have an excellent working relationship. This does not always occur in other branches of medicine, as we all know.

Finally, we are looking forward to the transfer to the new hospital in March 2005. The staff should be congratulated on providing such an excellent clinical service when the current buildings are somewhat sub standard.

Jane Waite
Maternity Services Manager

Maternity Service Report

This year has been a busy one for Maternity Services with 4433 births, of 4528 babies. Twenty-eight percent were caesarean section deliveries, 9 percent ventouse, and 5 percent forceps births. All the staff have worked extremely hard and despite a high occupancy rate have maintained excellent standards of care.

Antenatal Outpatients has also seen a dramatic increase in referrals from the community, which has put pressure on staff working within this area.

Utilisation of the Primary Units has been a feature of 2003 with encouraging results.

- Rangiora Hospital had 90 births
- Burwood Birthing Unit had 212 births
- Lincoln Hospital had 86 births

Several projects have been initiated with many positive results. Rotation of midwifery staff has occurred throughout the Christchurch Women's Hospital (CWH). This has lifted the profile of midwifery throughout the Women's Health Division (WHD) and offers midwives the opportunity to maintain a high skill base. This further provides greater potential for professional development within a core setting.

In recognition of increasing intervention rates highlighted in the 2002 Annual Clinical Report a multidisciplinary team was established to explore strategies to reduce induction of labour (IOL) rates. There is clear evidence that IOL produces a cascade of intervention, with primiparous women being the most vulnerable. A consensus for post dates and a new booking system are beginning to have a positive effect. In addition there has been a significant saving in the use of prostaglandin gel, this is the preferred drug for initiating IOL currently used within WHD.

Efficiency initiatives have included disbanding of pre-packaged theatre equipment and the purchase of individual items, and the introduction of Birthing Suite specific, laboratory forms. Patient information has also been developed to ensure women have access to unbiased informed choice.

Achieving Accreditation was a highlight of the 2003 year. As was the status of Baby Friendly Hospital Initiative (BFHI) for our Primary Units, affording the Canterbury District Health Board (CDHB) the status of the first fully BFHI accredited DHB in New Zealand.

In September Pippa Kyle took up the appointment of Professor of Obstetrics and Gynaecology. Pippa has subspecialty qualifications and expertise in Fetal Maternal Medicine. This has led to the expansion of the services provided to the women of the South Island. The service previously provided by Dr Rosemary Reid and Midwife Jeannie Matthews has, with the addition of Professor Pippa Kyle been formalised into the Fetal Maternal Medicine Unit, now located in the University Department. Alongside this service sits the Fetal Maternal Assessment Unit, which provides monitoring for high-risk pregnancies.

The appointment of a maori health worker has complemented services provided by our Social Work department and has improved access to services provided for Maori women and their whanau.

Several midwifery staff within WHD have been recognised by achieving publication in the 2003 year. These publications include:

"Community Care of the Hyperemesis Woman in a Primary Unit", published in Quality Health New Zealand (NZ).

"Midwifery Care of Women with Afterpains", "Born in a Caul" and "Neonatal Jaundice" all published in the New Zealand College of Midwives (NZCOM) magazine

The Lactation Service also had an entry in the NZ Quality Health Awards and was placed second overall.

Several Midwives also presented at the inaugural Joan Donnelly Midwifery Research Forum held in Christchurch. Other presentations from within the Maternity Service have included a presentation at the International Lactation Conference held in Sydney.

Finally, relocation to the new Women's Hospital and Day Surgery Unit has been a focus of 2003, with many staff contributing to the development of the plans.

2003 has been a busy year with many successes for the staff within the Maternity Service. Despite increasing numbers of women utilising our services we have maintained an exceptional standard of care for the women of Canterbury.

C J Conaghan
Chairman MSRC
Consultant Obstetrician and Gynaecologist

Maternity Standards Review Committee

The Maternity Standards Review Committee has met regularly throughout 2003 reviewing the clinical details of six patients referred to this committee. In addition one Accident Compensation Corporation (ACC) case is currently under review by ACC at the committee's request where there is some clinical concern regarding the interpretation ACC has put on this particular case.

The committee starts the 2004 year with three new cases for review at our first meeting.

The committee membership is Jane Waite, Debbie Earl, Annette Finlay, Rosemary Reid, Nicola Austin, David Peddie and Colin Conaghan.

The Maternity Standards Review Committee was formed to review, discuss and advise the Women's Health Division (WHD) General Manager, on maternity policy, standards, guidelines and practice within the WHD.

The six cases reviewed during the course of 2003 can be summarised with respect to the following issues:

Table 1: Cases Reviewed by the Maternity Standards Review Committee

	(n)
Inadequate Clinical Examination / Supervision (in labour)	2
CTG Interpretation	2 + 1 (ACC)
Management of Third Stage	2
Delay in Transfer	1
Poor Prescribing	1
Reviewed – No Further Action	1

In some cases, the problems identified may lie in more than one particular field. For example, inappropriate management of third stage may then go on to generate delay in transfer resulting in the admission of a patient to a base hospital requiring intensive care.

There were two points highlighted during the course of reviewing cases over the last 12 months.

1. Clinical Examination

It is imperative that all patients arriving in the Birthing Suite have an appropriate examination performed soon after admission. While clinical examination in determining the portion of the presenting part can at times be difficult, there is very little defence for an individual who does not examine a patient; cares for the same patient over 7 to 8 hours and then finds the presenting part on the perineum is a breech.

2 Management of Third Stage

The physiological management of the third stage places the patient at a risk of primary postpartum haemorrhage. The case for active management of third stage has been proven in randomised control trials (Cochrane database). Active management will reduce the risk of postpartum haemorrhage, blood transfusion and maternal morbidity/mortality. In an environment where we constantly strive to practice evidence based medicine, patients must be clearly advised of the risks involved in managing the third stage physiologically.

Elaine Gray
Midwifery Educator

Midwifery Educator

Maternity services are provided at Christchurch Women's Hospital (CWH) and three Primary Birthing Units: Lincoln, Rangiora and Burwood. Midwives are employed in all three areas either as core or lead maternity carers (LMC). Approximately 172 midwives, six enrolled nurses (EN) and one obstetric nurse (Obs N) are employed within the four hospitals/units (full/part time or casual basis). Employed staff support and work alongside our LMC self-employed midwifery colleagues and form a multidisciplinary team with our obstetric and neonatal colleagues.

Educational opportunities are open for all midwives and staff within Women's Health Division (WHD). LMC midwives are invited to these sessions creating ideal opportunities for discussion with our peers. Multidisciplinary workshops are held throughout the year and we are fortunate to have supportive obstetricians and paediatricians who present at these workshops. Joint ventures between the New Zealand College of Midwives Canterbury/West Coast Region and WHD have provided excellent workshops for discussion on topics such as induction of labour and keeping birth normal.

Strong links between WHD and the Christchurch Polytechnic School of Midwifery are maintained and joint ventures in education are planned between the two facilities. One such venture is the design of the Newborn Examination Course that will be held in 2004. Three midwives are members of the Professional External Advisory Committee and attend meetings twice a year.

In September 2003 the introduction of the Health Practitioners Competency Assurance Act, celebrated the development of the first Midwifery Council in New Zealand. Midwives are now compiling and maintaining professional portfolios to achieve their Competency Based Practicing Certificates. This is an exciting time for midwives and 2004 celebrates 100 years of midwifery within New Zealand.

Within the Maternity Service six midwives are currently enrolled in postgraduate midwifery studies and three are well on their way to their Masters of Midwifery! Five midwives presented at the inaugural Joan Donley Research Forum held in Christchurch over a two-day period and numerous midwives attended this extremely interesting forum. Two midwives have had their papers published in midwifery journals both in New Zealand and overseas.

As reported in the Annual Clinical Report 2002, WHD has continued to provide two positions for new graduate midwives. 2003 welcomed two graduate midwives who qualified from the Christchurch Polytechnic School of Midwifery. The programme continues to be a supportive environment for graduate midwives and focuses on clinical midwifery practice within the secondary care environment. Both midwives obtained full time positions at the end of their 9-month contract.

Midwives continue to support newly employed midwives to WHD and all midwives have a planned preceptorship period. This is decided upon after discussion with the midwife and the midwifery educator or charge midwife, thus ensuring each midwife's requirements are met individually (ranges from 2-14 days). Student midwives are supported during their clinical placements within the WHD and third year students are part of a 'buddy system' on their placement to the Birthing Suite at CWH. All midwives are encouraged to attend an 8-hour preceptorship workshop for midwives prior to acting as a preceptor.

Five full day workshops were held over 2003 and represented 880hrs of learning (Table 1). The rural/primary workshop has now become so popular that a larger venue will be sought for 2004. Employed and self-employed midwives from Akaora, Kaikoura, Canterbury and West Coast attended this year's workshop which created an ideal opportunity for midwives who practice in isolated areas to network with colleagues.

Table 1: 8 hour Workshops

	No's attended	Hours
Community midwives workshop	13	104
Primary/rural workshop	45	360
Midwifery practice: fetal loss	22	176
Preceptorship workshop	10	80
Childbirth education	20	160
Total	110	880

Neonatal resuscitation sessions are now an annual event for all midwives within WHD and the successful programme has been running for the last 4 years. It is run in conjunction with the Neonatal Service (Table 2).

Table 2: Neonatal Resuscitation Hours

	No's attended	Hours
WHD MWS,EN & Obs. N	113	226
LMC midwives	42	84
Other facilities	38	76
Total	193	386

2003 was a busy year for midwives and ongoing education and professional development has been highlighted in the statistics below (Table 3). The midwifery educator plans education over the year and ideas are obtained from staff members or as clinical/professional issues arise. Table 3 reflects midwives' ongoing clinical and professional development. The numbers are inclusive of employed midwives, EN, Obs N, LMC midwives, medical personnel, allied health professionals and students. Consumers are also invited to present or attend education sessions.

Table 3: 2003 Combined Education Hours

	Hours
General education	388
Adult cardio pulmonary resuscitation	172
Neonatal resuscitation	386
Workshops	880
Total	1826 hrs

It is important to acknowledge the intangible hours of education that occur on a day to day basis between all professionals. This is crucial for knowledge sharing and although cannot be statistically collected is a vital component of ongoing professional development and I would like to take this opportunity to thank and acknowledge all the midwives and staff.

There is no doubt that 2004-2005 will continue to challenge midwives with an ever-increasing demand to meet both educational and professional development requirements. The proposed move to the new hospital in March 2005. will in itself provide added demands but as always midwives will rise to the challenge!

Lesley Dixon
Charge Midwife, Burwood Birthing Unit

Burwood Birthing Unit

The Burwood Birthing Unit (BBU) is situated in the Northeast area of Christchurch city and has 10 maternity beds and three birthing rooms.

We are committed to providing, safe, flexible and supportive care for women and their families. As such we provide a welcoming and relaxing family friendly environment in which to promote the normal birth process. Close links to Christchurch Women's Hospital (CWH) are maintained as a means of promoting the safety of women and their babies.

A team of four community midwives work from our unit and provide continuity of care for up to 50 women per midwife a year. Childbirth classes are held for women intending to use our unit and an average of 30 classes a year are led by childbirth educators within Burwood Hospital. A physiotherapist is available for consultations for antenatal / postnatal women and also holds antenatal and parent and baby swimming sessions.

In the 2003 calendar year there has been another increase in the number of women accessing our unit. The total number of admissions has increased to 736 women (number is exclusive of babies).

Births

The number of births at Burwood Birthing Unit in 2003 has increased by 9 percent to 212. There were 254 women admitted in labour with 42 women transferring to CWH in labour. This gives us a 16.5 percent transfer rate in 2003. The most common reason for transfer was prolonged labour and / or request for epidural. This was followed by meconium stained liquor in labour. Of the births that occurred, 104 (49%) were under the care of the Burwood continuity of care midwives.

There continues to be a high number of women using water during labour (69%) and an increase to 48 percent in the number of women giving birth in water. The number of first time mothers (primigravidae) has increased with 34 percent being primagravida and 66 percent of women being multigravid in 2003.

Postnatal Transfers

The number of women transferring from CWH has increased by 17 percent from 397 in 2002 to 463 in 2003. The average length of stay has fallen from 2.5 days in 2002 to 2.2 days in 2003.

Retrieval to Christchurch Women's Hospital

When a baby becomes unwell in the postnatal period it becomes necessary to transfer to CWH. In 2003 the neonatal transfer rate was 0.9 percent which has stayed the same as in 2002.

Breastfeeding Rates

The number of women breastfeeding remains high with exclusive breastfeeding on discharge rates of 84 percent, which increases to 91 percent if the woman has given birth at Burwood Birthing Unit.

Statistics

Table 1: Admission, Discharge and Transfer Numbers

	2001	2002	2003
Total admissions (excluding babies)	563	651	736
Intrapartum admissions	218	241	25
Antenatal transfer to CWH	42	46	42
Antenatal admissions (not in established labour and discharged	20	13	10
Postnatal transfers from CWH	325	397	463
Neonatal Transfers to CWH	3	6	7

Table 2: Labour and Birth Numbers Burwood Birthing Unit

	2001	2002	2003
Births	176	195	212
Primiparous births	51	52	73
Multiparous births	125	143	139
Births in Water	42	62	102
Labours where water used	90	126	147

Table 3: Breastfeeding Rates (Inclusive of Burwood Births & Transfers in)

	2001		2002		2003	
	(n)	%	(n)	%	(n)	%
Exclusive	395	80	493	85	566	84
Fully	29	6	23	3.9	29	4.3
Partially	34	7	40	6.9	48	7.1
Formula Fed	33	7	22	3.8	30	4.4
Total (d)	491		578*		673	

* BF status not available for 14 women

Table 4: Breastfeeding Rates (Burwood Births Only)

	2002		2003	
	(n)	%	(n)	%
Exclusive	174	90	192	91
Fully	1	0.5	3	1.4
Partially	12	6.2	7	3.3
Formula Fed	6	3.1	8	3.8
Total	193	**	210	**

** BF status not available for two women

Table 5: Ethnicity Data Burwood Birthing Unit

	2002		2003	
	(n)	%	(n)	%
European	889	75.6	900	66
Maori	121	10.3	125	9.1
Pacific Islander	31	2.6	37	2.7
Asian	14	1.2	39	2.8
Middle Eastern	1	0.1	0	0
Other	27	2.3	158	11.6
Not Stated	93	7.9	103	7.52
Total	1176		1362	

Table 6: Average Length of Stay Burwood Birthing Unit

	2002	2003
Hours	60	52
Days	2.5	2.2

Anne Atkins
Charge Midwife, Lincoln Hospital

Lincoln Hospital

Lincoln Hospital is a seven bed maternity facility with two birthing rooms. The facility provides services to women from Christchurch and Selwyn Districts. Services include early pregnancy classes, pregnancy and parenting classes, labour and delivery support and postnatal care.

Whilst Lincoln has shown an increasing throughput over the last three years, the 2003 year has been exceptional with an overall increase of 162 admissions (see Table 1). The number of women birthing at Lincoln is reasonably static with a fall of five births (see Table 2). In 2003 the use of water as a form of pain relief during labour remained at 47 percent of births. However, there has been an increase in the number of women birthing in water from eight percent (7) in 2002 to 12.7 percent (11) in 2003. The availability of water birth attracts some clients to Lincoln. It is important for us to encourage women to use the primary units given the research supporting the safety of this option.

Lincoln's "Baby Friendly" status achieved in January 2003 has continued to be a focus of the staff. The overall exclusive breastfeeding rate for 2003 of 83.9 percent is slightly reduced from the 2002 figure of 85.1 percent (see Table 3). Women birthing at Lincoln have a 96 percent exclusive rate (see Table 4). The differing rate continues despite all efforts to close the gap.

Thirteen percent of babies transferring to this facility have received some complimentary feeding prior to arrival. As transfer times are now between 12 and 24 hours it would seem appropriate that we take a closer look at this statistic.

Table 1: Admission, Discharge and Transfer Numbers to Lincoln Hospital

	2001	2002	2003
Admissions (including babies)	588	615	777
Intrapartum admissions	83	105	105
Antenatal / Intrapartum Transfers to Christchurch Woman's Hospital (CWH)	14	14	19
Postnatal transfers From CWH	218	205	302
Neonatal transfers to CWH	1	3	7

Table 2: Labour and Birth Numbers at Lincoln Hospital

	2001	2002	2003
Births	69	91	86
Primiparous births	32	23	37
Multiparous Births	37	68	49
Births in Water	NR*	7	11
Labours where water used	NR*	40	42

*NR = Not Recorded

Table 3: Breastfeeding Rates (Inclusive of Lincoln births)

	2001		2002		2003	
	(n)	%	(n)	%	(n)	%
Exclusive	235	84.5	251	85.1	307	83.9
Fully	23	8.3	10	3.3	15	4.1
Partially	2	0.7	21	7.1	33	9.0
Formula Fed	18	6.5	13	4.4	11	3.0
Total	278		295		366	

Note – in June 2002 data collection methods changed to give a more accurate analysis of breastfeeding data.

Table 4: Breastfeeding Rates (Lincoln Births Only)

	2002		2003	
	(n)	%	(n)	%
Exclusive	89	98	82	96
Fully	0	0	0	0
Partial	1	1	4	4
Formula Fed	1	1	0	0
Total	91		86	

Table 5: Ethnicity Data Lincoln Births

	2002		2003	
	(n)	%	(n)	%
European	74	81	72	83.7
Maori	14	15	5	5.8
Pacific Island	1	1	1	1.2
Asian	1	1	1	1.2
Other	-	-	1	1.2
Middle Eastern	-	-	2	2.3
Not Stated	1	1	4	4.6
Total	91		86	

Table 6: Average Length of Stay Lincoln Hospital

	2002	2003
Hours	55	55.6
Days	2.2	2.3

Suzanne Salton
Charge Midwife, Rangiora Hospital

Rangiora Hospital

Rangiora Hospital services a population in excess of 48,000 for both maternity and convalescent care. The unit receives funding for eight maternity beds and four convalescent beds. A team of four community midwives are based at the unit, each caring for a caseload of 50 women per year, providing a mix of primary and secondary care. These midwives have expanded their service into remote areas of North Canterbury over the past year. The midwives work closely with the antenatal clinic at Christchurch Women's Hospital (CWH).

The 2003 calendar year has seen a very promising increase in the number of women choosing to birth at Rangiora Hospital. This can be attributed to several factors. Firstly women are being given more information about birthing facilities in their local areas at booking. This has lead to more women who fit the criteria for birthing in primary units now choosing to do so. There has also been an increase in the number of self-employed midwives choosing to book women to birth here.

A free cervical screening clinic, which ran four sessions in 2003 was very popular.

The hyperemesis rehydration service has now been running for over a year and the North Canterbury women who have utilised this service have found it very beneficial.

Demand for the convalescent beds continues to exceed the contracted available beds. This will continue with predicted population increases and shift in age distribution of population.

2003 has seen Rangiora Hospital together with Lincoln Hospital and Burwood Birthing Unit achieve accreditation to the Baby Friendly Hospital Initiative (BFHI). An assessment was carried out by representatives from the New Zealand Breastfeeding Authority in January 2003.

Quality Health NZ Accreditation and Ministry of Health Certification was also successfully achieved in August 2003. This is current for a period of three years to September 2006.

Table 1: Admission, Transfer and Discharge Numbers at Rangiora Hospital

	2001	2002	2003
Total Admissions (including babies)	732	798	943
Convalescent Care Admission	87	99	103
Gynaecology Admissions (dedicated Gynae Bed)	NR	11	4
Cervical Screening Clinic	35	55	35
Hyperemesis Admissions (day stay)	-	2	5
Intrapartum Admissions	99	61	103
Antenatal Admissions (not in established labour) & Discharged	-	32	18
Antenatal Transfer in Labour to CWH	17	11	10

Table 2: Labour and Birth Numbers at Rangiora Hospital

	2001	2002	2003
Total Births	82	50	90
Primiparous Births	30	5	20
Multiparous Births	52	45	70
Births in Water	NR*	5	3
Labours Where Water Used	NR*	15	32

*NR = Not Recorded

Table 3: Breastfeeding Rates (Inclusive of Rangiora Births & Transfers in)

	2001		2002		2003	
	(n)	%	(n)	%	(n)	%
Exclusive	366	91.2	334	86.6	331	84.7
Fully	17	4.3	9	2.3	22	5.4
Partially	9	2.2	9	2.3	20	5.1
Formula Feeding	9	2.2	34	8.8	19	4.9
Total	401		386		391	

Table 4: Breastfeeding Rates (Rangiora Births Only)

	2002		2003	
	(n)	%	(n)	%
Exclusive	45	90	80	88.9
Fully	0	0	5	5.6
Partially	1	2	1	1.1
Formula Feeding	4	8	4	4.4
Total	50		90	

Table 5: Ethnicity Data Rangiora Births

	2002		2003	
	(n)	%	(n)	%
European	43	86	81	90.1
Maori	5	10	7	7.7
Not Stated	2	4	1	1.1
Pacific Island	0	0	1	1.1
Total	50		90	

Table 6: Average Length of Stay (Maternity Only) at Rangiora Hospital

	2002	2003
Hours	71	72.7
Days	2.6	2.9

Wendy Kean
Charge Midwife

Antenatal Clinic, Team Care and Community Midwives

The Christchurch Women's Hospital (CWH) Maternity Outpatient Department has undergone a time of much change in the past year with new services being introduced and a number of staff changes.

This department is the base for a number of maternity outpatient services, which include Obstetric Outpatients, Team Care and Community Midwives and the Fetal Maternal Medicine Unit.

With the development of two new services within the department and a significant increase in volumes, it has been an extremely busy year.

Team Care Midwifery (TCM) Service

This service began in March 2003 in order to provide continuity of care to many women who, for a variety of reasons, were unable to access this type of care previously.

The vast majority of the TCM clients have increased care needs, which may be due to medical, obstetric, or social reasons or very often, a combination of these.

The team currently consists of eight enthusiastic midwives, dedicated to the provision of continuity of midwifery care, within the limitations of a team framework.

The team assumes the role of lead maternity carer (LMC) to these women and, as such, also provides a co-ordination role of what is often a multidisciplinary approach to care.

The TCMs have a target caseload of 330 women per year.

Community Midwives (CWCM)

We currently have seven CWCM providing LMC services to women as per the requirements of Section 88 of the New Zealand Public Health and Disability Act 2000.

The clients they care for are predominantly in the low risk category with the exception of one midwife who also provides care to the women booked on the Methadone in Pregnancy Programme (MIPS).

The expected caseload is 50 women per midwife per year.

Obstetric Clinic

The clinic has had an extremely busy year with an increase in volume of 1000 women through the department.

Whilst we have had three additional weekly consultant clinics this year, we have an ongoing situation of demand being well in excess of supply, in terms of appointment availability and processing.

All clinics are heavily booked well in advance and out of necessity allotted appointment times are kept to a minimum, despite the complexity of the presenting cases.

The two main causal factors would appear to be the reduced number of obstetricians providing antenatal consultations in private practice and the significant impact of the new consultant roster.

Table 1: Antenatal Clinic Statistics

	2002		2003	
	(n)	%	(n)	%
CWCM	1374	18	1131	13
Maternity Doctor	4344	56	4092	47
MIPS	173	2	193	2
Clinic Midwife	472	6	1343	15
Physician Clinic (Diabetic)	1042	13	1193	14
Antenatal Daycare	293	4	0	0
Fetal Maternal Assessment	76	1	826	9
Total	7774		8778	

Note: The apparent increase in numbers for the clinic midwife category between 2002 (472) and 2003 (1343) can be explained by the inclusion of the team care midwives (TCM) caseload. At this time it has not been possible to separate the TCM figures from those of the clinic midwives.

The antenatal daycare figure of zero for 2003 is a little misleading. Women that fell within this category in 2002 fall into the fetal maternal assessment category for the 2003 data.

Table 2: Parity of Women Birthed by CWCM

Parity	2002 (n)	2002 %	2003 (n)	2003 %
Nulliparous Births	170	38.5	174	40
Multiparous Births	271	61.5	261	60
Total Births	441		435	

Table 3: Parity of Women Birthed by TCM

Parity	2003 (n)	2003 %
Nulliparous Births	48	35
Multiparous Births	89	65
Total Births	137	

There has been nil significant change in the split between nulliparous and multiparous women cared for by CWCM. The TCM have a slightly higher number of multiparous women, this being a reflection of their caring for the majority of those women who are having a repeat elective caesarean section.

Table 4: Ethnicity Data of Women Birthed by CWCM

Ethnicity	2002 %	2003 %
European	71	60
Maori	10	14
Asian	7	14
Pacific Island	9	10
Middle Eastern	1	1
African	1	1
Other	1	0

Table 5: Ethnicity Data of Women Birthed by TCM

Ethnicity	2003 (n)	2003 %
European	83	60
Maori	23	17
Asian	19	14
Pacific Island	8	6
Middle Eastern	3	2
African	1	1
Other	0	0
Total	137	

It is interesting that the figures for both TCM and CWCM concerning ethnicity are similar with both groups caring for a significantly high number of non-European New Zealand women. This may in part be influenced by the fact that many self employed LMC providers are reluctant to care for non-resident women when there is the risk of not recovering payment for their services. All referrals are accepted by CWH midwives regardless of residency status.

Table 6: Comparison of CWCM & TCM Epidural Rates with Total CWH Population

	Total Births	2003 Epidurals (n)	Epidurals (%)
CWCM Population	435	77	18
TCM Population	137	15	11
Remaining CWH Population	3861	1397	36
Total CWH Population	4433	1489	34

Epidural rates for CWCM are low and probably reflect the now predominantly low-risk multiparous client base. Given that 26 percent of team care clients have elective caesarean sections the above figures are not representative and there is nil value in making any comparison to other groups.

Table 7: Comparison of CWCM & TCM Mode of Birth with Total CWH Population

	CWCM		TCM		Remaining CWH		Total CWH Population	
Mode of Birth	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**
Spontaneous Vaginal	235	54	71	52	2259	58	2565	58
Vaginal – Assisted*	77	18	11	8	540	14	628	14
C/S-Elective	17	4	35	26	311	8	363	8
C/S-Emergency	106	24	20	14	751	20	877	20
Total	435		137		3861		4433	

*Excludes breech birth caesarean section (C/S)

The TCM are the predominant provider of LMC services to women requiring elective caesarean section which is reflected in the rate of 26 percent, which is significantly higher than the CWH population.

Rosemary Reid
Consultant Obstetrician Gynaecologist

Fetal and Maternal Medicine Unit (FMM)

The Fetal and Maternal Medicine Unit (FMM) has continued to develop its scope and indeed its accommodation over the year 2003. The unit aims to offer an outpatient service to antenatal prenatal diagnostic referrals and a day assessment for those with complicated pregnancies necessitating closer monitoring; hence often obviating the need for inpatient stays. With the increasing pressures on both space and staffing within the outpatient clinic a search for a new site for this work to occur ended with the conversion of a laboratory area to accommodate this service.

During 2003 Christchurch Women's Hospital (CWH) was fortunate to be joined by our new Professor of Obstetrics and Gynaecology, Professor Pippa Kyle, whose sub-specialist training, experience and expertise within this area of obstetric medicine has added greatly to the possibilities of this service. Indeed in the latter part of 2003 the first fetal blood transfusions were undertaken within Christchurch; a very effective treatment, which historically would have meant transfer to National Women's Hospital in Auckland. Future development plans for 2004 include:

- purchase of a high-quality ultrasound machine for the unit,
- a fetal medicine database to facilitate data storage, communication & research,
- expansion of the fetal and maternal medicine team including additional midwifery and administrative support.

The unit's midwife, Jeannie Mathews, continues to juggle the many demands of this service, under the direction of Charge Midwife, Wendy Kean. Wendy herself, and other members of her team help support in this work.

The FMM unit provides support for the Fetal Anomaly Advice Committee; a multidisciplinary group, which meets weekly to review and feedback information regarding cases referred by lead maternity carers.

Table 1: Activities of the Fetal and Maternal Medicine Unit

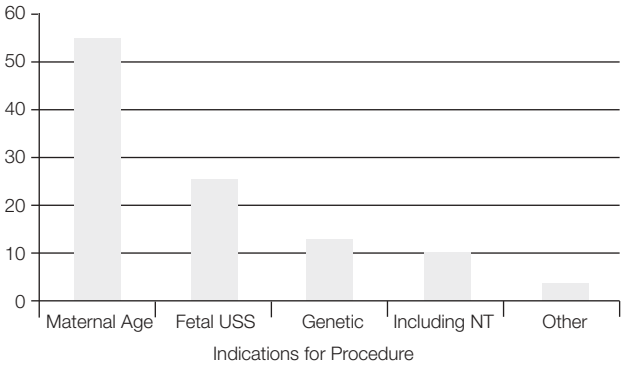
Month	Antenatal Checks	Consultations	CTG	Amnio	CVS
Jan	7	9	22	5	3
Feb	16	11	59	8	4
Mar	13	10	50	7	1
Apr	11	7	33	7	0
May	14	6	42	7	3
Jun	8	7	57	4	5
Jul	15	10	62	6	0
Aug	9	6	41	6	1
Sep	13	15	51	7	0
Oct	13	22	68	7	2
Nov	29	28	31	13	3
Dec	34	28	18	7	1
Total	182	139	534	84	23

Invasive Procedures Audit

The following data relates to invasive diagnostic procedures performed within CWH during 2003. The data shows the indications for, procedure performed and operator for these procedures. Some limited data on outcome is available in view of the diversity of birth sites.

A total of 170 invasive diagnostic procedures were performed, of which a consultant obstetrician performed 98 percent. These comprised 147 amniocentesis and 23 chorionic villous samplings. Sixty-seven percent of women had a nuchal translucency (NT) scan prior to their invasive procedure, 17 percent (19 of these scans) were abnormal and the prime indication for testing (representing 11 percent of total). Of these 19 women, the test undertaken for 16 of them was an amniocentesis.

Figure 1: Indications for Invasive Prenatal Diagnosis 2003



Twenty cases of chromosomal abnormality were identified and these are detailed below in Table 2.

There were a total of 26 fetal losses; twenty-three of these following termination of pregnancy (TOP). The fetal indication was chromosomal abnormality in 12 cases and in 11 it was a structural abnormality diagnosed on ultrasound. The structural abnormalities included four neural tube defects (one anencephaly, one encephalocoele and two spina bifida), two major cardiac anomalies (one tetralogy of fallot and one hypoplastic left heart). There were two intrauterine deaths subsequent to procedures but these occurred in fetuses with recognised structural abnormalities likely to be lethal of themselves (one cystic hygroma demising at 17 weeks and one case of severe intrauterine growth retardation with pre-existing placental separation lost at 22 weeks). There was one neonatal death in a baby known to have a chromosomal inversion and a hypoplastic left heart.

Table 2: Numbers and Outcomes for Diagnosed Chromosomal Abnormality

Chromosomal Abnormality	Number	TOP	Delivery	NND	Live Birth
Trisomy 21	4	4			
Trisomy 18	2	2			
Trisomy 13	1	1			
Turner's Syndrome	4	2	2		
Triploidy	2	2			
Translocation	6	4			2
Inversion	1			1	
Total	20	15	2	1	2

A high proportion of these invasive diagnostic procedures were chromosomaly abnormal with 11.7 percent of results being abnormal; this represents a higher proportion than previous years and most likely reflects a changing referral pattern rather than any true increased incidence. In addition to this there were another 5.8 percent of babies with significant structural abnormalities leading to termination in whom the information that the karyotpye was normal will be of utility when counselling in subsequent pregnancies.

Acknowledgement

The data collection for invasive diagnostic procedures performed at CWH was collated during part of a wider review to assess any change in practice following the ad hoc introduction of nuchal translucency screening in the community. This work was undertaken as part of a summer studentship by Lauren Cross, fifth year medical student.

Chris Mazey
Charge Midwife Ward 5 & 6

Antenatal & Postnatal Wards at Christchurch Women's Hospital (CWH)

Antenatal Admissions Rates

In 2003 we modified the CareSys database to collect information on the reasons why antenatal patients were admitted to the antenatal / postnatal wards 5 and 6, and the length of stay associated with each admission. This data relies on staff changing the admitting code and entering a reason for admission.

There are some recognised discrepancies, as the admission diagnosis may change classification with further investigation, for example, an antepartum haemorrhage (APH) can be redefined after admission as placenta praevia.

Many patients also have multiple reasons for admission and it is at the discretion of the admitting midwife to assess the presenting problem.

We do acknowledge that not all admissions are having the code changed so they are missed off our data. As this process becomes more familiar to all our staff and with additional clerical assistance the data will become more accurate.

Although we only have 6 months data available it is indicative of the year's average. Analysis of the results of the data gives the wards an average of 11 antenatal inpatients per day.

Table 1: Antenatal Admissions

	No of Patients	Percentage of total Antenatal Patients	Bed Days	Range Length of Stays (days)	Average Length of Stays (days)
Hypertensive disorders of Pregnancy	84	21.7	472	1-24	5.6
Non Pregnancy Related Medical events	79	20.4	499	1-29	6.3
APH	39	10.1	130	1-33	3.3
Abdominal Pain	36	9.3	71	1-9	1.9
Premature Labour	29	4.4	84	1-12	2.8
Fetal Monitoring	26	6.7	236	1-39	9.0
Pre-labour Rupture of Membranes	18	4.6	143	1-37	7.9
Induction of Labour Cares	17	4.3	64	1-7	3.5
Placenta Praevia	16	4.1	226	1-66	14.1
Early Labour	13	3.3	18	1-4	1.3
Urinary Tract Infection	13	3.3	32	1-6	2.5
Diabetes Stabilisation	7	1.8	44	1-24	6.2
Multiple pregnancy	7	1.8	60	1-24	8.5
Pyelonephritis	3	0.7	14	1-10	4.6
Total	387				5.5

Table 2: Average Percentage Occupancy of the Antenatal / Postnatal Wards

	2003		
	Ward 5	Ward 6	Total
Jan	84	77	81
Feb	86	78	82
Mar	79	80	79
Apr	73	72	72
May	83	80	82
Jun	88	86	87
Jul	95	95	95
Aug	98	95	96
Sep	96	98	97
Oct	99	93	96
Nov	90	90	90
Dec	90	86	88
Total	88	86	87

Average Length of Stay (ALOS)

The yearly average occupancy for the antenatal and postnatal Wards 5 & 6 is 87 percent. This figure is a snapshot at midnight and does not take into account the number of admissions and discharges that occur during the 24-hour period for one bed, but does give a picture of the workload and the reason for planned transfer and discharges.

Transfers to the Primary Units

Transfers to Women's Health Division (WHD) primary units should occur within 12 hours for a vaginal birth and 24 hours for a caesarean section. If the time required for transfer occurs in the evening or overnight these transfers occur the next morning.

St Georges Hospital accepts vaginal births within 12 hours of birth. Caesarean section deliveries can no longer transfer to this facility.

Postnatal Discharges

Vaginal birth should have a planned discharge no later than the morning of their 3rd day (as recommended by Section 88).

Caesarean section patients are discharged when they are medically fit.

Table 3: Average Length of Stay on the Antenatal / Postnatal Wards Prior to Transfer

	Caesarean			Vaginal			Total Number of Women
	Number	ALOS (hours)	ALOS (days)	Number	ALOS (hours)	ALOS (days)	
Jan	32	34.5	1.4	171	7.0	0.3	203
Feb	31	26.1	1.1	185	7.1	0.3	216
Mar	32	29.4	1.2	141	7.4	0.3	173
Apr	31	26.4	1.1	149	6.0	0.3	180
May	31	31.4	1.3	160	6.3	0.3	191
Jun	21	26.2	1.1	155	6.0	0.3	176
Jul	28	29.0	1.2	168	7.0	0.3	196
Aug	18	27.3	1.1	185	5.6	0.2	203
Sep	28	26.3	1.1	172	5.2	0.2	200
Oct	29	24.3	1.0	171	4.4	0.2	200
Nov	28	33.4	1.4	162	4.5	0.2	190
Dec	25	30.0	1.3	166	6.4	0.3	191
Total	334	28.7	1.2	1985	6.1	0.3	2319

*ALOS = Average Length of Stay

Table 4: Average Length of Stay on the Antenatal / Postnatal Wards

	Caesarean			Vaginal			Total		
	Number	ALOS (hours)	ALOS (days)	Number	ALOS (hours)	ALOS (days)	Number	ALOS (hours)	ALOS (days)
Jan	79	99.2	4.1	79	48.3	2.0	158	73.5	3.1
Feb	46	101.0	4.2	86	54.4	2.3	132	70.5	2.9
Mar	69	95.5	4.0	79	53.0	2.2	148	72.6	3.0
Apr	64	105.3	4.4	103	44.1	1.8	167	67.4	2.8
May	67	97.4	4.1	109	51.2	2.1	176	68.6	2.9
Jun	79	96.6	4.0	108	49.1	2.0	187	69.2	2.9
Jul	80	101.4	4.2	102	48.5	2.0	182	72.0	3.0
Aug	75	99.3	4.1	107	50.3	2.1	182	70.4	2.9
Sep	86	92.4	3.9	87	45.2	1.9	173	68.5	2.8
Oct	89	96.5	4.0	117	44.4	1.9	206	67.1	2.8
Nov	87	94.5	3.9	101	50.5	2.1	188	71.1	3.0
Dec	73	95.3	4.0	116	48.2	2.0	189	66.3	2.8
Total	894	97.8	4.1	1194	48.9	2.0	2088	69.7	2.9

Paula Cooney
Midwife Parent Educator

Parent Education Department

The Parent Education Department at Christchurch Women's Hospital (CWH) provides antenatal education for women and runs a total of 63 classes annually. The increase in women wishing to use our service means that we now have to turn women away. The department has two educators, Paula Cooney and Julie Scales. Towards the end of the year Julie went to the casual pool and her position was taken over by Susan Dearlove.

Most women attend our classes once a week for six weeks or on two consecutive Saturdays. Early Pregnancy and Refresher Courses are available. When necessary, a one to one class can be offered usually for those with limited English, hearing impairment and distance restrictions or for those requiring specialised input.

The department is continually being evaluated. Those attending classes do the majority of the evaluation. This is one way in which we can make sure the requirements of our clients are being met.

Ongoing education is very important to the Parent Education Department team. We are given the opportunity to maintain our staff training and to attend study days where appropriate. This year a South Island forum was held for those working in this area. This is very important as many educators work in isolation.

Statistics

The Parent Education Department is able, through Antenatal Class reunions, to gather statistics relating to the birth and the feeding of babies. The collection of this data began after a reunion in which a very high percentage of women stated they had had an infection post partum. The then, infection control nurse asked if I would collect some figures on this. As time has gone by, more and more information has been collected from the women.

These statistics are recorded on a standardised form processed by the Quality Team at CWH. The information collected on the women's birth and feeding is as she experiences it. No statistics are collected without the client's permission and there is no way a client can be identified. The relatively high rate of attendance at reunions gives a good base from which to collect data.

When collecting this data one of the staff checks and confirms the information. We then process the information onto our computerised system. At the end of the year the statistics are tabulated.

Results

This year we had reunions for 56 classes. The total number of women attending session six of the classes (the last class) was 517. The number of women returning to reunions was 384 being 74.3 percent of the night six attendees. From the 384 replies the following data was collected:

Births

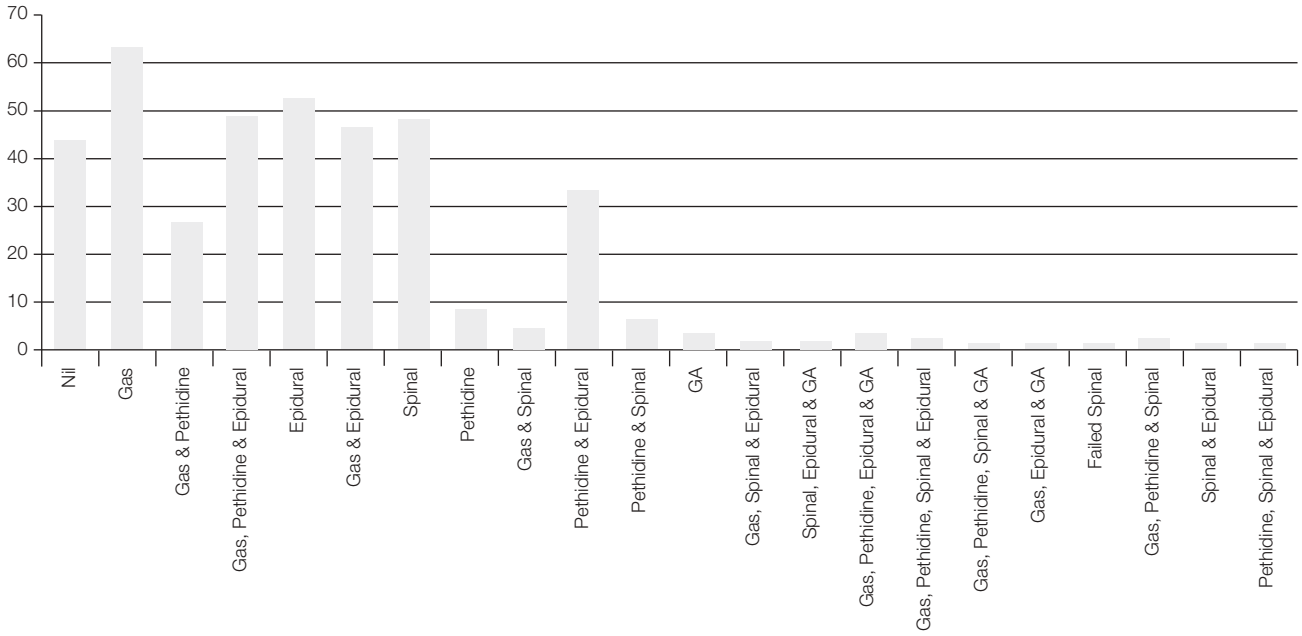
Table 1: Types of Birth Reported by Women

Type of Birth	2003	
	(n)	%
Normal birth	170	44.3
Caesarean section	142	37.0
Forceps	20	5.2
Failed forceps	1	0.3
Ventouse	37	9.6
Forceps / ventouse	12	3.1
Forceps / ventouse / caesarean section	1	0.3
Ventouse / caesarean section	1	0.3

Pain Relief

We are able to obtain from the clients the pain relief method that was used during their birth. It was discovered that 63 women used gas only (16.4%). This is the highest percentage for any one type of pain relief. However, when you add up epidurals and the various combinations of pain relief using an epidural, 180 women (46.9%) had an epidural as part of their pain relief.

Figure 1: Pain Relief During Birth



Infections

It was recorded that a total of 108 (28.1%) of those returning to reunions stated they had had infections. Of these women the highest percentage was for breast infections at 13 percent. It was noted that of the infections, six women had more than one infection – one woman having a urine, breast, wound and uterine infection.

Breastfeeding

Nationally just over 70 percent of women are breastfeeding between 11-15 weeks post partum according to figures from the Plunket Society. The average age of a baby at the reunions is 12.3 weeks and of those babies 75 percent are still having all or some breast milk.

Table 2: Type of Infection by Birth Type

	Urine Infection		Breast Infection		Uterine Infection		Wound Infection		Episiotomy	
	(n)	%	(n)	%	(n)	%	(n)	%	(n)	%
Normal birth	8	5	19	11	5	3	0	0	1	1
Caesarean section	5	4	21	15	11	8	22	15	0	0
Forceps	0	0	4	20	0	0	0	0	5	25
Ventouse	0	0	6	16	0	0	0	0	3	8
Forceps ventouse	0	0	1	8	0	0	0	0	0	0

Table 3: Breastfeeding Figures Reported by Women

	2003	
	(n)	%
Exclusively breastfed	142	37.0
Fully breastfed	72	18.8
Partially breastfed	72	18.8
Formula fed	96	25.0

Summary and Conclusion

Having collected, tabulated and analysed the data from the past year, we are now keen to compare and benchmark with other WHD data sources and other national statistics.

Each year our statistics become more accurate, more reliable and more effectively collected. As the team increases its knowledge of data collection techniques and better understands the purposes for which the data is to be used, the process will continue to develop and improve.

Dawn Hunter IBCLC
Lactation Co-ordinator
Christchurch Women's Hospital

Lactation Service

The service, based at Christchurch Women's Hospital (CWH) consists of a full time lactation co-ordinator (LC) whose role is both clinical and educational.

The LC is available to consult with women who birth and stay for their postnatal care at CWH. In addition, the LC receives referrals from the Christchurch Women's Community (CWCM) and Team Care Midwives (TCM), to advise and/or assist women under their care antenatally, at the facility of birth, and at home during the postpartum period (for up to 6 weeks after the birth).

Clinical

Over the past year the number of consultations and the reasons for referral were collected and the data has been collated to illustrate areas where women require the most input to ensure a satisfactory breastfeeding outcome.

There was an average of 48 phone consultations per month in 2003.

Table 1: Clinical Consultations by Mode of Birth/Parity

	2003 %
Caesarean section (CS)	50
Vaginal birth	50
Primipara	79
Multipara	21

Table 2: Clinical Consultation Breakdown

	2003 %
General Discussion About Breastfeeding Issues	34.5
Positioning and Latching Issues	43.5
Expressing / Breastpump Concerns	10
Other Lactation Related Issues	12

Home visits to assist with breastfeeding problems are decreasing. A major influencing factor is that midwives working in the community have become more skilled and educated in dealing with the majority of situations that arise for breastfeeding clients. There are now also less midwives working as CWH community midwives (CWCM) leading to fewer women being referred to the Lactation Service

Post Natal Support Group

This monthly group was initially set up for the purpose of mother to mother support. However, over time mothers are attending for assistance with breastfeeding problems where they are unable to afford a private consultation with an independent Lactation Consultant in the community.

On average at least three consultations are performed in the hour and a half time frame. The problems presented vary, but most commonly pain associated with breastfeeding would be the reason for the visit.

Ankyloglossia Release

The number of tongue-tie releases performed has increased over the past 12 months.

Our audit findings were presented for the Quality Health New Zealand (QHNZ) Improvement Award. The entry entitled 'Recognition, Assessment and Ankyloglossia (Tongue-Tie) Release and its Impact on Breastfeeding' was placed runner up for the Maternity and Neonatal Services, Women's Health Division.

Breastfeeding Statistics

The percentage of babies discharged exclusively breastfeeding has remained static over the past year at around 79 percent. This is above the Baby Friendly Hospital Initiative (BFHI) basic requirement of 75 percent.

An audit of one hundred randomly selected charts, performed at least every 6 months confirms the percentage. The audit compares the breastfeeding code on discharge with the clinical notes of mother and baby, ensuring accuracy of the coding.

Skin-to-skin Contact

A vital step in the initiation of breastfeeding, 'skin-to-skin contact' between mother and baby, is now widely practised both in Birthing Suite (at birth) and in the postnatal wards. The practise of 'skin-to-skin' is recognised as important for all mothers and babies irrespective of feeding method. It facilitates maternal/infant bonding, lowers blood pressure and stabilises the baby's temperature and respirations as well as many other positive implications.

In the postnatal wards the staff encourage the practise when:

- breastfeeding has been compromised
- where separation has occurred i.e. baby returning to ward from the Neonatal Service
- when the baby's temperature has dropped below an acceptable reading

Education

The education curriculum was extended last year to include extra study days to expand the focus for the staff caring for smaller babies, both in the neonatal and postnatal areas.

Staff

The Breastfeeding Study Days are part of the core competencies staff are required to complete. An audit of the postnatal staff showed a 76 percent compliance overall.

The BFHI requires that all staff assisting mothers and babies with breastfeeding have undertaken a minimum of eighteen hours breastfeeding education, which includes three hours of clinical supervision. The education needs to be shown to be ongoing with four hours attained annually.

Antenatal

The antenatal series of lectures continued for women and their partners/mothers/whanau until November 2003. The sessions were for an hour and a half, each day of the last week of every month.

The numbers of women attending increased to over 70 by the end of the year.

Feedback was positive as indicated by the increasing numbers and interest from health professionals who referred women to the lectures.

Student Support

The LC supports the Christchurch Polytechnic Faculty of Health and Sciences by accommodating a Bachelor of Midwifery student one-day a week. This contact helps the student understand the LC role and gain experience in breastfeeding and lactation.

Joan Williams
Charge Midwife Labour Ward

Spontaneous Vaginal Births

The aim of this report is to review the total number of women who went into spontaneous labour resulting in a spontaneous vaginal birth (SVB) at Christchurch Women's Hospital (CWH). Whilst there is no dedicated clinical audit database to collect this data it was felt that the international classification of disease volume 10(ICD10) code, used by Clinical Records Department, could be utilised. With this in mind postpartum women who were discharged with the code 080, 'single spontaneous episode resulting in vertex delivery', with minimal or no assistance, were enrolled in this audit. Five hundred and seventy one women (12.9%) fit these criteria out of the total figure of 4433 women birthing at CWH in 2003. This group of women represents just over 12 percent of the birthing population.

It was possible to cross reference National Health Index (NHI's) of women who fitted into this category with data collected through the CareSys maternity database. By combining information from these two databases, 103 women (18%) were identified as having undergone an induction of labour (IOL), artificial rupture of membranes (ARM), or had augmented labours (AUG). These women were excluded from the remainder of this analysis.

Table 1: Women Excluded from the SVB Analysis at CWH

	2003	
Intervention	**(n)**	**%**
Induction of Labour (IOL)	23	4.0
ARM	76	13.3
AUG	4	0.7
Total	103	

Therefore the total number of women fulfilling the spontaneous labour and birth criteria was 468.

The total rate for spontaneous labour and vaginal birth at CWH in 2003 was 10.6 percent. Within the SVB group there were 46 waterbirths, making up 10 percent of all SVBs.

Numerator Total number of women who went into spontaneous labour resulting in a spontaneous vaginal birth at CWH.

Denominator Spontaneous Labour and Birth Rate Using 080: ICD10 code
468/4433 = 10.6%

Parity

Two thirds of the women identified in this group were of multiparous status.

Table 2: Parity of SVB Women at CWH

SVB	**468**	**10.6%**
Nulliparous	137	29.3
Multiparous	331	70.7

Table 3: Parity Breakdown of Multiparous SVB Women at CWH

Parity	**(n)**	**%**
2	186	56.2
3	89	26.9
4	25	7.6
5	16	4.8
6	9	2.7
7	4	1.2
8	2	0.6

Third Stage

Approximately three quarters of women had an actively managed third stage and no SVB women required a manual removal of placenta.

Table 4: Third Stage Management of SVB Women at CWH

Management	**(n)**	**%**
Active	360	76.9
Physiological	108	23.1
Manual Removal	0	

Di Poad
Consultant Obstetrician and Gynaecologist

Induction of Labour

Induction of labour (IOL) continues to comprise a significant proportion of medical and midwifery activity on the Birthing Suite. This is due to the prolonged time required to achieve labour as well as the ensuing effects in terms of increased subsequent interventions typically seen in this group of women.

The total number of IOLs has decreased over the 3 years of these local reports with this year's total at 27 percent of all births at Christchurch Women's Hospital (CWH).

Table 1: Percentage of IOL Compared to Total Births

	2001		2002		2003	
	(n)	%	(n)	%	(n)	%
No. IOLs	1282	30	1153	27.8	1180	26.6
Total Births	4241		4149		4433	

Table 2: Breakdown of Royal Australia & New Zealand College of Obstetricians & Gynaecologists (RANZCOG) Defined Indications for IOL

	Indication as a % of All Inductions		
	2001	2002	2003
Diabetes	3	4	5
Hypertensive disorders	17	15	14
Prelabour rupture of membranes	8	12	11
IUGR	8	7	8
Isoimmunisation	0	0	1
Concern re-fetal wellbeing: (CTG)	0	1	1
Chorioamnionitis	0	0	0
Fetal demise	1	1	1
Prolonged pregnancy	35	36	34
Other	28	24	25

Clinical Indicators for Induction of Labour

The Women's Hospitals of Australasia (WHA) Working Group has identified clinical indicators to enable comparison of performance amongst different obstetric units in the South Pacific. This would enable units to focus on areas where there may be disparity. Evident in future data will be the slight reclassification of indication for IOL, to include multifetal pregnancy.

With regard to IOL there are currently two clinical indicators which were suggested to reflect the character of the obstetric service:

Clinical Indicator 1.1

Women undergoing IOL for indications other than those defined as per RANZCOG as a proportion of all women undergoing IOL (this excludes women having labour augmented).

Clinical Indicator 1.2

Women undergoing IOL for indications other than those defined by RANZCOG as a proportion of the total number of births (including augmentation and elective caesarean section).

The WHA provisional thresholds for these categories are also included in the figures below to enable comparison with CWH data.

Clinical Indicator 1.1

Table 3: Women Undergoing IOL for 'Other' Indicators as a Proportion of all Women Having an IOL

	2001		2002		2003	
	(n)	%	(n)	%	(n)	%
No. Women Induced for 'Other'	373	29	282	24	293	25
Total No. Women Induced	1287		1153		1180	

The WHA threshold for the percentage of women undergoing IOL for 'Other' indicators as a proportion of all women having an IOL ranges between 31.6 – 42.1 percent with a mean of 36.7 percent.

Clinical Indicator 1.2

Table 4: Women Undergoing IOL for 'Other' Indications as a Proportion of all Births

	2001		2002		2003	
	(n)	%	(n)	%	(n)	%
No. Women Induced for 'Other'	373	9	282	7	293	6.6
Total No. Women Delivering*	4241		4149		4433	

*Includes women being augmented and having elective caesarean section (CS)

The WHA threshold for the percentage of women undergoing IOL for 'Other' indicators as a proportion of all births ranges between 10 – 13.7 percent with a mean of 11.7 percent.

We can see that CWH falls within the WHA threshold for both of these indications. The overall validity of these thresholds is being reviewed continuously.

Effect of Parity

Outcomes may be different for women having labour induced for the same indication, but who represent different patient populations. One example is seen when considering parity. We are seeing a slight increase in the number of IOL for nulliparous women this year compared to previous years.

Table 5: Percentage of Women who were Induced Separated by Parity

	2001	2002	2003
Nulliparous Women	51	50	54
Multiparous Women	49	50	46

The follow-on effect of this change in practice may translate to an alteration in intervention rate during labour. This is evident in the birthing figures.

Mode of Birth

Table 6: Mode of Birth for all IOL all Parities

	2002		2003	
	(n)	%	(n)	%
Normal vaginal	648	56.3	671	56.9
Ventouse	110	9.5	109	9.2
Obstetric forceps	88	7.6	76	6.4
Emergency caesarean section	307	26.6	324	27.5
Total	1153		1180	

One can see approaching one third of women undergoing IOL have a caesarean delivery. The number has increased slightly in the past 12 months from 26.6 to 27.5 percent, while the normal birth rate is reasonably constant at approximately 57 percent.

The rate of instrumental birth combining ventouse and obstetric forceps hasn't changed appreciably but is slightly higher than the obstetric population as a whole where it was static at 14 –15 percent over the past three years.

Looking specifically at women who are induced and comparing outcomes between nulliparous and multiparous women, it is apparent nulliparous women represent a significant proportion of all operative births.

Table 7: Mode of Birth Following IOL by Parity

	2002				2003			
	Nulliparas		Multiparas		Nulliparas		Multiparas	
	(n)	%	(n)	%	(n)	%	(n)	%
Normal vaginal	181	31.3	467	81.4	262	40.8	409	76.0
Ventouse	73	12.6	25	4.3	77	12.0	32	5.9
Obstetric forceps	85	14.6	15	2.6	59	9.2	17	3.2
Emergency CS	240	41.5	67	11.7	244	38.0	80	14.9
Total	579		574		642		538	

In both 2002 and 2003 the chance of having a normal vaginal birth if you are a nulliparous woman and are induced is significantly less than 50 percent (31.3 and 40.8 percent respectively).

Assisted Vaginal Births

In 2003, the assisted vaginal birth (AVB) rate is not significantly different for women of any parity who are induced when compared to women of any parity who are not induced. Of

Table 8: Assisted Vaginal Births By Induction Status for All Births 2003

	Assisted Vaginal Births		Total Births
	(n)	%	
IOL only	185	15.7	1180
Non IOL	466	14.3	3253
Total	651	14.7	4433

Table 9: AVB Rates for Nulliparous Women by Induction Status

	AVB		All Nulliparous Births
	(n)	%	
Nulliparous IOL	136	21.0	642
Non IOL nulliparous	369	24.2	1525
Nulliparous births	505	23.3	2167

interest is the instrumental birth rate for nulliparous women who are induced, which is three to four times higher than that for multiparous women. However if looked at in isolation the instrumental birth rate for nulliparous women who are induced looks better than for nulliparous women who are not induced.

This apparent discrepancy is likely to be accounted for by the high CS rate for this same group of induced women compared with the group of nulliparous women who are not induced.

Caesarean Section

Table 10: CS Rates by Induction Status for all Births 2003

	CS		Total Births
	(n)	%	
IOLs	324	27.5	1180
Non IOLs	916	28.2	3253
Total Births	1240	28.0	4433

It must be remembered that the CS figure for all nulliparous births includes 109 elective CS (5%) and therefore the emergency CS rate gives a more realistic comparison of effect of IOL on birth outcome.

Table 11: CS Rates by Induction Status for Nulliparous Births 2003

	CS		Total Births
	(n)	%	
Nulliparous IOL	244	38.0	642
Non IOL Nulliparous	483	31.7	1525
Total Nulliparous Births	727	33.6	2167

Table 12: Comparison of CS Rate Following IOL to the Total CS Rate 2003

	Elective CS	Emergency CS*	CS following IOL		Total CS (elective & emergency)
	(n)	(n)	(n)	%	(n)
Nulliparous	109	618	244	34	727
Multiparous	254	259	80	16	513
Total	363	877	324	26	1240

*Until recently the data collected would record 'women who were intending an elective caesarean section but had an emergency delivery' as emergencies. Therefore the actual number of true emergency CS undertaken for women who are intending a vaginal birth will be even smaller than the number recorded above and may be able to be accurately portrayed next year.

For multiparous women delivery by elective CS is as common as emergency CS (49 percent versus 51 percent),

Table 13: Emergency CS Rate for Nulliparous Women Intending Vaginal Birth by Type of Labour

	Emergency CS		
	(n)	%	Total
Induced Labour	244	38.0	642
Spontaneous Labour	374	26.4	1416
Total	618	30.0	2058

Table 14: Emergency CS Rate for Multiparous Women Intending Vaginal Birth by Type of Labour

	Emergency CS		
	(n)	%	Total
Induced Labour	80	14.9	538
Spontaneous Labour	179	12.1	1474
Total	259	12.9	2266

whereas for nulliparous women the largest proportion of CS is represented by those performed as an emergency procedure (elective 15 percent versus 85 percent emergency).

Considering data for the past 3 years, if a woman is induced in our hospital and has not birthed previously her chance of having a CS is approaching 40 percent. This is significantly higher than the nulliparous woman who labours spontaneously who has a 26.4 percent chance of having a CS. We must be transparent in our counselling about this very significant outcome when considering IOL in this group of women.

For multiparous women the emergency CS rate is only two to three percent higher in induced women as compared to women who laboured spontaneously.

Summary

Women's Health Division (WHD) is presently undergoing a review of its IOL policy and developing guidelines around IOL. As a result it is hoped we may see a reduction in both the number of women subject to IOL and ultimately the high intervention rate for this group of women.

Since the formation of the IOL Project Group the rate of IOL by month has decreased with the averages from January to April being 102 per month down to 98.8 for May to August, then 96 for September to December 2003. At the time of writing this report it is evident this trend is continuing.

The development of clear guidelines regarding both the process of obtaining an IOL and re-iterating the internationally accepted indications for IOL seems to have already had some impact on our local Obstetric Service. Further information including who is providing care for women being induced, what are the trends around IOL beyond term and what are the outcomes by indication for the IOL will be available in the next report.

Di Poad
Consultant Obstetrician and Gynaecologist

Assisted Vaginal Births (AVB)

At Christchurch Women's Hospital (CWH) there were 628 AVBs in 2003. Capture of data was minimal until a formalised operative reporting sheet was introduced in April of 2003. From that time the birth information has increasingly been completed and therefore is able to be studied. We continue to have less than 100 percent completion of the form, but as awareness of the purpose of its existence increases this will continue to improve. The figures quoted represent those for AVBs for which we received the completed data between April and December of 2003.

For this period of time there were 476 AVBs recorded and we have data for 239 (50%) of these. There were 3400 births in the same time period and so the assisted birth rate for this period of time was 14.0 percent which is similar to the past 2 years where it was 15.6 percent and 14.6 percent in 2001 and 2002 respectively. This rate is the same as for the entire year as a whole and therefore this 9 months of data is likely to be representative of all AVBs for the year.

Table 1: Total Assisted Vaginal Births by Month at CWH

	Total Normal Vaginal Births		Total Breech Births		Total Caesarean Deliveries		Total Forcep Births		Total Ventouse Births		Total Births	Total AVBs with data available
	(n)	%	(n)	%	(n)	%	(n)	%	(n)	%		
April	197	56.7	2	0.5	95	27.3	22	6.3	31	8.9	347	19
May	220	59.8	2	0.5	99	26.9	16	4.3	31	8.4	368	26
June	213	58.7	0	0	100	27.5	18	4.9	32	8.8	363	30
July	190	50.1	3	0.8	108	28.5	28	7.4	50	13.2	379	37
August	236	61	2	0.5	93	24	23	5.9	33	8.5	387	23
September	215	57.6	4	1.1	114	30.6	12	3.2	28	7.5	373	19
October	240	58.8	7	1.7	120	29.4	10	2.5	31	7.6	408	22
November	208	55	2	0.5	115	30.4	14	3.7	39	10.3	378	32
December	227	57.1	7	1.8	105	26.4	17	4.3	41	10.3	397	31
Total	1946	57.2	29	0.9	949	27.9	160	4.7	316	9.3	3400	239

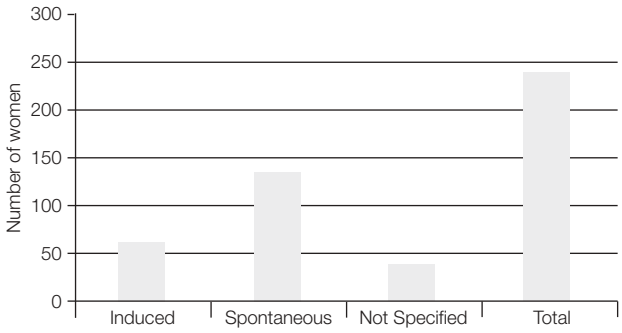
Table 2: Assisted Vaginal Births by Parity and Previous Birth Type

Parity	0 (n)	1 (n)	2 (n)	3 (n)	4 (n)	Total (n)	Total %
No previous births	183					183	76.6
Vaginal		24	7	1	2	34	14.2
Caesarean		14				14	5.9
Vaginal & caesarean			3			3	1.3
Unknown birth mode		5				5	2
Total	183	43	10	1	2	239	

Table 2 is a great demonstration of how data can be unreliable as according to the data entry five women (2%) birthed neither vaginally nor by caesarean section (CS). For the data that we do have, we see the majority of AVBs are performed for primipara. Of the 239 births noted, 77 percent were in primipara and 21 percent in multipara. The majority of multipara had only had one previous birth, either by caesarean section or the vaginal route.

Most women who birthed by an assisted vaginal method, laboured spontaneously (55.2%). Of the remainder, 29.7 percent had their labour induced and 15 percent had no entry for type of labour on their delivery record.

Figure 1: Type of Labour Resulting in AVB



Epidural rate

The rates for epidural are similar whether labour is induced or spontaneous for those women undergoing AVB.

The epidural rate for women who eventually have an assisted birth was 68.2 percent for women with spontaneous labour and 66.2 percent for women whose labour was induced. The overall epidural rate for 2003 was 33.59 percent. Many women therefore have epidural analgesia without requiring an AVB.

Table 3. Epidural Rate for Assisted Vaginal Birth by Labour Category

	Epidural Sited						
	Yes		No		Unknown		Total AVBs
	(n)	%	(n)	%	(n)	%	
Induced	47	66.2	17	23.9	7	9.9	71
Spontaneous	90	68.2	38	28.8	4	3	132
Not Specified	30	83.3	5	13.9	1	2.8	36
Total	167	69.9	60	25.1	12	5	239

Labour Augmentation

Table 4: Use of Syntocinon in Women who Undergo Assisted Vaginal Birth

	Syntocinon Used						
	Yes		No		Unknown		Total AVBs
	(n)	%	(n)	%	(n)	%	
Induced	40	56.3	24	33.8	7	9.9	71
Spontaneous	49	37.1	67	50.8	16	12.1	132
Not Specified	16	44.4	13	36.1	7	19.4	36
Total	105	43.9	104	43.5	30	12.5	239

There appear to be no major differences for utilisation of syntocinon by mode of birth for this sample population.

Indications for Assisted Vaginal Birth

The indication for AVB is evenly spread between non-reassuring cardio tocograph (CTG) and dystocia in second stage (failure to progress). Of the 119 (49.8%) who had an AVB for a non-reassuring CTG only one percent had a fetal scalp pH estimation prior to the birth. There were 118 remaining women who were birthed for failure to progress in second stage. Two women had both indications recorded for the same birth.

Table 5: Women Who Required AVB Because of an Abnormal CTG

	Abnormal CTG				
	Yes		No		Total AVBs
	(n)	%	(n)	%	
Induced	36	50.7	35	49.3	71
Spontaneous	64	48.5	68	51.5	132
Not Specified	19	52.8	17	47.2	36
Total	119	49.8	120	50.2	239

Where the information is recorded the rate of AVB because of an abnormal CTG tracing is marginally higher in the women whose labour was induced 50.7 percent compared to 48.5 percent. These women would be more likely to be in a high risk category for fetal compromise with potential hypertension with proteinuria, diabetes, post maturity or growth restriction, and it is therefore surprising there is not a greater disparity.

Rates of AVB for dystocia in the second stage of labour were 45.1 percent and 50.8 percent respectively for induced versus spontaneous labour. Once again the impact of the large proportion of women induced for postmaturity doesn't appear to necessarily translate to more AVBs. The caesarean figures for this group might elucidate the apparent disparity and it is hoped to be able to provide this level of detail in future reports.

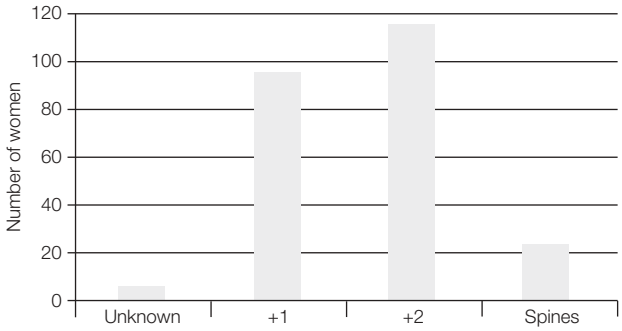
Table 6: Women Who Required AVB Because of Failure to Progress/Dystocia

Second Stage					
	Yes		No		Total AVBs
	(n)	%	(n)	%	
Induced	32	45.1	39	54.9	71
Spontaneous	67	50.8	65	49.2	132
Not Specified	19	52.8	17	47.2	36
Total	118	49.4	121	50.6	239

Fetal Station at Birth

Most babies were 2cm or more beyond the ischial spines at the time of birth. There has certainly been a trend away from performing potentially difficult vaginal births to opting for caesarean section as the primary procedure. Currently, we are unable to report on 'Trial of Forceps' or ventouse numbers, or the outcomes as they are recorded either as a successful assisted vaginal birth or under the caesarean figures. It is hoped we will be able to present this data next year with refinements to the operative delivery record.

Figure 2: Station of Presenting Part Prior to AVB



Method of Birth

Table 7: Order of AVB Procedure

Ventouse Extraction	Neville Barnes	Kielland	Wrigley's	Total
				1
			1	1
		1		6
	1			34
1				155
1			2	6
1	2			36
Total AVBs				239

Table 7 shows order of instruments where a second instrument is used to achieve the birth denoted as 1 and 2.

As expected the most common mode of birth is by ventouse extraction, which comprised 64.9 percent of the AVBs. Neville Barnes forceps were utilised next most frequently for 13.8 percent of the births. The remainder was in far smaller numbers with Wrigley's forceps, 0.4 percent, Kielland forceps, 2.5 percent, being used by only a few consultants. Of interest is the fact that there are still quite a number of women being birthed with the use of more than one instrument. Most often the ventouse and then this is removed and a lift out performed with either the Neville Barnes or Wrigley's forceps, for 15.1 percent and 2.5 percent of the births respectively. The more recent College guidelines advise caution when instituting the use of more than one birth instrument, citing an increased risk of both maternal and fetal trauma when this occurs. The data is not available this year, but it will be useful to look at these more complicated births, which are more likely to represent the more difficult of obstetric scenarios with fetal mal-rotation and minimal descent of the presenting part likely to be present.

The Kiwi cup has been introduced during the past year also, and for the next Annual Report, it should be possible to give some information about it's use and success. Likewise, a failed forceps birth is not being captured at present by this form if the accoucheur only fills out the caesarean section form and not the operative delivery form. It may be possible to collect data on this undesirable outcome in the future.

Epidural is by far the most common form of analgesia utilised to facilitate AVB. In most situations the epidural catheter will have been inserted prior to full dilatation to assist with the

Analgesia Administered to Facilitate AVB

Table 8: Ventouse Extraction Analgesia

	(n)	%
Local	31	22.3
Pudendal	17	12.2
Spinal	8	5.8
Epidural	83	59.7
Total	139	

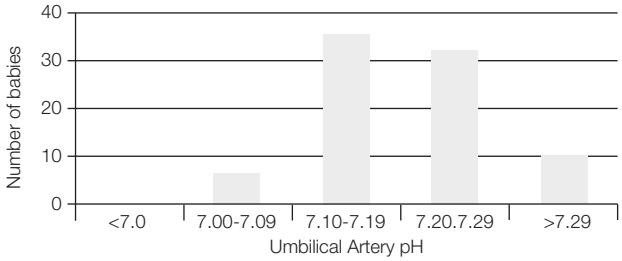
Table 9: Neville Barnes Forceps Analgesia

	(n)	%
Local	4	10.5
Pudendal	3	7.9
Spinal	1	2.6
Epidural	30	79.0
Total	38	

pain of labour rather than being inserted specifically for the birth itself. Local anaesthetic and pudendal nerve blocks would appear to be used where perhaps less difficulty is anticipated with the birth, and in this situation the ventouse is more likely to be employed.

Fetal Acidosis

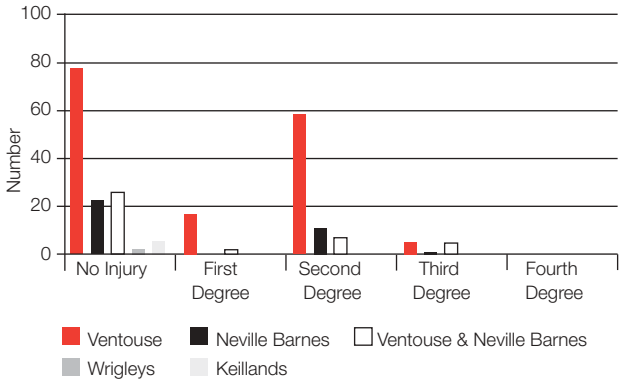
Figure 3: Assessment of Fetal Acidosis at Assisted Vaginal Birth



These results show that when fetal compromise is suspected, it is confirmed with abnormal cord pH in this population 34.5 percent of the time. There were 36 babies birthed for a non-reassuring CTG whose cord pH was not recorded. We continue to work at increasing our sampling of babies birthed for suspected fetal compromise.

Perineal Trauma

Figure 4: Perineal Trauma Sustained as a Result of Assisted Vaginal Birth



The incidence of perineal trauma is considered to be higher for all AVBs over normal vaginal birth. The ventouse was utilised to effect 155 births within this sample population. Of this number 77 (49.7%) had no perineal injury recorded while 9.7 percent, 37.4 and 3.2 percent had Grade I, II and III perineal tears/episiotomies respectively. Interestingly, 67.6 percent of the Neville Barnes forceps births were effected without perineal trauma being reported. Of most interest is the apparently low level of risk to the vagina and perineum of a birth involving the use of two instruments. This may be explained by the 'Trials of Forceps' where two instruments may have been applied or attempted, but birth vaginally was abandoned in favour of a caesarean section.

Estimated Blood Loss at Birth

Of interest, the larger blood losses occurred with average sized babies. This may illustrate the unit's pro-active management when there is a suspected risk of postpartum haemorrhage after birth, related to fetal size or the characteristic of the labour. No information has been collated in relation to oxytocic administration for third stage on the operative delivery record and this may be another area of interest to investigate in future.

Summary

The assisted birth rate for all births in 2003 was similar to previous years at 14.0 percent. If only considering vaginal births (all caesarean deliveries are excluded) then the proportion of vaginal births managed operatively is 19.7 percent. This compares to a rate of 20.8 percent in 2002, and 20.37 percent in 2001.

It is of interest that there does not appear to be any alteration in the numbers of AVBs undertaken since the introduction of the consultant on site in Birthing Suite over the past year.

Table 10: Blood Loss Compared to Birth Weight of Babies Born by Assisted Vaginal Method

	0-199 mls		200-399 mls		400-599 mls		600-799 mls		800-999 mls		>999 mls		
Weight in grams	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**	**Total**
1500-1999			1	100									1
2000-2499	3	42.9	3	42.9					1	14.3			7
2500-2999	4	13.3	18	0.6	5	16.7	1	3.3					30
3000-3499	15	17.9	47	55.9	14	16.7	1	1.2	1	1.2			84
3500-3999	2	2.8	43	60.6	17	23.9	3	42.3	1	1.4	1	1.4	71
4000-4499			14	51.9	7	25.9	3	11.1					27
4500-4999	1	25	1	25	2	50							4
5500-5999													1
Ns	2	14.3	9	64.3	2	14.3	1	7.1					14
Total	27	11.3	136	56.9	47	19.7	9	37.7	3	1.3	1	0.4	239

Table 11: Comparison of Caesarean Section (CS) Deliveries and Assisted Vaginal Birth for 2003

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
CS	30.7	22.3	31.6	27.4	26.9	27.5	28.5	24.0	30.6	29.4	30.4	26.5	27.9
AVB	14.7	14.6	14.6	15.3	12.8	13.8	20.6	14.5	10.7	10.0	14.0	14.6	14.2

Numbers indicate the percentage for each method of assisted births of the total births for the month.

Pauline Burt
General Manager
Women's Health Division

Lessons Learned from Tragedy

On 19 December 2003, Coroner Trevor Savage released his formal findings into the death of Hana Yanagawa, a baby girl who was born at Christchurch Women's Hospital (CWH) on 22 March 2002, and died several hours later.

The Coroner found that her death was due to intrapartum hypoxia/ischaemia resulting from severe traumatic head injuries which were sustained during a difficult and extended forceps delivery.

We have learned several valuable lessons from this tragedy, which is remembered as a stressful and distressing period for everyone involved.

CWH now has an obstetric consultant in the Birthing Suite from 8a.m. to 5p.m., Monday to Friday. This move has been welcomed by all staff and promotes more timely and appropriate access to specialist skills and knowledge.

We are also working to develop new clinical guidelines, which include the role of pelvimetry in pregnancy care, fetal monitoring, better management of the second stage of labour and assisted vaginal delivery.

While we are constantly seeking to improve our service delivery, the death of Hana Yanagawa gave us a special opportunity to review our obstetric services and to re-examine our clinical practice protocols.

Sharron Bolitho
Tutor Specialist
Consultant Obstetrician and Gynaecologist

Caesarean Section

The data presented in this report is taken from two databases, CareSys and the Christchurch Women's Hospital (CWH) caesarean section database. Reassuringly, this year, the same numbers of caesarean sections (CS) were recorded in each database, as there have been problems with discrepancies in the past. In both databases multiple births are recorded as a single birth.

As suggested in last year's report, a revised version of the CS Operation Note/Data Gathering Form has been designed. However it was not available until late 2003, so a decision was made to introduce it on the first of January 2004, in order to collect a complete calendar year's data. The new information will be available in the next Women's Health Division (WHD) Annual Clinical Report, and will include information on external cephalic version, syntocinon augmentation and intrapartum fetal blood sampling.

The birth numbers for birth centres other than CWH, Lincoln, Rangiora and Burwood have been obtained from Ministry of Health (MOH) Reports on Maternity (1), or directly from the units concerned.

Data is presented below, firstly by overall rates then by the five most common reasons for CS as defined by the UK National Sentinel Caesarean Section Audit Report (2).

Total Caesarean Section Rate

The total caesarean section rate (CSR) for CWH in 2003 was 28 percent. This has not changed significantly from the 2002 CSR of 28.3 percent. However there has been a marked rise over the 5-year period 1999 to 2003.

Table 1: Total CSR at CWH

Year	Total number of CS	Total number of Births	Total CS Rate (%)
1999	872	3765	23.2
2000	877	4108	21.3
2001	1031	4241	24.3
2002	1174	4149	28.3
2003	1240	4433	28.0

The total CSR at CWH has previously compared favourably with other tertiary hospital rates in Australia and New Zealand (NZ). The most recent report from Women's Hospitals Australasia (WHA) (3) reports an average total CSR for tertiary hospitals (16 institutions) of 25.3 percent in 2000/2001.

The total CSR for NZ tertiary institutions in the most recent MOH report on maternity is 26.1 percent in 2001. Both these rates are actually higher than the CWH CSR of 24.3 percent for the same year. It will be interesting to see if the average for all tertiary hospitals has risen since 2001 (like the CSR at CWH), when the next WHA and MOH reports are published.

Total CSR can be reported for a geographical region as well as for an institution (as above). In New Zealand, the MOH reports both these types of rates. Regional rates are reported by District Health Board region. The regional rate for Canterbury District Health Board (CDHB) was reported as 22.0 percent in 2000, and 25.4 percent in 2001. MOH data for 2002 and 2003 are not yet available, therefore a best estimate is presented below (Table 2) for these years.

Table 2: Number of Births per Birthing Centre in CDHB Region

	2002	2003
CWH	4149	4433
Kaikoura	8	9
St George's Hosp.	607	615
Burwood	195	212
Darfield	9	3
Akaroa	3	3
Waikari	1	4
Lincoln	91	86
Rangiora	50	90
Ashburton	120	137
Homebirths	120	96
Total	5353	5688

Table 3: CDHB Regional Numbers of CS

	2002			2003		
	Em.CS	El.CS	Total CS	Em.CS	El.CS	Total CS
CWH	851	323	1174	877	363	1240
St George's Hosp	0	345	345	0	352	352
Total	851	668	1519	877	715	1592

Table 4: CDHB Regional CSR Figures

	2000	2001	2002	2003
Number of CS	1176*	1384*	1519	1592
Number of Births	5335*	5446*	5353	5688
CSR as Percentage	22.0*	25.4*	28.4	28.0

* MOH figures

It should be noted that the institutional rates for CWH and the regional rate for CDHB are very similar. A more usual situation is for the regional rate to be considerably lower than its tertiary institution's rates.

An appropriate hospital for benchmarking in NZ is Wellington Women's Hospital (WWH) as it is an urban tertiary hospital that has a similar number of deliveries to CWH. The recent Capital & Coast DHB (C&CDHB) Maternity Report (4) follows the more usual pattern of the regional CSR, being lower than the tertiary hospital's CSR. The C&CDHB regional CSRs for 2001and 2002 were 24.0 percent and 25.1 percent respectively, whereas the CSRs for WWH for the same period were 29.9 percent and 27.9 percent.

The national CSR for all of New Zealand in the most recent MOH report was 22.1 percent in 2001. The regional rate for CDHB in this year was above the national average at 25.4 percent. Unfortunately, the MOH national CSRs for 2002 and 2003 are not yet available, so no comment can be made on whether there is an ongoing trend for the CDHB's regional caesarean section rates to be above the national average.

For international comparisons outside Australasia, it is usual to compare our data with the United Kingdom in particular. The most recent UK data is from the National Sentinel Caesarean Section Audit (NSCSA) Report. This reports a CSR of 21 percent for England and Wales in 2001. There is wide variation in CSR internationally, being as low as 15 percent in Scandinavia, and well over 50 percent in Brazil. However, worldwide there has been an increase in CSR over time.

Mode of Caesarean Section

There were 281 elective CS performed at CWH in 2003. They accounted for 22.7 percent of all CSs. The CWH total elective CSR for 2003 as a proportion of all births at CWH was 281/4433 = 6.3%.

The majority (69.8%) of elective CS were performed for multiparous women. The reverse was true for emergency CS in labour, as 69.2 percent of this mode of CS were performed in primiparous women. Emergency (Em.) CS for women not in labour was a similar percentage in both groups.

Table 5: Mode of CS by Parity

Parity	Elective		Em. in Labour		Em. Not in Labour		Total by Parity	
	(n)	%	(n)	%	(n)	%	(n)	%
Primipara	85	30.2	572	69.2	55	41.4	712	57.4
Multipara	196	69.8	254	30.8	78	58.6	528	42.6
Total	281	22.7	826	66.6	133	10.7	1240	

Repeat Caesarean Section

The total number of repeat CS was 306, making up 24.6 percent of the total number of caesarean births. The majority, 83.3 percent, of women having a repeat CS had only one previous CS.

Vaginal Birth after Caesarean Section (VBAC)

WHD has nominated Royal Australian New Zealand College of Obstretricians & Gynaecologists (RANZCOG) Clinical Indicator 2.1 to access VBAC rates.

Clinical Indicator 2.1

Numerator The number of patients delivering vaginally following a previous primary (first) caesarean section, and having no intervening pregnancies greater than 20 weeks gestation.

Denominator The total number of patients delivering following a previous primary (first) caesarean section, and having no intervening pregnancies greater than 20 weeks gestation

With revisions to the CS database, it is now possible to get accurate information about repeat CS, ie failed VBAC. However, as in previous years, it is not possible to get complete information from CareSys about women undergoing successful VBAC. CareSys does not record the number of previous CS that women have had. Therefore, for women having a VBAC, it is not possible to differentiate all the women who have had only one previous CS (a previous primary CS). The CareSys database also cannot give information about birth order and intervening births.

Therefore a subgroup of para 2 women, which consists of all women delivering their second baby in 2003 who have had one previous delivery that was a CS has been analysed. This subgroup of women by definition have had no intervening pregnancies greater than 20 weeks gestation or vaginal births prior to their CS. The VBAC indicator for this group is defined as below.

Numerator The number of women delivering vaginally following a previous primary caesarean section, with their previous CS being their only other delivery greater than 20 weeks

Denominator The total number of women delivering following a previous primary CS, with their previous CS being their only other delivery greater than 20 weeks

102/480 = 21.3%

This gives a VBAC rate of 21.3 percent in this subgroup for 2003, which means that only 21.3 percent of women whose only previous birth was a CS had a successful VBAC at CWH during this period. This compares with a rate of 37 percent in 2002 (defined as Subgroup 1 in the 2002 report), and 29 percent in 2001. Women's Health Australasia tertiary hospitals noted a rate of 23.1 percent in 2001, using the college clinical indicator. This information cannot be calculated from CareSys, so it is hard to know whether we are comparing like with like.

An alternative way to look at VBAC rates is to consider all women who have ever had one or more CS, ie a total VBAC rate as opposed to a VBAC rate for women who have had only one previous CS. This is the rate that C&CDHB reported in their latest maternity report.

Numerator Number of vaginal births in women with one or more previous CS.

Denominator Total women with one or more previous CS.

176/480 = 36.7%.

In 2003, the total VBAC rate for CWH was 36.7 percent. This is a very similar rate to the C&CDHB total VBAC rate of 34.5 percent in 2002.

Presumed Fetal Distress

There were 229 CS performed for the primary indication of presumed fetal distress in 2003, giving a total of 18.4 percent of all CS performed.

RANZCOG indicators 4.1 and 4.2 are used to determine the rates of primary (first) CS for fetal distress in labour as percentages of the whole delivering population and as a percentage of primary CS.

Clinical Indicator 4.1

Numerator The number of patients undergoing primary caesarean section for presumed fetal distress in labour

Denominator The total number of patients delivering including those delivering vaginally

171/ 4433 = 3.8%

The provisional mean for this indicator is 2.7 percent with a threshold of 2.4 - 3.0 percent

Clinical Indicator 4.2

Numerator The number of patients undergoing primary caesarean section for presumed fetal distress in labour

Denominator The total number of patients delivering by primary caesarean section only.

171/936 = 18.2%

The provisional mean for this indicator is 19.2 percent with a threshold of 16.5 – 22.3 percent.

Failure to Progress in Labour

There were 381 CS performed for the primary indication of failure to progress in labour in 2003. They made up 30.7 % of total CS.

RANZCOG Clinical Indicators 3.1 and 3.2 are used to monitor the adequacy of trial of labour.

Clinical Indicator 3.1

Numerator The number of patients undergoing primary CS for failure to progress in labour after a period of labour with cervical dilation of 3cm or less.

Denominator The total number of patients undergoing primary non elective caesarean section

67/795 = 8.4%

No threshold is yet established.

This indicator reflects the primary CS rates for women who fail to establish in labour.

Clinical Indicator 3.2

Numerator The number of patients undergoing primary CS for failure to progress in labour after a period of labour with cervical dilation of more than 3cm.

Denominator The total number of patients undergoing primary non elective caesarean section

270/ 795 = 33.9%

No threshold is yet established.

This indicator reflects the primary CS rate for women who fail to progress in labour.

Breech Presentation

The total number of CS performed for breech presentation as the primary indication in 2003 was 104, of which 100 were in women with no previous CS. This makes up 8.4 percent of all CS. The number of breech vaginal deliveries in 2003 was 35. Therefore 74.8 percent (104/ 139) of breech presentations were delivered by CS. The current practice of

discussing the 'Term Breech Trial' findings with women, and their subsequent uptake of the offer of elective CS for breech, is reflected in the 2003 CS rate for breech.

Maternal Request

There were 31 elective CS for the primary indication of maternal request. This constitutes 2.5 percent of all CS performed at CWH and 11.0 percent of all elective CS. The NSCSA reported that 7 percent of all CS performed in England and Wales in 2001 were for maternal request

The percentage of births at CWH by CS for maternal request in 2003 as a proportion of all births at CWH was 31/4433 = 0.7%. International comparison with NSCSA data shows that 1.5 percent of all births in England and Wales were CS carried out for non medical reasons. It is likely that our CDHB regional rate for this indication is more in line with the NSCSA figure. However, in order to calculate this rate, we need to ascertain how many of the elective CS performed outside CWH in the CDHB region were for maternal request.

The majority of women requesting elective CS were multiparous. However, within the group of women with no previous (prev) CS, 30.8 percent (4/13) were primiparous (see Table 6).

Table 6: Maternal Request for CS by Parity and Previous CS Status

Parity	No previous CS		One previous CS		Total by Parity	
	n	%	n	%	n	%
Primipara	4	30.8	N/A	N/A	4	12.9
Multipara	9	69.2	18		27	87.1
Total by Prev CS Status	13	41.9	18	58.1	31	

Summary

A detailed discussion on reasons for CS and possible ways to impact the CSR was presented in last year's ACR. In the interim the National Institute of Clinical Excellence (5) have published an evidence based clinical guideline for CS. The recommendations in their document are in line with what was discussed last year. In particular, they are recommending the following ways to decrease the CSR by impacting the five main indications for CS;

- Encouragement of VBAC.
- Fetal blood sampling in cases of suspected fetal distress.
- Routine use of action lines on partograms for failure to progress.
- External cephalic version for breech presentation at 36 weeks.
- Counselling of women fearful of labour to discourage CS for maternal request.

There will be new CWH caesarean section audit data in the next ACR, which can be used to audit practice at CWH in the areas outlined above. This will enable identification of possible areas for improvement in our local practice.

References

(1) Report on Maternity 2000 & 2001. Ministry of Health, NZ Health Information Service – 2003.

(2) Thomas J, Pararjothy S. RCOG Clinical Effectiveness Support Unit. National Sentinel Caesarean Section Audit Report London; RCOG Press; 2001

(3) Benchmarking in Obstetrics 1997 – 2001, Women's Hospitals Australasia (WHA) October 2002

(4) Capital & Coast District Health Board, Maternity Report 1997-2002.

(5) National Institute of Clinical Excellence, Clinical Guideline 13; Caesarean Section; NHS, London, April 2004

Emma Jackson
Obstetric and Gynaecology Registrar

Preterm Births

This year demographic data regarding preterm births (PTB) has been reviewed. It is not possible to ascertain the reason for PTB from the CareSys database, as the birth summary data only relates to the reason for mode of actual birth i.e. normal vaginal, assisted or caesarean section (CS) - and not the reason for the birth being preterm.

For the 2000/2001 period Women's Health Australia documented rates of 10.7 percent for births before 37 completed weeks, and 3.4 percent for births before 32 completed weeks. Christchurch Women's Hospital (CWH) had rates for the same period of 10.4 percent, and 2.2 percent respectively, thus comparing well with our Australian counterparts.

Clinical Indicator

Numerator Total number of preterm deliveries = 413
Denominator Total number of deliveries = 4433

The Ministry of Health (MOH) Report on Maternity 2000 & 2001 published in 2003 is the most recent national data we have to compare with. The report gives data for gestational age (GA) at birth for babies born in hospital by ethnicity, and data recording the percentage of babies at each gestation, born in each unit in the country. For example, for the year 2001, 86.3 percent of all babies born between 24 and 27 weeks were delivered at a tertiary unit, and (CWH) delivered 12.6 percent of the total number of this age group.

CWH was the birthing place for 7.9 percent of the country's babies for the year 2001 (see Figure 1). This compared with 6.1 percent for Wellington, 7.0 percent for Middlemore, and 13.9 percent for National Women's Hospital. Unfortunately, the MOH does not report the data on the actual numbers of babies born at each GA by area.

Capital & Coast District Health Board (C&CDHB) has done a recent review of their maternity statistics for 1997-2002 after development of a database for this purpose. They report a stable preterm birth rate of 12 percent, with risk factors for preterm birth including younger maternal age, and Maori or Pacific Island ethnicity, with big overlaps between age and ethnicity data.

Looking at our most recent CWH data (2003) our preterm birth rate appears relatively stable at 9.3 percent (see Table 1), slightly lower than the C&CDHB data.

Table 1: PTBs as a Percentage of all Births

	2002		2003	
	(n)	%	(n)	%
Preterm Births	419	10.1	413	9.3
Total Births	4149		4433	

Figure 1: Percentage of Babies Born at CWH by GA Group in 2001 (MOH data)

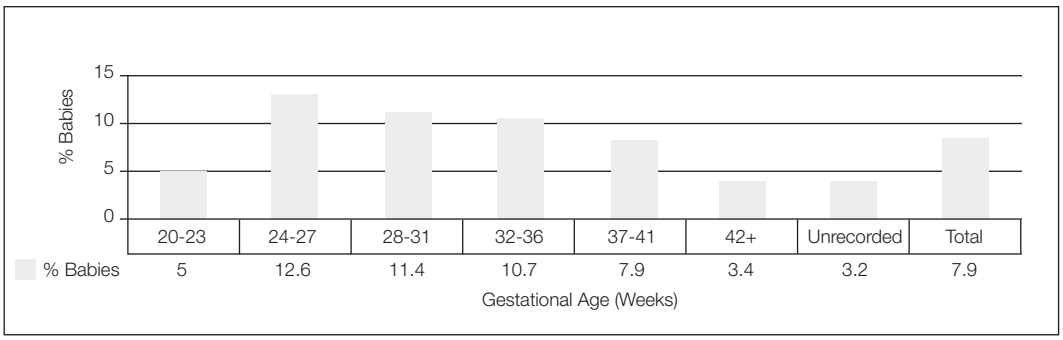


Table 2: Type of PTBs Stratified by GA

GA	Live Births 2002	Live Births 2003	Still Births 2002	Still Births 2003	Totals 2002	Totals 2003
<28 weeks	36	25	11	19	47	44
28-32 weeks	66	71	3	11	69	82
33-36 weeks	298	283	5	4	303	287
Total	400	379	19	34	419	413

Last year there were more stillbirths, mainly at the earlier gestations (see Table 2). If these were excluded from the overall data, our live preterm birth rate, which has the greatest impact on our neonatal resources, would be reduced from 9.6 percent to 8.5 percent.

Table 3: Stratification of PTB by Parity and GA

Parity	<28 Weeks 2002	<28 Weeks 2003	28 – 32 Weeks 2002	28 – 32 Weeks 2003	33 – 36 Weeks 2002	33 – 36 Weeks 2003	Total 2002	Total 2003
1	30	27	39	35	153	135	222	197
2	12	9	12	25	84	79	108	113
3	3	2	11	12	38	41	52	55
4	1	3	4	4	21	17	26	24
5	1	3	1	5	4	9	6	17
6	0	0	2	0	1	4	3	4
7	0	0	0	1	2	1	2	2
8	-	0	-	0	-	1	-	1
Total	47	44	69	82	303	287	419	413

Once again, as in last year's data, we can see that PTB is equally common in nulliparous and multiparous women. 47.7 percent of babies < 37 weeks were born to primigravida, and 52.3 percent to multiparous women. There may be a trend of increasing risk with increasing parity, but this data would need to be analysed separately, looking at parity data for all births.

Table 4: Breakdown by Maternal Age Group of PTB

Maternal Age Group	Total No. Births 2002 (n)	Total No. Births 2002 %	Total No. Births 2003 (n)	Total No. Births 2003 %	Total Number PTBs 2002 (n)	Total Number PTBs 2002 %	Total Number PTBs 2003 (n)	Total Number PTBs 2003 %
<=20	338	8.2	286	6.5	33	7.8	30	7.3
21-25	626	15.1	608	13.7	60	14.3	52	12.6
26-30	1150	27.7	1111	25.0	105	25.1	100	24.2
31-35	1400	33.7	1572	35.5	136	32.5	126	30.5
36-40	537	12.9	728	16.4	70	16.7	90	21.8
41+	98	2.4	128	2.9	15	3.6	15	3.6
Total	4149		4433		419		413	

Table 4 gives us interesting data on trends in maternal age at birth. It can be seen from the table that over the last year, there has been a slight reduction in the percentage of babies born to women under 31 years of age, and an increase in all categories over this age, following a trend towards increasing maternal age. It can be seen that 16.4 percent of all babies were born to women aged 36-40, but 21.8 percent of preterm births were born to this group. I.e. the percentage of preterm births compared to percentage of total births shows an increase for women aged over 35, confirming data that older women, >35 and younger women are at increased risks for PTB.

One can see that 7.3 percent of all births and 10.4 percent of preterm births were to women identified as Maori giving a rate of 13.2 percent of all births to Maori women being preterm. Once again, as in last year's data, the trends are consistent for ethnicity with Maori, Pacific Island and Middle Eastern groups having higher percentages of PTB compared to European and Asian groups. This is also consistent with other data including C&CDHB.

Table 5: Ethnic Breakdown of PTB

	Total No. Births				PTBs		No PTBs as a % of all Births for Each Ethic Group	
	2002		2003		2002	2003	2002	2003
Ethnicity	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**	**%**	**%**
European	3494	84.2	3600	81.2	341	81.4	328	79.4	9.8	9.1
Maori	275	6.6	325	7.3	36	8.6	43	10.4	13.1	13.2
Pacific Island	117	2.8	146	3.3	15	3.6	14	3.4	12.8	9.6
Asian	196	4.7	271	6.1	18	4.3	22	5.4	9.2	8.1
Middle Eastern	17	0.4	18	0.4	4	1.0	2	0.5	23.5	11.1
Latin American	2	0.1	6	0.1	0	0.0	0	0.0	0.0	0.0
African	9	0.2	21	0.5	0	0.0	1	0.2	0.0	4.8
Other	1	0.1	5	0.1	1	0.2	1	0.2	100.0	20.0
Not Stated	38	0.9	41	0.9	4	1.0	2	0.5	10.5	4.9
Total	4149		4433		419		413			

Table 6: Comparison of PTBs with All Births by Mode of Birth

	Total No. Births				Total Number PTBs			
	2002		2003		2002		2003	
Mode of Birth	**(n)**	**%**	**(n)**	**%**	**(n)**	**%**	**(n)**	
Vaginal	2975	71.7	3193	72.0	217	51.8	238	57.6
Caesarean	1174	28.3	1240	28.0	202	48.2	175	42.4
Total	4149		4433		419		413	

Table 7: Mode of Birth by GA for PTB

	Vaginal Birth				Caesarean Delivery				Total		No. Still Births	
	2002		2003		2002		2003		2002	2003	2002	2003
GA	(n)	%	(n)	%	(n)	%	(n)	%	(n)	(n)	(n)	(n)
<28 Weeks	26	55.3	33	75.0	21	44.6	11	25.0	47	44	11	19
28-32 Weeks	22	31.8	33	40.2	47	68.1	49	59.8	69	82	3	11
33-36 Weeks	169	55.8	172	59.9	134	44.2	115	40.1	303	287	0	4
Total	217	51.8	238	57.6	202	48.2	175	42.4	419	413	14	34

The percentage of preterm babies born vaginally has increased since 2002, with a reciprocal reduction in CS. The figures for CS are still much higher than for term babies, as would be expected given the complications associated with prematurity; including multiple gestation, malpresentation, fetal compromise and a number of urgent indications for birth for which a trial of vaginal birth or induction would not be appropriate.

As per last year's data it can be seen that pre 28 weeks, 75.0 percent of babies were birthed vaginally and 25.0 percent by CS whilst between 28-32 weeks the rate of CS was much higher then vaginal birth 59.8 percent vs 40.2 percent. This again relates to the above comments regarding malpresentation and fetal indications for birth and that prior to 28 weeks, cases may have been of questionable viability, including induction for fetal abnormality and other situations where evidence is unclear of the benefits of delivery by CS.

Our data for the last year is quite consistent with what is known elsewhere, and with our previous year's data. We need to be able to use this data to target certain groups (ethnic and age) of the population, to try and develop strategies to reduce the PTB rate. Studies looking at screening for bacterial vaginosis as a risk factor for PTB, and treating this, have mainly focused on women with a past history of early birth and show some benefit. Perhaps a policy of selected screening being offered routinely to high-risk women could have an impact, and should be the focus of future research. However, concurrent risk factors such as heavy smoking, nutritional and socio-economic status, makes identification of isolated causative factors difficult.

Jane Fielder
Obstetric and Gynaecology Registrar

Lower Genital Tract Trauma

Introduction

This report presents the Christchurch Women's Hospital (CWH) data on lower genital tract trauma for 2003. At Christchurch Women's Hospital (CWH) the Royal Australian and New Zealand College of Obstetrics and Gynaecology (RNZCOG) clinical indicator 5.1 is used to assess the incidence of an intact lower genital tract in primiparous patients delivering vaginally. This indicator is presented below, followed by information on episiotomy rates and third degree tears.

Intact Lower Genital Tract in Primiparas

A high incidence of intact perineum following vaginal delivery is considered a desirable outcome. It is estimated that 85 percent of women sustain some kind of lower genital tract trauma as a result of a vaginal delivery, and 60 to 70 percent of those will require suturing (1).

Definition of terms:

The lower genital tract is those structures below and not including the cervix.

Surgical repair is defined as suturing of the lower genital tract following delivery.

Clinical Indicator 5.1

Numerator The number of primiparous patients not requiring surgical repair of the lower genital tract as defined above.

Denominator The total number of primiparous patients delivering vaginally

335/1439 = 23.3%

At CWH for the calendar year of 2003, the incidence of intact lower genital tract in primiparous women was 23.3 percent. This was evaluated by taking all those primiparous women who had a vaginal delivery who were not sutured, and comparing them to the total number of primiparous women who had a vaginal delivery. This includes women coded as intact perineum, and first degree, second degree, labial and vaginal teas who were coded as not sutured. This includes assisted, spontaneous, and vaginal breech births. The rate at CWH in 2001 was 16 percent, and 17.8 percent in 2002.This RANZCOG indicator is somewhat ambiguous, as stated in last years report, as it does not state that it includes only spontaneous vaginal deliveries (SVD), therefore all vaginal deliveries have been included.

Table 1 : Primipara Lower Genital Tract Trauma by Delivering Professional (includes assisted, spontaneous and breech deliveries)

	Intact		1st degree tear		2nd degree tear		3rd degree tear		Labia/Vag wall tear		Episiotomy		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Case Management Midwife	28	24.3	28	24.3	30	26.1	1	0.9	15	13.0	13	11.3	115	8.0
Consultant	15	8.7	8	4.7	19	11.0	1	0.6	7	4.1	122	70.9	172	12.0
Core Midwife	25	42.4	13	22.0	11	18.6	0	0	4	6.8	6	10.2	59	4.1
General Practitioner	8	25.0	5	15.6	9	28.1	0	0	2	6.3	8	25.0	32	2.2
House Surgeon	0	0	0	0	2	66.7	0	0	0	0	1	33.3	3	0.2
Independent Midwife	176	23.5	148	19.8	170	22.7	6	0.8	101	13.5	147	19.7	748	52.0
Registrar	11	4.1	26	9.6	32	11.9	5	1.9	23	8.5	173	64.1	270	18.8
Student Midwife	11	27.5	9	22.5	13	32.5	0	0	4	10.0	3	7.5	40	2.8
Total	274	19.0	237	16.5	286	19.9	13	0.9	156	10.8	473	32.9	1439	

Table 2 : Multipara Lower Genital Tract Trauma by Delivering Professional (includes assisted, spontaneous and breech deliveries)

	Intact		1st degree tear		2nd degree tear		3rd degree tear		Labia/Vag wall tear		Episiotomy		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Case Management Midwife	112	49.8	48	21.3	39	17.3	0	0	11	4.9	15	6.7	225	12.8
Consultant	16	19.3	16	19.3	15	18.1	1	1.2	3	3.6	32	38.6	83	4.7
Core Midwife	41	51.3	19	23.8	15	18.8	0	0	4	5.0	1	1.3	80	4.6
General Practitioner	22	46.8	15	31.9	6	12.8	0	0	2	4.3	2	4.3	47	2.7
House Surgeon	2	0.1	0	0	0	0	0	0	0	0	0	0	2	0.1
Independent Midwife	458	39.7	283	24.5	230	19.9	6	0.5	54	4.7	123	10.7	1154	65.8
Registrar	26	28.6	7	7.7	18	19.8	2	2.2	3	3.3	35	38.5	91	5.2
Student Midwife	36	50.0	18	25.0	11	15.3	2	2.8	3	4.2	2	2.8	72	4.1
Total	713	40.6	406	23.1	334	19.0	11	0.6	80	4.6	210	12.0	1754	

Table 3: Primapara Delivering Vaginally by 'Intact' Perineal Type

Type of Intact Perineum		Number
Intact		274
First degree tears not sutured		33
Second degree tears not sutured		5
Labial/vaginal tears not sutured		23
Total		335

A more useful indicator of intact perineum in primipara may be the incidence of intact perineum in primipara delivering by SVD only as a proportion of all primipara delivering by SVD only. As defined by the formula below:

Numerator The number of primiparous patients delivering by SVD not requiring surgical repair of the lower genital tract as defined above.

Denominator The total number of primiparous patients delivering by SVD

323 / 938=34.4%

This rate in 2003 at CWH was 34.4 percent, 26 percent in 2002, and 24.2 percent in 2001. Comparisons with Women's Hospitals Australasia (WHA) benchmarking data (2) show that for this clinical indicator they had a rate of 38.4 percent for 2000/01for all member hospitals.

When making these comparisons, it is important to keep in mind how the data is collected, and what data is used in obtaining these results. Data is obtained from the CareSys coding of perineal trauma. The codes included in this analysis are 'intact perineum' and any first degree, second degree or labial tears, which were not sutured. There can be inaccuracies in how the tears are defined. As a result of this, there may be tears that are incorrectly coded. For example a tear may be defined as a 'second degree tear not sutured' when it is in fact a first degree tear, or a second degree tear (which ought to have been sutured). Therefore the CWH 2003 rates of 'intact lower genital tract in primiparous patients delivering vaginally' may in fact be higher than the true incidence.

Table 4: Primipara Delivering by SVD by 'Intact' Perineum Type

Type of 'Intact Perineum	(n)
~~Intact~~	~~224~~
~~1st degree tears, not sutured~~	~~70~~
~~2nd degree tears, not sutured~~	~~7~~
~~Labial tears, not sutured~~	~~22~~
~~Total~~	~~323~~

Episiotomy Rates

The episiotomy rate is another outcome the WHA group uses as a benchmark for comparison between hospitals. They define the episiotomy rate as the number of women who have an episiotomy, divided by the total number of women delivering vaginally. For the 2003 calendar year the rate was 21.4 percent at CWH for all modes of vaginal delivery. The episiotomy rate for SVB was 12.2 percent. These rates compare favourably to the 19.1 percent episiotomy rate for WHA in the 2000/01 year, and 23.8 percent for National Women's' Hospital for 2000. A low episiotomy rate for SVB is felt to be a desirable outcome by WHA. There are, in general, wide variations in episiotomy rates depending on the area of the world. The Netherlands has an episiotomy rate of 8 percent, England and Wales 20 percent, USA 50 percent, and Eastern European Countries 99 percent (1).

Table 5: Lower Genital Tract Trauma by Type of Delivery

Total	Intact		1st degree tear		2nd degree tear		3rd degree tear		Labia/Vag wall tear		Episiotomy		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Vaginal	928	36.1	589	22.9	526	20.5	16	0.6	201	7.8	308	12.2	2530	79.2
Breech	27	77.1	1	2.9	1	2.9	0	0	1	2.9	5	14.3	35	1.1
Forceps	1	0.5	4	1.8	13	1.8	2	0.9	4	1.8	196	89.1	220	6.9
Ventouse	31	8.4	49	13.2	80	13.2	6	1.5	30	8.1	174	42.5	408	12.8
Total	987	30.9	643	20.1	620	20.1	24	0.8	236	7.4	683	21.4	3193	

Third Degree Tears

The total number of third degree tears at CWH in 2003 was 24, compared with 29 in 2001, and 34 in 2002. This has not changed significantly over time. The highest number of tears occurred with spontaneous vaginal delivery. Ventouse delivery caused most third degree tears in the assisted category. However, the rate of third degree tears per mode of delivery is more important than the actual numbers. This is shown in the table below in the form of number of third degree tears per 1000 births via that particular mode.

Table 6: Third Degree Tear Rate for Each Mode of Vaginal Delivery (breech excluded).

Mode of Delivery	Third Degree Tears	Total Deliveries	%Third Degree Tears per mode	Third Degree tear rate per 1000
SVD	16	2530	0.6 %	6
Ventouse	6	408	1.5%	15
Forceps	2	220	0.9%	9
Total	24	3158	0.8%	8

The overall numbers are small. Therefore it is not possible to draw significant conclusions about the rates for each mode of delivery. However it is interesting to observe the trend that there was a higher rate with ventouse than forceps, as it is traditionally taught that lower genital tract trauma rates are higher with forceps than ventouse delivery. It is also interesting to note that an episiotomy was performed in 42.5 percent of ventouse deliveries and in 89.1 percent of forceps deliveries.

References:

1: RCOG, Clinical Green Top Guidelines No. 23, Perineal Repair, RCOG Press, June 2000.

2: Benchmarking in Obstetrics 1997 – 2001, Women's Health Australasia , October 2002.

Deon Kennedy
Obstetric and Gynaecology Registrar

Complications of Labour - **Postpartum Haemorrhage**

This is the first year that 'Complications of Labour' has been included as a topic in the annual clinical report. The data recorded has been collated from the CareSys computer data inputs from all births for the 2003 year.

Obstetric haemorrhage is one of the leading causes of maternal mortality world wide, with primary postpartum haemorrhage the most common complication of labour.

This report will look at the incidence of postpartum haemorrhage (PPH) at Christchurch Women's Hospital (CWH). Comparing the incidence at this institution with the incidence in other first world countries could be used as an indication of the level of peripartum medical care provided. A multidisciplinary approach is essential in predicting (identifying risk factors etc.), and adequately dealing with this complication when it does occur.

The total number of births at CWH from 01 January, 2003, to 31 December, 2003, was 4433, with 409 of these births being recorded as complicated by PPH (historically defined as 500ml blood loss in the first 24 hours post delivery). This equates to an incidence of 9.2 percent, that is slightly higher than a first world average of approximately 6 percent.

Table 1: Comparison of PPH by Mode of Delivery

	Total Deliveries	PPH	%
Caesarean section	1240	213	17.2
Normal vaginal birth	2530	196	7.8
Assisted birth	628	50	8.0
Total Births	4433	409	9.2

The following table compares the incidence of this complication in primiparous and multiparous patients.

Table 2: Comparison of PPH by Parity

	Total Deliveries	PPH	%
Primiparous	2167	227	10.5
Multiparous	2266	182	8.0

Twin pregnancies showed an increased rate of PPH compared with the whole birthing population. Out of a total of 88 sets of twin deliveries during this period, 32 were recorded as having had a PPH, resulting in an incidence of 36.4 percent.

Table 3 below compares the incidence of PPH in the different age groups to indicate whether age at delivery impacts on the risk of complications.

Table 3: Comparison of PPH by Age Group

Age Group	Total Deliveries	PPH	PPH as % of Total Deliveries
15-20	287	25	8.7
21-25	589	58	9.8
26-30	1101	104	9.4
31-35	1588	141	8.9
36-40	732	71	9.7
>40	136	10	7.4

The data indicates the highest incidence of PPH is in the age group 21 to 25 years, with 9.8 percent of deliveries in this age group having a PPH.

Above average birth weight is known to be a risk factor for PPH. This is well demonstrated in the data analysis with a birth weight of > 4000g recorded in 31.1 percent of cases of PPH. The overall incidence of a birth weight in excess of 4000g is 15.4 percent.

An attempt was made to analyse the data as recorded on CareSys pertaining to the different management options for the third stage of delivery as the analysis potentially provides an argument for a change in management of the third stage. However the information as recorded on the CDHB form 9903 (Labour Record Sheet) does not allow the extraction of this specific information.

A manual search of the clinical notes would therefore have to be performed. This would be an excellent topic for an audit in future.

It would also be useful to consider amending the record sheet so that specific management of the third stage can be recorded in the database.

By Dr. Nigel Skjellerup
Anaesthesia Coordinator

Anaesthetic Report

Introduction

The Department of Anaesthesia, based at Christchurch Public Hospital (CPH) provides 24 hour, seven day per week cover for the Birthing Suite at Christchurch Women's Hospital (CWH). In office hours during the week (0800 to 1730) the service is consultant-based. After hours, dedicated obstetric anaesthetists provide off site cover for the registrars. Apart from their core work, anaesthetists provide teaching, assistance with Intravenous access, fluid management and emergency resuscitation when required.

This is the third calendar year report prepared for the Women's Health Division. Obstetric anaesthetists actively review their performance and almost all women are interviewed after their anaesthesia by personal visit or telephone. Side effects and satisfaction are recorded and entered into a dedicated obstetric anaesthesia database. All numerator figures are derived from this database whilst the denominator figures were supplied by CareSys. I.e. 4433 women delivered 4528 babies during 2003.

Every woman delivering with an anaesthetic at CWH enters the obstetric anaesthesia database. All anaesthetic audit records are crosschecked against the contents of the Birthing Suite "green folders", where birth details are recorded. Every effort is made to ensure accuracy for demographic, birth, and anaesthetic data.

Obstetric Anaesthesia Database

2377 separate National health Indexes (NHIs) are recorded as having had 2523 obstetric anaesthetics in 2003. This represents 53.6 percent of all women delivering at CWH. The average age was 30.2 years. Tables 1 & 2 describe parity and American Society of Anaesthetists (ASA) grading. About 56.5 percent of women having anaesthesia were nulliparous. Only 5.0 percent were ASA three or greater.

So what anaesthetics were used at CWH in 2003? Table 3 indicates that over half were epidural, almost a third were spinal, and the rest were combined spinal epidurals (CSEs), or general anaesthetics (GAs). The limited use of general anaesthesia in this population is regarded as important for reducing major morbidity, such as anaesthesia-related airway management complications.

Table 1: Parity

	2002 (n)	2003 (n)
0	1328	1343
1	644	699
2	232	219
3	82	70
4	24	28
5	5	5
6	2	7
7	2	3
8	0	2
9	1	1
Total	2320	2377

Table 2: ASA Status

	2002 (n)	2003 (n)
1	1402	1543
2	792	715
3	130	119
4	1	0
5	0	0
Total	2325	2377

Table 3: Anaesthetic Techniques

	2002		2003	
	(n)	%	(n)	%
Epidural	1371	55.3	1353	53.6
Spinal	722	29.1	786	31.2
Combined Spinal Epidural (CSE)	295	11.9	279	11.0
GA	91	3.7	105	4.2
Total	2479		2523	

Table 4: Follow Up After Anaesthetic

	2002		2003	
	(n)	%	(n)	%
Seen	1475	63.4	1527	64.2
Telephoned	823	35.4	830	34.9
Lost	27	1.2	20	0.8
Total	2325		2377	

Table 5: Anaesthetic Grade

	2002		2003	
	(n)	%	(n)	%
Excellent	1677	67.6	1832	72.6
Good	543	21.9	470	18.6
Adequate	103	4.2	96	3.8
Poor	127	5.1	104	4.2
Not Asked	29	1.2	21	1.2
Total	2479		2523	

Table 6: Repeat Anaesthetic

	2002		2003	
	(n)	%	(n)	%
Definitely	1878	72.7	1978	78.4
Probably	459	19.8	382	15.1
Maybe	92	4.7	123	4.9
Never	21	0.7	19	0.8
Not Asked	29	2.1	21	0.8
Total	2479		2523	

Table 7: Side Effects After Anaesthetic

	2002		2003	
Complications of Regional Anaesthesia	(n)	%	(n)	%
No early side effects	2326	93.8	2369	93.9
No late side effects	2462	99.3	2507	99.4
Reinsertion of epidural	30	1.2	27	1.1
Reinsertion of spinal	11	0.4	10	0.4
Change to new technique of anaesthesia	103	4.2	108	4.3
Significant early resuscitation required	3	0.1	4	0.1
Epidural post-dural puncture headache	8	0.6	8	0.6
Spinal post-dural puncture headache	1	0.1	2	0.2
Epidural blood patch for dural puncture headache	7	0.5	8	0.3
Neurological damage after spinal / epidural / CSE	2	0.08	2	0.0

Anaesthetists make every effort to review satisfaction after anaesthesia (Table 4). 64.2 percent of patients were seen and 34.9 percent were interviewed by telephone in 2003. A few (0.8%) were lost to follow-up. Women are asked about their satisfaction with their anaesthetic and whether they would, in similar circumstances in the future, have the same technique again (Tables 5 and 6).

Side Effects of Obstetric Anaesthesia

Side effects (Table 7) are defined as being either early (dural puncture, resuscitation required, reinsertion of needle and change to a new technique), or late (post-dural puncture headache, blood patch, Intensive Care Unit (ICU) admission, nerve damage). The number of early (6.1%) and late (0.6%) side effects is quite low. There were no general anaesthetic-related side effects.

The main early side effects are related to how well the spinal, epidural, or CSE anaesthetics function, and whether they needed to be replaced (Table 8) or changed to another technique (Table 9). The chance of a woman having another anaesthetic, having received an epidural, is about one in 13, or 7.9 percent.

The bulk of the other early and late complications are related to post-dural puncture headaches. The epidural post-dural puncture headache rate at CWH is low for a teaching institution, with about 5.8 per thousand epidurals resulting in a headache. In 2003, there were no documented neurological insults secondary to regional obstetric anaesthesia.

Table 8: Reinsertion

	2002		2003	
	(n)	%	(n)	%
Epidural	30	2.2	27	2.0
Spinal	11	1.5	10	1.3
CSE	2	0.7	0	0.0
Total	43	1.8	37	1.5

Note: The total percentage refers to all regional anaesthetics.

Table 9: Change to New Technique

	2002		2003	
	(n)	%	(n)	%
Epidural	73	5.3	80	5.9
Spinal	15	2.1	19	2.4
CSE	15	5.1	9	3.2
Total	103	4.3	108	4.5

Note: The total percentage refers to all regional anaesthetics.

Anaesthesia and Birth Mode

The CareSys database is close to agreement with the obstetric anaesthesia database in terms of numbers of caesarean sections (CS) performed. It reports that 1240 delivered by CS (363 elective and 877 emergency), although the anaesthetic database disagrees with the proportion of elective to emergency caesareans. This is due to planned electives being classed as emergency cases if they proceed on other than their planned delivery day, usually due to early onset of labour. Table 10 is derived from the anaesthetic database, and details the mode of birth and anaesthetic provided.

The overall combined elective and emergency CS rate for 2003 was 27.9 percent. Although this represents a 17 percent increase since 2001, the caesarean rate has stabilised at this figure for 2 years running now. Note that the total numbers of anaesthetics exceed those of women receiving them because some women received more than one, and occasionally more than two, anaesthetics for any given birth.

The indication for epidurals and CSEs is usually maternal request for analgesia. The CWH epidural rate is calculated as being 34.4 percent. Therefore about 63 percent of all women requiring anaesthetics on the Birthing Suite were for pain in labour, even if the mode of birth ended up being instrumental or operative. Of those requesting epidural or combined spinal epidural analgesia, 38.5 percent had a normal vaginal birth, 28.8 percent had an instrumental birth, and 32.7 percent had an emergency caesarean section.

Summary

The CWH anaesthetic database figures for 2003 have been presented. These figures demonstrate a levelling of the caesarean section rate. Anaesthetists are involved with over half the women birthing at CWH. Overall, these women receive effective and safe care. Serious side effects of obstetric anaesthesia are rare. The post-dural puncture rate is also stable and still lies well below the one-percent benchmark for a teaching institution. Almost all women were followed up (only 0.8 percent were lost in 2003 compared to 1.2 percent in 2002), and over 90 percent of those reported good or excellent satisfaction ratings, which has been a consistent figure in recent years.

Table 10: Mode of Birth Associated with Anaesthetic

Mode of Birth	Number of Women	Epidurals	Spinals	CSEs	Gas	Total Anaesthetics
Normal Vaginal Birth (NVB) only	584	488	10	101	0	599
NVB & Man. Removal	16	14	3	2	1	20
Sub Total NVB	**600**	**502**	**13**	**103**	**1**	**619**
Emergency Lower Section Caesarean Section (LSCS) only	926	460	403	74	86	1023
Emergency LSCS (after failed low forceps & ventouse)	9	5	0	4	0	9
Emergency LSCS (after failed low forceps)	3	2	0	1	0	3
Emergency LSCS (after failed high forceps.)	2	2	0	0	0	2
Emergency LSCS (after failed ventouse)	38	20	12	10	0	42
Emergency LSCS (after ventouse & high forceps)	0	0	0	0	0	0
Sub Total Emergency LSCS	**978**	**489**	**415**	**89**	**86**	**1079**
Elective LSCS only	257	3	249	3	10	265
Sub Total All Caesareans	**1236**	**492**	**664**	**92**	**96**	**1344**
Low forceps only	98	79	6	13	0	98
Low and high forceps	0	0	0	0	0	0
Low forceps & manual removal	1	1	1	0	0	2
High forceps only	10	6	2	2	0	10
High forceps & manual removal	0	0	0	0	0	0
Ventouse only	256	203	13	47	0	263
Ventouse and low forceps	84	62	6	20	0	88
Ventouse and high forceps	2	1	1	0	0	2
Ventouse and manual removal	8	4	3	0	1	8
Ventouse, low forceps and manual removal	1	1	0	0	0	1
Sub Total Assisted Birth	**460**	**357**	**32**	**82**	**1**	**472**
Manual removal only	83	0	77	0	8	85
Other	0	0	0	0	0	3
	Women having an Anaesthetic	**Epidurals**	**Spinal**	**CSEs**	**Gas**	**Total Anaesthetics**
Grand Totals	**2377**	**1353**	**786**	**279**	**105**	**2523**

Geeta Singh
Obstetric and Gynaecology Registrar

Low Apgar Scores

This data is gathered as a marker of infant well being at birth. The Women's Health Division (WHD) uses The Royal Australian and New Zealand College of Obstetrics and Gynaecology (RANZCOG) clinical indicator 6.1 to monitor low Apgar scores. This indicates the number of babies with Apgar scores of four or less at 5 minutes post birth, over the total number of babies born expressed as a percentage.

There were 4528 babies born at Christchurch Women's Hospital (CWH) during the year 2003. The total number of babies recorded as having Apgar scores of four or less at 5 minutes was 27. The rate for 2003 was 0.6 percent. This compares with a rate of 0.7 percent for 2002 for CWH. RANZCOG has set a provisional threshold of 1.0 – 1.7 percent with a mean of 1.3 percent. Reassuringly, the CWH rates fall well below the threshold. Monthly breakdown of the low Apgar score figures was not done, as the numbers were small.

Last year's report included all the babies with gestation over 20 weeks except Intra-Uterine Deaths (IUD's). The RANZCOG gives no guidelines on the cut-off gestation to be included in the definition for this clinical indicator. However they state that IUD's and stillbirths should be excluded. To give a meaningful result, it would seem sensible to exclude pre-viable fetuses in which there was no possibility of survival, as in these babies Apgar scores are irrelevant. Therefore, a more appropriate indicator of low Apgar scores may be to exclude gestations less than 24 completed weeks.

In 2003 there were 20 babies of 24 or more weeks gestation with low Apgar scores. There were 4416 babies born of gestation-24 weeks or more. This gives a low Apgar score rate of 20/4416 = 0.5%

A more detailed analysis for babies of 24-weeks gestation and over was performed. An analysis of the causes of low Apgar scores found that preterm premature rupture of membranes with or without chorioamnionitis was the most common association.

Mode of birth analysis found there were 11 caesarean sections (CS); six of them crash caesarean sections under general anaesthesia, two were classical sections. There was one set of twins. There were seven breech deliveries in total, four of which were vaginal, and three were caesarean sections.

An analysis of antepartum and intrapartum Cardio-Toco Graph (CTG) monitoring occurred in all cases. There were 10 non-reassuring or abnormal CTGs. Of these, five were in labour and one of them had a scalp pH performed, which was abnormal. Three cases were noted to have meconium stained liquor.

Umbilical artery cord blood pH (Cord pH) analysis is routinely done following CS and assisted vaginal births (AVB) at CWH. Cord pH's were done in 14 out of 20 cases giving a rate of 70 percent. Interestingly, only two cord pHs were abnormal <7.2. Cord pHs were not performed in six cases. Mode of birth for these cases were as follows:

- two were 24-week breech births
- three spontaneous vaginal births
- one ventouse birth at term

There were three neonatal deaths, which gives a mortality rate of 3/20 = 15%. The case notes of these three babies were reviewed. Two of these cases were 24-week vaginal breech births, and one was a 28-week gestation baby, with gastroschisis born by classical CS. In all three cases, there was a history of preterm premature rupture of membranes, and post-mortem showed evidence of chorioamnionitis.

Table 1:
Frequency of Low 5-Minute Apgar Score in Babies of 24 weeks or More Gestation

Apgar Score	No. of Babies
0	1
1	4
2	4
3	3
4	8

Table 2:
Numbers of Babies with Low Apgar Score at 5 Minutes by Gestational Age

Gestation	No. of Babies
24-28	5
29-32	1
33-36	4
37-40	8
>40	2

Table 3: Conditions Associated with Low 5-Minute Apgar Score

Condition	No. of Babies
Pre-labour rupture of memranes+/- chorioamnionitis	9
Congenital anomalies (gastroschisis)	2
Shoulder dystocia	2
Cord round the neck	2
Placental abruption	2
Vaginal breech	2
Methadone in pregnancy/intra-uterine growth retardation	1
Hypertensive disorders of pregnancy	1
Unknown	1

NB: Some babies are included in more than one category as they had more than one condition.

Gynaecology Service

Gynaecology Service

Mike Laney
Clinical Director
Gynaecology Services

Catherine Dwan
Service Manager
Gynaecology Service

Gynaecology Service **Overview**

This report signifies the end of another busy year for the Gynaecological Department, at Christchurch Women's Hospital (CWH). I believe that the services that we provide are of high quality, and from the point of view of the standard of services provided, I think this has been another successful year. I applaud and appreciate the hard work and dedication shown by all of our staff. We continue to struggle with cost containment, but in spite of being under-budgeted, I feel that the service generally is in good heart and functioning well.

Over the next 12 months, all of our departments at CWH will begin in earnest to plan for an orderly transfer from our current site to the new site at Christchurch Hospital. We look forward to this with eager anticipation, but also some trepidation, given the complexity of the task to be undertaken.

There will be elements of sadness too, particularly for those staff members who have worked for a long time at the hospital on the current site. Over many years CWH has developed a history of excellence in care and the credit for this must go to all of our staff including medical, nursing, administrative and other ancillary staff. The CWH has a special culture and those who work here will know what I mean. I hope that we are able to retain and perhaps even enhance this culture when we move to the new site.

Thank you once again to all of our staff as we look forward to another full and busy year.

Gynaecology Service **Report**

The Gynaecology Service continues to strive to provide a high quality service to the women of Canterbury and to women referred from other areas within the South Island. Women's Health Division (WHD) achieved Certification and Accreditation this year. Once again, this serves as a validation of the high standard set and maintained by all staff.

This year saw the development of a Gynaecology Multidisciplinary Research Group. This group has secured support from the Cancer Society, University of Otago School of Medicine, Thomas Tippet Trust Fund (New Zealand Nurses Organisation) and WHD to enable a research project to proceed. The research topic is "A Survey of Informational and Emotional Needs of Women Undergoing Surgery for Gynaecological Cancers in the South Island of New Zealand". It is a 2-year prospective study. The aim of the study is to find out the informational and emotional needs of women during this difficult time in their life.

Over the past 12 months we have welcomed the opportunity to have two nurses from the Graduate Nursing Programme working within the Gynaecology Service. One registered nurse has been placed in Operating Theatre and one in the Gynaecology Unit.

During 2003 a senior gynaecology staff nurse was appointed to set up the elective waiting list project to conform to the Ministry of Health (MOH) guidelines. Her role as waiting list project nurse, works closely with the GP liaison and the waiting list secretary, to review and monitor women on the surgical waiting list, who cannot be given certainty regarding the time frame for their surgery.

The move to the Christchurch Hospital site creates great challenges and anticipation for all staff. The design of the new hospital will necessitate looking at different ways of working to enhance our delivery of care to women. Excitement is increasing as the new hospital gets closer to completion and staff are very eager to move to the new facility. However, their eagerness is also tinged with a sense of sadness at leaving an old hospital, which has served us well for many years and given us many happy memories.

I would like to thank all staff for their continued commitment to WHD and the wonderful care they give to the women who use our service.

Sheryl Heeren
Gynaecology Nurse Educator

Gynaecology **Education**

The Gynaecology Service has seen some exciting changes during 2003. These include:

- New graduate position
- Introduction of mifepristone
- Mothers and babies audit
- Brachytherapy via the selectron

New Graduate Position

The Gynaecology Service has been able to provide a position for a new graduate nurse in both the September 2003 and January 2004 intake. The graduate nurse is part of the Canterbury District Health Board (CDHB) Graduate Nurse Programme.

The aim of the Graduate Nurse Programme (GNP) is to provide a safe and supportive environment in which the graduate nurse is effectively socialised into the role of the registered nurse with confidence. Graduate nurses are involved in a variety of learning experiences, which enhance the application of theory to practice and further develop the graduate nurses' skills of critical thinking, clinical judgement, and reflection. During this time, the graduate nurse is supported by their preceptor.

The GNP is run over a 52-week period. Over the course of this year, the graduate nurse will have four clinical appraisals, identifying future goals that can be achieved over this period. Their professional competency development workbook assists them to set future goals. The graduate nurse is also required to present two case presentations and reflect on their practice. The nurse is responsible for the development of his or her own personal portfolio during this year.

The graduate nurse is offered guided reflection sessions. These sessions provide a supportive environment for the graduate nurses to meet, share and reflect on their experiences in clinical practice.

Mifepristone (Mifegyne – RU486)

The Gynaecology Service at Christchurch Women's Hospital (CWH) is the main provider in the South Island for mid-trimester termination of pregnancy, induction of labour for fetal abnormality and induction of labour for fetal demise. During 2003, 90 women were admitted to the Gynaecology Unit for inductions:

- 65 for termination of pregnancy
- 17 for induction of labour for fetal abnormality
- 8 for fetal demise

Table 1 : Mifegyne & Misoprostol Inductions

	Mifegyne Inductions	**Misoprostol Inductions**
Days in Hospital	2 hours for Mifegyne administration Return 36 – 48 hrs	Commenced on Admission
Induction time	Av. 9hrs 53min	Av. 20hrs 10min
Dosage	Mifegyne 200 mg – single dose Misoprostol 800mcg initial dose 400mcg 3 hrly – max.5 doses	Misoprostol 400mcg initial dose 200mcg 2hrs following initial dose 200mcg 4 hrly – max 9 doses
Route of Administration	Mifegyne – Oral Misoprostol – Initial PV Following doses - Oral	Misoprostol Initial dose – Oral Following doses - PV
Side Effects	Mifegyne – Nausea and Vomiting Diarrhoea	Misoprostol – Vaginal Bleeding Uterine pain and cramps Nausea and vomiting Diarrhoea

Mifegyne (Mifepristone) is a synthetic steroid drug that has recently been imported into New Zealand by ISTAR, a non-profit consortium of health care providers. Mifegyne has been used as an abortifacient overseas for many years and is commonly known by the French as RU-486. Its administration commenced at CWH in September, 2003. Mifegyne administration is used in combination with the prostaglandin analogue misoprostol, which stimulates uterine contractions.

With the introduction of mifegyne, this allows women a choice of two methods of induction.

An audit is currently being undertaken within the Gynaecology Service to ascertain:

- The length of day stay for women who have mifegyne inductions compared to the previous method of misoprostol-only inductions
- To identify complications when using mifegyne
- To ascertain the woman's experience when undergoing an induction when using mifegyne

Every woman admitted to the Gynaecology Unit, for either type of induction, is included in the audit so a comparison of length of stay can be calculated. It is anticipated that the results will indicate that the inductions were achieved within a shorter time frame with fewer complications for each woman.

Table 2: Mothers & Babies Admitted to Gynaecology Unit

	2000	2003
No. of mothers admitted	143	162
No. of babies admitted	107	126
Average day stay	1.9	2.1

Table 3: Mothers & Babies - Reason for Admission to the Gynaecology Unit

	2000	2003
Mastitis or breast abscess	27	47
Endometritis or retained products	64	39
Wound infections, including perineal infections	4	26
Bleeding	9	15
Abdominal pain	6	11
Infection – site not stated	11	9
Other – including acute/elective surgery	22	15
Total	43	162

Mothers and Babies

In the Gynaecology Unit, it has been perceived that there has been an increase in the number of mothers and babies admitted. An audit is currently underway to review the number and reasons for admission of mothers and babies.

During 2003, the Gynaecology Unit and Day Surgery Unit admitted 162 women who required admission during the post partum period. Not all women chose to have their baby board with them during their stay, with a total of 126 babies being admitted. In this number, there were two sets of twins and five babies who were still in-patients in the Neonatal Service. Two of these were admitted to the Gynaecology Unit at a later date. An average day stay for these mothers and babies was 2.1 days.

The impact of women being admitted into the hospital environment is unsettling for the women, their babies and their families. When mothers are unwell, this often means their baby is unsettled and requires considerable attention.

The audit is hoped to identify any feature that may assist staff and women to improve post natal care by asking women:

- Did they attend antenatal education?
- Written/verbal education given prior to discharge?
- What follow up care were they given on discharge to the community?
- What treatment did the woman receive prior to admission?

Brachytherapy

(Refer to Brachytherapy and Selectron Report)

Summary

The Gynaecology Unit is actively working to improve patient outcomes. With the current audit processes in progress, it is believed that at the completion of these, we will be able to review our current practice and improve patient cares.

Jane Allen
Charge Nurse

Outpatients

The Outpatients Department (OPD) of Christchurch Women's Hospital (CWH) provides outpatient gynaecology services for the women of Canterbury from Kaikoura to the Rakaia. The majority of referrals for general gynaecology clinics are received from general practitioners (GPs). Reasons for referral include menorrhagia, pelvic masses, post menopausal bleeding, chronic pelvic pain, intermenstrual bleeding, prolapse, urinary incontinence and sterilisation. A combined gynaecology/oncology clinic is held weekly. This service includes women from the whole of the South Island. Two gynaecological oncologists and two oncologists are involved in the provision of this service. Nine weekly pre-admission clinics operate for surgical procedures. Women are interviewed by nursing staff, at which time a multidisciplinary care pathway is commenced, (depending on the type of operation). Assessment of the women is completed by junior medical staff with supervision provided by a consultant who obtains the operation consent. Other clinics held in the department are:

Reproduction and general endocrinology	Weekly
Neonatal clinic	Weekly
Visiting geneticist clinics	Twice monthly
Infertility clinic	Weekly

The departmental area is also utilised by the Christchurch Women's Community Midwifery (CWCM) service, Antenatal Outpatients and the Team Care Midwives (TCM).

Table 1: Outpatient Services

	2002		2003	
	(n)	%	(n)	%
Genetic counselling	23	2.4	30	0.3
Gynaecology Consultant	5886	61.1	5725	61
Reproductive Medicine	117	1.2	79	0.8
Infertility	510	5.3	445	4.8
Endocrine (Menopausal/PMT)	475	4.9	510	5.4
Combined Gynaecology Oncology	536	5.7	491	5.2
Hysteroscopy LA Clinic Appointments	40	0.4	175	1.9
Preadmit	1390	14.4	1480	15.8
Reassessment	663	6.9	455	4.8
Total	9640		9390	

Helen McLeod
Manager, Cervical Screening

Cervical Screening

In 2003 the National Cervical Screening Programme (NCSP) Canterbury Region, processed just under 60,000 histology and cytology results. As at the 31st of December 2003 Canterbury had:

- An enrolment rate of 98.4 percent (enrolment rate shows women aged 20-69 who are recorded on the register and are not overseas or deceased)
- A participation rate of 89.5 percent (participation rate is enrolled women who have a smear recorded on the register during the previous 6 years)
- A coverage rate of 73.4 percent (coverage rate shows enrolled women who have a smear recorded on the register during the previous 3 years). *

Health promotion strategies continue to target our priority groups, which are women:

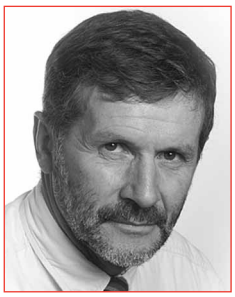
- Who have never had a smear
- Who have not had a smear in the last 5 years
- Who are aged over 40
- Maori women
- Pacific women

Strategies included free community clinics. These were held at Rangiora Hospital, on Marae, at sports events, and in conjunction with health days. We also had clinics that coincided with the Breast Screening Mobile Screening Unit as the target age range of the Breast Screening Programme is 50-64, an age group that has low screening rates in the NCSP.

Another project involved having a health day at one of the inner city Marae. Each person needed to have at least one health check to be eligible for a free hangi. The other groups involved were Diabetes Life, Te Awa O Te Ora, Te Puawhaitanga O Temaiti, Whanau I Te Ora, Cardio-Respiratory Outreach, the Deaf Association, and Hauora Matauraka – Smokefree. Approximately 140 people had a health check during the day.

The joint project with Cervical Screening, Breastscreen South, and the Pegasus Group has been very successful so far. This project involved our education team working with a number of practices to personally invite women in for a free smear. In a lot of cases this is done during a home visit and initial results have been very encouraging. With the first two practices, 64 percent of the Maori women contacted attended for a cervical smear. All of the women contacted as part of the project had already been contacted by the practice on a number of occasions and had declined or ignored the recall.

* Figures taken from the National Cervical Screening Register – Monthly report for December 2003.



Dave Peddie
Consultant Obstetrician and Gynaecologist

Colposcopy Report

In the 12 months, February, 2003 to end January, 2004, a total of 2669 women attended the Christchurch Women's Hospital (CWH) Colposcopy Service. An additional 99 women were seen at the Sexual Health colposcopy clinic and 113 attended the colposcopy / dermatogy clinic. We do not have a record of the number who have attended gynaecology outpatients for colposcopy related appointments.

Approximately one in five colposcopy patients do not attend in spite of all efforts to have women confirm their appointment.

The 'did not attend's' (DNA) have a significant impact on the waiting times for appointments. New referrals are seen within the National Cervical Screening Programme (NCSP) Guidelines:

- less than 1 month for high grade abnormalities
- less than 6 months for low grade

For follow-up appointments there are currently 263 women overdue for colposcopy, the majority of these, 183, less than 2 months overdue.

There are 10 colposcopists at CWH, eight have worked for the 12 months. Of these eight, the number of new consultations ranged between 72 and 202. The NCSP recommends that a colposcopist see more than 100 new patients per year to maintain experience and to enable meaningful audit of results. There are four of our colposcopists who in the 12 months saw between 72 and 90 new referrals each. All four have practices outside CWH so have opportunities to boost their numbers.

More regular attendances at specific clinics by registrars, has improved the quality of colposcopy experience for those registrars.

The Colposcopy Service at CWH and at Sexual Health, are fortunate to have a dedicated team of nursing and secretarial staff, essential for the successful and safe running of the clinics. Three of our nursing staff have been able to attend an annual study day at National Women's Hospital specifically for colposcopy nurses.

Continuing Medical Education (CME) and Standards

There is a monthly meeting with pathologist and colposcopists to review cases. The meeting is well attended by the pathologists, but unfortunately less well by clinicians. Last year the biennial scientific meeting of the Australian Society for Colposcopy & Cervical Pathology was held in Rotorua, and was an opportunity for a number of our clinicians to update in colposcopy and cervical screening.

We are currently considering purchase of a new colposcopy patient database for recording information, clinical audit, and providing reports requested by the NCSP. The current system is well past its "use by date" and any reports are labour-intensive and expensive to produce.

Research

Senior Lecturer Dr Peter Sykes and Research Nurse Dianne Harker have initiated a number of projects. These include:

- The role of human papilloma virus (HPV) testing in follow-up of women over 40 years
- The outcome of colposcopy for women under 20 years
- A comparison between liquid and conventional cytology

The colposcopy clinic also has a role in a current multinational research project in the efficiency of HPV vaccination.

Di Poad
Consultant Obstetrician and Gynaecologist

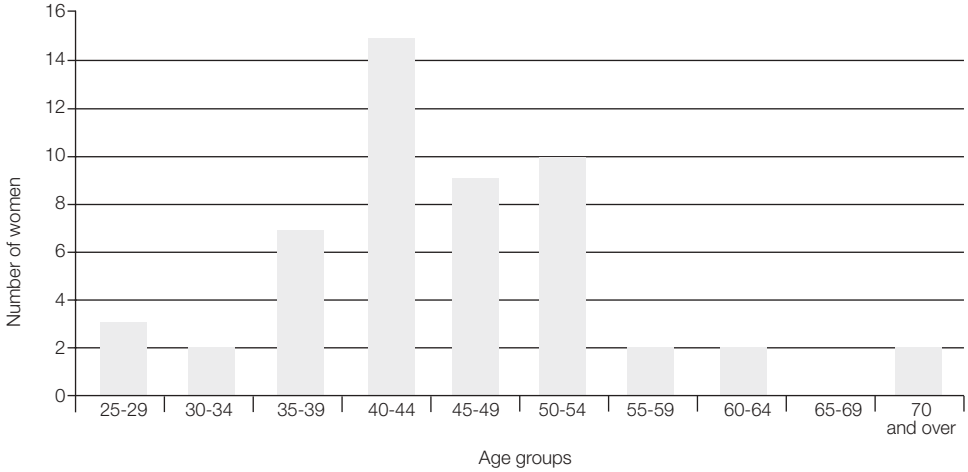
Outpatient Hysteroscopy Service

This service was developed in 2002 to streamline the assessment of women with problematic vaginal bleeding. Previously, the wait for an outpatient appointment, and then the wait for an inpatient operating theatre procedure may span up to several years. The advantage of a one-stop clinic is the reduced waiting time and the reassurance of what is often a normal examination. In addition, it will avoid the inconvenience of a day-admission and general anaesthetic for a 5-minute procedure, as well as the lost theatre operating time, secondary to the required anaesthetic turn around time.

The clinic has been accommodated in the previous fertility clinic site, with minimal modification required. Presently, five women are seen per clinic and at least half of them are discharged back to their primary health care provider.

From the inception of this clinic in September, 2002 until December, 2003 a total of 199 patients have been seen. The following data represents that which has been recorded and entered into the database, and this data is therefore not representative of the entire outpatient hysteroscopy cohort. The figures quoted represent those for the clinics held between January and October of 2003, where a total of 52 patients were seen.

Figure 1: Age range of women attending outpatient hysteroscopy clinic from January 2003 until October, 2003



As would be expected, the majority of women seen are between 40 and 55 years of age. A small number of women have been seen with postmenopausal bleeding at the upper extreme of the age range. Women at the lower age range are much less likely to have significant intrauterine pathology as suggested by the National Guideline recommendations for investigation of heavy menstrual bleeding (HMB), and therefore we would expect to perform very few procedures in this age range.

Indications for Referral

Figure 2: Irregular Bleeding

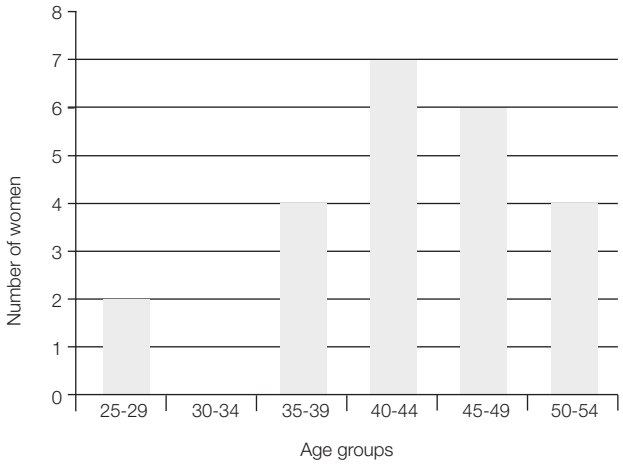
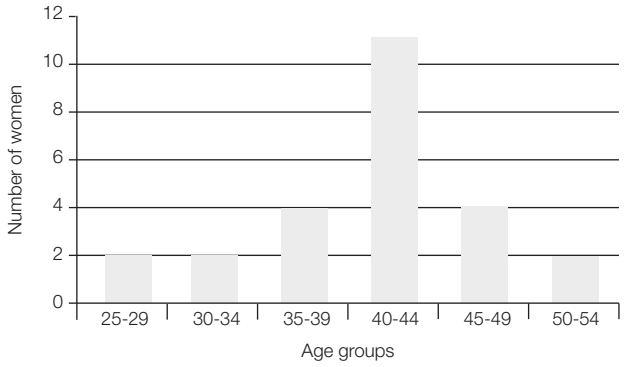


Figure 3: Menorraghia



Referrals are mostly for heavy or irregular vaginal bleeding. The age group represented most frequently is from 40 to 44 years (see Figure 3). Post-menopausal bleeding may occur at any age, but is more commonly seen in the early post-menopausal phase, between 50 and 59 years (see Figure 4).

Figure 4: Post-Menopausal Bleeding

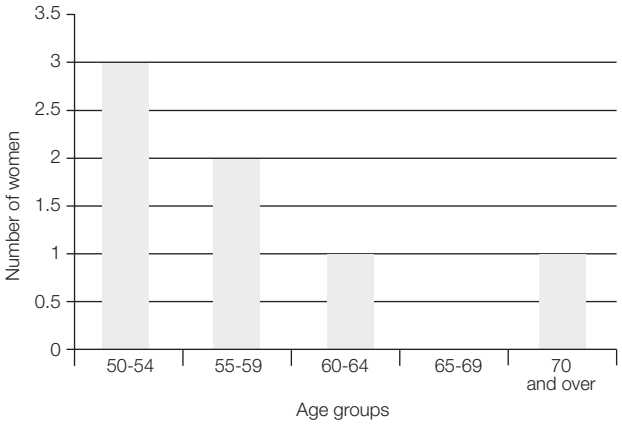
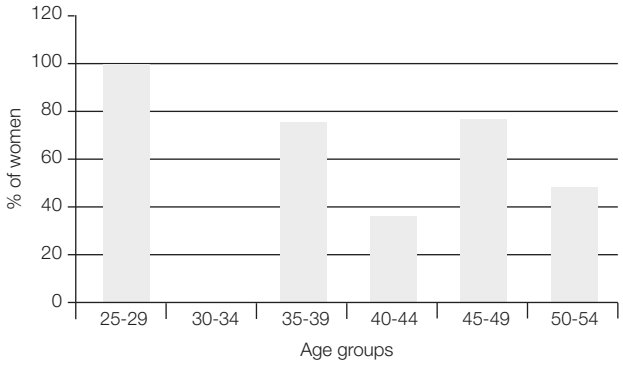


Figure 5: Percentage of Women with Menorrhagia and Normal Endometrium



It can be seen that the majority of women with purely menorrhagia have a normal endometrium, and hence, adherence to the National Treatment Guidelines would obviate the need for further investigation of many of these women, if they are without significant risk factors for malignancy (see Figure 6).

Figure 7: Percentage of Women with Post Menopausal Bleeding and Normal Endometrium

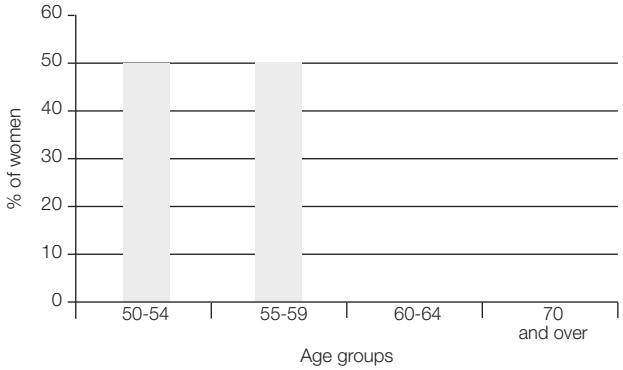


Table 1: Incidence of Polyps by Indication for Procedure

	35-39	40-44	45-49	50-54	55-59	60-64	> 70
Post-Menopausal Bleeding					1	1	1
Menorrhagia		1					
Irregular bleeding	1	1	2				

From the above examples (Figure 6 & 7), it can be seen that most women will have a normal endometrium. It is therefore, of benefit for them to have avoided a general anaesthetic to confirm the lack of pathology present.

Of the 52 procedures undertaken, three were unable to be completed due to patient discomfort, or inadequate access of the available equipment. This represents only 5.8 percent of the women referred to the clinic. Of the remainder, the majority were discharged to the care of their general practitioner (GP) as below.

Table 2: Patient Follow-Up after Hysteroscopy

	Number of Women
GP	31
Private Specialist	1
Gynaecology Outpatient Clinic	20
Total	52

There were 10 women who had a Mirena Intra Uterine Contraceptive Device (IUCD) fitted at the conclusion of their procedure as a means of controlling their menorrhagia.

A further three were added to the surgical waiting list for hysteroscopy under general anaesthetic. Two of these were to remove polyps, which could not be dealt with adequately under local anaesthetic.

Summary

The outpatient hysteroscopy service is having an impact locally, with reducing the number of unnecessary anaesthetics for women being investigated for abnormal uterine bleeding. The majority of women can be seen and effectively assessed and discharged back to their GP without further unnecessary outpatient appointments.

Initially, many women had been referred from the gynaecology outpatient clinic having been first seen by one of the hospital gynaecologists, and so doubling up on appointments. However the development of a 'Direct Referral Form' to be used by GPs, and increasing awareness of the availability of this service, has meant women are being seen earlier and without compromising limited outpatient appointments. The system as a whole is working extremely effectively. We are looking towards improving our ability to deal with simple intrauterine pathology such as polyps more effectively by acquiring some additional equipment, and this will further enable us to deal with patients without additional hospital visits.

Janene Brown
Obstetric and Gynaecology Registrar

Fertility Centre In Vitro Fertilisation (IVF)

The Fertility Centre is a joint venture between the University of Otago and the Canterbury District Health Board (CDHB), undertaking both public and private infertility investigation and treatment.

Fresh IVF Report

Table 1: Oocyte Aspiration Cycles (Egg pick-up)

	2002		2003	
	(n)	%	(n)	%
Number of cycles started	342		391	
Number of cycles with oocyte aspiration (TVOR)	307	90	338	86
Number of cycles cancelled	35	10	53	14

Table 2: Embryo Transfer Cycles

		2002		2003	
		(n)	%	(n)	%
Number of cycles with embryo transfer (ET)		279	91	324	96
Cycles with no ET	No eggs	3	1	1	0.2
Freeze - all	12	4	1	0.2	
	No embryos (usually failed fertilisation)	13	4	12	3.6
Total		307		338	

Table 3: Clinical Pregnancies

	2002		2003	
	(n)	%	(n)	%
Number of clinical pregnancies	108		135	
Clinical pregnancy rate per TVOR	108/307	35	135/338	40
Clinical pregnancy rate per ET	108/279	39	135/324	42

Table 4: Ongoing Pregnancies

	2002		2003	
	(n)	%	(n)	%
Ongoing pregnancies	85		122	
Ongoing pregnancy rate per TVOR	85/307	28	122/338	37
Ongoing pregnancy rate per ET	85/279	31	122/324	38
Ongoing pregnancy rate per clinical pregnancy	85/108	79	122/135	90

Table 5: Multiple Pregnancy Rate

	2002		2003	
	(n)	%	(n)	%
Singleton pregnancies	77	71	83	68
Twin pregnancies	30	27	38	31
Triplet pregnancies	1	1	1	1
Total	108		122	

Table 6: IVF (standard fertilisation) vs ICSI (intracytoplasmic sperm injection) Cycles

	2002			2003		
	IVF	ICSI	Mix	IVF	ICSI	Mix
Cycles	129	171	4	153	165	6
Percentage of oocytes fertilised	59	74		68	70	
Number of clinical pregnancies	46	60	2	65	69	2
Clinical pregnancy rate per cycle (%)	36	35	50	42	42	33
Number of ongoing pregnancies	42	42	1	60	61	1
Ongoing pregnancy rate per cycle (%)	33	25	25	39	37	17
Ongoing pregnancy rate per clinical pregnancy (%)	91	70	50	92	88	50

Table 7: Age of Women at TVOR in Relation to Pregnancy Rates

Age (yrs)	TVOR Cycles		Pregnancies		Pregnancy Rate (%)		Miscarriages		Miscarriages (%)	
	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003
20-25	1	6	1	3	100	50	0	0	0	0
26-34	120	143	50	68	42	48	10	7	20	10
35-37	75	91	26	36	35	40	5	2	19	6
38+	95	84	24	28	25	33	8	4	33	1
40+	50	42	28	14	16	33	3	3	38	21

Frozen Embryo Report

Table 8: Frozen Embryo Transfers

	Clomid		Natural		E2V (artificial cycle)	
	2002	2003	2002	2003	2002	2003
Number of Frozen ET Cycles	-	8	149	208	38	30
Number of Clinical Pregnancies	-	0	37	46	10	6
Clinical Pregnancy Rate per FET Cycle (%)	-	0	25	22	26	20
Number of Ongoing Pregnancies	-	0	28	37	4	6
Ongoing Pregnancy Rate per FET Cycle (%)	-	0	76	18	40	20

Implantation Rate Report

Implantation rates – ie pregnancy rate per embryo transferred rather than per embryo transfer procedure (often >1 embryo transferred).

Table 9: Implantation Rate

	All Ages		25-34 Yrs		35+ Yrs	
	2002	2003	2002	2003	2002	2003
Fresh	25	29	28	36	22	24
Frozen	16	15	14	16	17	15

Live Birth Rate Report

Live birth rate for 2003 IVF pregnancies is not available yet because many of the pregnancies are ongoing.

Table 10: Live Birth Rate (LBR)

	2001		2002	
	(n)	%	(n)	%
Number of LB from fresh IVF Cycles *	91		109	
LBR per fresh TVOR	91/270	33.7	109/307	35.5
LBR per fresh ET	91/247	36.8	109/279	39.1
Number of LB from frozen embryo cycles	17		40	
LBR per frozen ET	Not Available		40/149	26.8
Total number of LB	Not Available		149	
Total LBR per ET	Not Available		149/428	34.8

* Includes donor egg cycles

Marrilyn Benton
Charge Nurse, Acute Gynaecology Assessment

Acute Gynaecology Assessment

The Acute Gynaecology Assessment (AGA) department at Christchurch Women's Hospital (CWH) provides nursing and medical assessment for women with acute gynaecological complaints. This service is operational 24 hours a day, 7 days a week, with the majority of patients seen between 9 a.m. and 5 p.m. In most cases a woman's specialist, midwife or general practitioner will refer her to AGA, however some women do self-refer. Following assessment, approximately 35 percent of patients are admitted to Gynaecology Services and the remaining 65 percent are discharged home.

Services Provided by AGA

- Telephone advice service
- Assessment of complications arising in the first 20 weeks of pregnancy
- Assessment of women with gynaecological complaints
- Outpatient rehydration service for women with hyperemesis gravidarum
- Assessment of women with postnatal complaints that cannot be managed by their lead maternity carer
- A post discharge service for women discharged from Gynaecology Services who require wound checks or blood tests, etc, eg. BetaHCG
- Administration of medication to Fertility Centre patients outside of office hours

Review and improvement in our CareSys and manual data-collection processes has reduced the discrepancy between these figures from 12.1 percent in 2002, to less than one percent in 2003.

Overview of AGA Presentations

The total number of women seen in AGA in 2003 was 6222.

Outpatient Group

This group numbered 4,063 in total with 3,263 women staying under three hours, and 800 women staying longer than three hours.

Admission Group

This group numbered 2,159

Table 1: AGA Presentations

	2002		2003	
	(n)	%	(n)	%
Outpatient visits	2991	53.7	4063	65.3
Admissions	2584	46.3	2159	34.7
Total presentations	5575		6222	

There has been a 12 percent shift in the ratio of admissions to outpatients as fewer women required admission than during 2002.

Table 2: Average Length of Stay in AGA

	2002 (n)	2003 (n)
Minutes	160	169

Hyperemesis Gravidarum

During 2003 AGA assessed, and, where necessary, rehydrated 152 women with hyperemesis gravidarum. Of this group, 94 women (61%) were first presentations with hyperemesis. These women were admitted to the Gynaecology Unit for rehydration and allied health input including dietician, pharmacist, and social worker referrals.

There were 58 representations for rehydration. Those requiring 1-2 representations for rehydration numbered 40 (68%). The remaining 18 (31%) required 4-10 presentations for rehydration.

Rehydration following the first presentation to AGA is carried out at Rangiora Hospital for some North Canterbury women.

Bea de Langen
Charge Nurse
Gynaecology Unit

Gynaecology Unit

The Gynaecology (Gynae) Unit provides 36 beds, and is separated into two levels:

- Gynae Unit 1 (20 beds) operates 24 hours a day, 7 days a week
- Gynae Unit 2 (16 beds) operates Monday to Saturday morning

One nursing team consisting of a staff mix of 5:1 registered nurse/enrolled nurse ratio, covers both units.

Services available on the units include:

- Non-surgical services
- Acute and elective gynaecology/oncology surgery
- Brachytherapy treatment
- Acute antenatal care for women less than 22 weeks
- Acute postnatal care for mothers and babies
- Second trimester termination of pregnancy and induction of labour (fetal abnormalities)

Table 1: Gynaecology Unit - Ethnicity

	2002 %	2003 %
European	83.4	81.6
Maori	9.0	10.0
Pacific Island	2.7	2.6
Asian	3.7	4.5
Other	0.7	1.0
Not Stated	0.5	0.3

Table 2: Gynaecology Unit - Age

	2002 %	2003 %
<=20	8.3	9.0
21 - 40	58.8	59.8
41 - 60	23.5	23.3
61 - 80	8.1	7.2
80 - 90	1.2	0.7
90+	0.1	0.0

Table 3: Gynaecology Unit - Length of Stay

	2002	2003
Hours	52.2	72.67
Days	2.2	2.9

Women can be admitted to the units either through other gynaecology services, or from a private consultant. The Gynae Unit also provides second trimester termination of pregnancy and induction of labour for fetal abnormalities. In 2003, 90 women used this service for induction of labour for fetal abnormalities.

The Gynae Unit has a multidisciplinary approach to care and works closely with a team of social workers, physiotherapist, occupational therapist, pharmacist, dietitians, chaplain, and the maori health worker. The multidisciplinary team meets weekly to discuss oncology inpatients, and once a month, a physician and palliative care specialist attend this meeting.

Michelle Bailey
Obstetrics and Gynaecology Registrar

Hysterectomy and **Major Operations** Report

The scope of this report has expanded from previous years to include other major open (as opposed to laparoscopic) operations. The intention had been to include colposuspensions. However, it was often not clear from the data, whether colposuspensions were performed as open or laparoscopic procedures, and therefore, they have been excluded from the data in this report. The oncology patient information has also been excluded from this database this year, and included in the oncology team's own data. In order to be able to make comparisons to the previous 2 years data, the hysterectomy information has been separated and analysed independently.

In the two preceding reports, the data has been collected directly from the patient notes. In 2003, we started using the major operations audit form, which is filled out at the time of the patient's admission, by the team caring for each patient. The aim of the new form is to try and improve data collection in terms of accuracy (i.e. have prospectively gathered data), and also to make actually doing the audit less arduous. Accuracy, in particular, has been improved with the new form, when assessing length of time of each operation, and complications, both of which have historically been difficult to find by reviewing patient notes, retrospectively. There is still room for improvement in the audit form, which will be modifed for future use. For example, to include more tick boxes, so there is less ambiguity of information, which will make it easier for the data entry staff to transfer the information. The other possibility is to use a similar programme to the new computerised database that is going to be installed for colposcopy. The way that follow-up data is recorded is also an area that requires improvement, as at present, a lot of the follow-up data is simply not recorded.

Table 1: Types of Operation

Operation	2003	%
Adhesiolysis	1	3
Bilateral ovarian cystectomy (BOC)	1	3
Bilateral salpingo-oophorectomy (BSO)	5	15
Unilateral salpingo-oophorectomy (USO)	15	44
Ovarian cystectomy (OC)	8	23
Myomectomy	4	12
Total	34	

Types of Hysterectomy

In 2003 there were 274 hysterectomies carried out. This is 42 less than 2002 and 104 less than 2001. This data is presented in Table 2 below, along with the 2001 and 2002 data. Once again the percentage of hysterectomies that were performed laparoscopically (LAVH) has increased compared to last year. The percentage of total abdominal hysterectomies (TAH) has remained fairly stable, but the vaginal (VH) and subtotal (STH) hysterectomy rates have fallen.

Table 2: Types of Hysterectomy

	2001		2002		2003	
Surgery	(n)	%	(n)	%	(n)	%
LAVH	46	12.4	51	16.5	64	23.4
STH	7	1.9	11	3.6	3	1.1
TAH	173	46.6	121	39.1	108	39.4
VH	145	39.1	126	40.8	99	36.1
Total	371		309		274	

Ethnicity Data

The ethnicity breakdown reflects the general distribution for the Christchurch region. Refer tables 3 and 4.

Indications for Hysterectomy

There were more hysterectomies performed for menorrhagia (143) than for all other indications grouped together (131). Refer tables 6 and 7.

Operating Times

There was no significant difference in operating times for TAH and VH. LAVH took on average 22 to 23 minutes longer than either TAH or VH. Refer tables 5 and 8.

Table 3: Ethnicity of Women Undergoing Hysterectomy

	2003	
Ethnicity	**(n)**	**%**
African	3	1.1
Asian	10	3.7
European	239	87.2
Latin American/Hispanic	1	0.4
Maori	16	5.8
Other	2	0.7
Pacific Island	3	1.1
Total	274	

Table 4: Ethnicity of Women undergoing 'Other' Surgery

	2003	
Ethnicity	**(n)**	**%**
Asian	3	8.8
European	27	79.4
Maori	3	8.8
Pacific Island	1	3.0
Total	34	

Table 5: Average Operating Times for Hysterectomy

Operation	**2001**	**2002**	**2003**
LAVH	1 hr 44 mins	1 hr 47 mins	1 hr 54 mins
STH	1 hr 23 mins	1 hr 40 mins	1 hr 40 mins
TAH	1 hr 36 mins	1 hr 40 mins	1 hr 22 mins
VH	1 hr 21 mins	1 hr 17 mins	1 hr 21 mins

Table 6: Indications for Hysterectomy

Indications	**Number**
Adenofibroma	1
Breast Cancer (Ca) on tamoxifen (Pt request)	1
Cervical polyp	1
CIN/Abnormal smear	3
Dysmenorrhoea	6
Endometrial hyperplasia	3
Endometriosis	16
Family history of ovarian Ca	1
Fibroids	23
Incontinence	3
Menorrhagia/abnormal bleeding/DUB	143
Pelvic pain	1
Pelvic/ovarian mass/cyst	19
Post menopausal bleeding on tamoxifen	1
Prolapse	51
Recurrent VAIN III/CIN/III	1
Total	274

Table 7: Indications for 'Other' Surgery

Indications	**Number**
Atypical Hyperplasia	1
CIN	1
Dyspareunia	1
Endometriosis	1
Fibroids	3
Hydrosalpinx	1
Menorrhagia	2
Pelvic Pain	1
Pelvic/Ovarian Mass/Cyst	23
Total	34

Table 8: Average Operating Times for 'Other' Surgery

Operation	**2003**
Adhesiolysis	25 mins
BOC	1 hr 30 mins
BSO	1 hr 18 mins
Myomectomy	1hr 4 mins
OC	48 mins
USO	1 hr 6 mins

Additional Procedures

Table 9: Additional Procedures Completed at theTime of Hysterectomy

Additional Procedure	LAVH (n)	ST (n)	TAH (n)	VH (n)
BSO	6		22	
Colposuspension	3	1	2	2
Laparotomy	1		7	
Vaginal Repair	2			8
Oophorectomy	2		4	
Bladder Repair	1			
Excision of Endometriosis	3			
Posterior Repair		1	1	3
Breast Implant Removal			1	
Salpingectomy			1	
BOC			1	
Left salp-oopher (LSO)			1	
Anterior Repair				13
Anterior & Posterior Repair				13
Lap BSO				1
Sacrospinuos Fixations				4
Tension -free Vaginal Tape				5
Incision & Drainage of Vaginal Vault				1
Perineal Stitch				1
Total	18	2	40	51

Length of Hospital Stay

The rates for prolonged hospital stay are very similar for LAVH (11.8%) and VH (11.1%). As expected, a higher percentage of women have a prolonged stay following TAH. The rate of TAH is more than double that for either VH or LAVH.

Table 10: Hospital Stay Longer Than 4 Days Post Hysterectomy

Operation	2002 (n)	2002 Total	2002 %	2003 (n)	2003 Total	2003 %
LAVH	6	51	11.8	6	64	9.4
STH	2	11	18.2	2	3	66.7
TAH	33	121	27.3	48	108	44.4
VH	14	126	11.1	16	99	16.2

Complications of Surgery

The complications recorded in the database are only those detected prior to discharge. Therefore, they will be an underestimation of total post-operative complications, especially with respect to infection, vault haematoma, and venous thrombo embolism (VTE), which tend to present later.

Table 11: Complications Associated with Hysterectomy

Complications	2003
Urinary Tract Infection	14
Wound Infection	3
Chest Infection	2
Vault Haematoma Wound	4
Vault Haematoma Pelvic	1
Prolonged Hospital stay > 4 Days	72
Post Operative Ileus	3
Return to Theatre	2
Urinary Retention	3
Blood Loss >500ml	9

Table 12: Complications Associated with 'Other' Surgery

Complications	2003
Urinary Tract Infection	3
Wound Infection	1
Chest Infection	1
Deep Vein Thrombosis	1
Temp >38	1
Vault Haematoma Wound	1
Prolonged Hospital stay > 4 Days	11
Return to Theatre	1
Urinary Retention	2
Blood Loss >500ml	2

Readmissions

There were no recorded readmissions on our database. This is not in keeping with the previous 2 years, when 5.3-7 percent of patients were readmitted. The audit form does have a follow-up section that should be completed at the 6-week postoperative appointment at the outpatients clinic. However, because the audit form is normally filed with the inpatient notes, it is highly likely that this was not completed in the majority of cases. Also patients who had their post-op check in the private sector will also have incomplete data in this respect.

Prophylaxis for Infection and Venous Thromboembolism

Antiobiotic prophylaxis rates appear to have fallen since 2003 and 2002. It can, at times, be difficult to ascertain retrospectively, whether antibiotic prophylaxis has been given. Therefore, this drop in rate may reflect a difference in data collection, rather than a true drop in antibiotic prophylaxis rates. Deep vein thrombosis (DVT) and pulmonary embolism (PE) remain a serious complication of any major surgical procedure. Reassuringly, this data shows that DVT / PE prophylaxis use has improved over the last year.

Table 13: Antibiotic Prophylaxis for Hysterectomy

2001	2002	2003
85.6%	84.8%	69.0%

Table 14: Comparison of Compression Stockings (TED) and Low Molecular Weight Heparin (Fragmin) Use for Hysterectomy

Type	2002	2003
Fragmin only	60	28
TED's only	58	80
Fragmin &/or TED	50	105
Total Prophylaxis Use	168	213
Total Hysterectomy	309	274
Percentage of Prophylaxis Use	54.4	77.7

Previous Treatment for Menorrhagia in Women Undergoing Hysterectomy for Menorrhagia

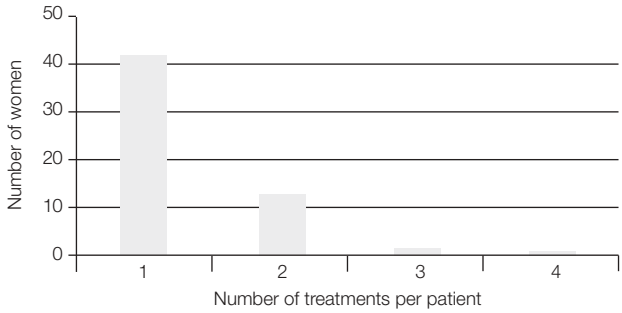
The New Zealand Guidelines on heavy menstrual bleeding recommend that alternatives to hysterectomy are offered to all women with menorrhagia, in whom there is no other underlying pathology. In 2003, 45.5 percent (65/143) of women who had a hysterectomy for menorrhagia had tried an alternative recommended treatment.

Table 15: Previous Treatment for Women Having a Hysterectomy for Menorrhagia

Treatment for Menorrhagia	Number
Combined Oral Contraceptive Pill	2
Danazol	2
Depo-Provera	5
Dimetriose	1
Endometrial ablation	2
Mirena	16
NSAIDS*	8
Progestogens	11
Tranexamic acid	18
Total	65

*Non Steroidal Anti-inflammatory Drugs

Figure 1: Prior Treatment for Women Having a Hysterectomy for Menorrhagia



Mirena Insertion vs Hysterectomy

Although the total number of mirena intra-uterine contraceptive devices inserted has remained relatively stable over the last 3 years, the number of these inserted in the outpatients clinic has virtually doubled. From this data, it does not appear that the recent drop in hysterectomy rate is explained by the increasing number of mirena insertions. However, in order to determine if the introduction of mirena has had an effect on hysterectomy rates, there would need to be a comparison of hysterectomy rates pre and post-mirena availability.

Figure 2: Mirena Insertions vs Hysterectomy Numbers

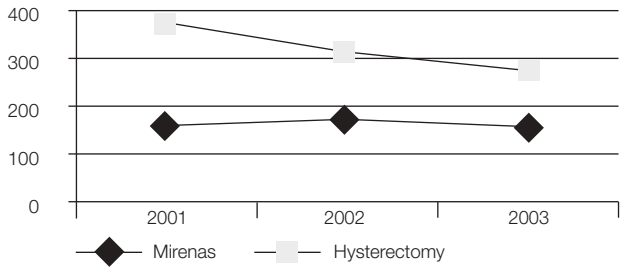


Table 16: Mirena Numbers by Insertion Location

Status	2001	2002	2003
Inpatient	131	139	93
Outpatient	31	44	71
Total	162	183	164

Hysterectomy in Women Under 35 Years of Age

At Christchurch Women's Hospital (CWH), we use the Royal Australian and New Zealand College of Obstetrics and Gynaecology (RANZCOG) clinical indicator number 8 to assess the number of women younger than 35 years of age undergoing hysterectomy for indications other than malignancy of the cervix, uterus, ovary, or fallopian tubes. The mean is 9.1 percent with a threshold 7.5-10.9 percent. The rate at CWH was 35/274 (12.8%). The indications for hysterectomy in this patient group, and a breakdown of the ages of the patients, are detailed in Table 17 and 18 and Figure 1 below.

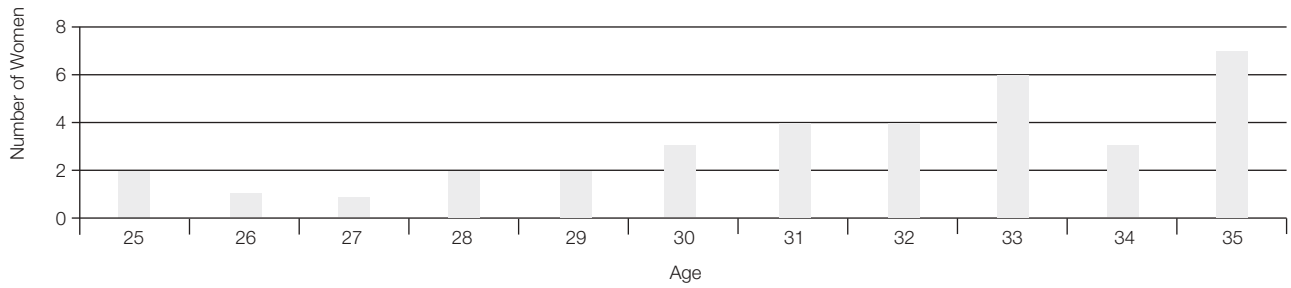
Table 17: Indications for Hysterectomy in Women <35 years

Indication for Hysterectomy	Number
CIN	1
Dysmenorrhoea	3
Endometrial Hyperplasia	1
Endometriosis	4
Fibroids	1
Menorrhagia	20
Pelvic Pain	1
Prolapse	4
Total	35

Table 18: Types of Hysterectomy in patients <35 years

Operation	2001	2002	2003
LAVH			11
TAH			9
VH			15
Total	41	46	35
% of Hysterectomies	11.1%	14.9%	12.8%

Figure 3: Age Span of Hysterectomy Patients <35 years



John R Doig
Consultant Gynaecologist

Endoscopic Surgical Unit Report

We are pleased to report that the four team members have performed well in excess of 250 laparoscopic procedures, encompassing the whole range of advanced endoscopic procedures.

In 2003, on a number of occasions, a multi-disciplinary surgical approach has been utilized for particularly complex grade-four endometriosis cases, and we wish to thank Women's Health Division (WHD) General Manager, Pauline Burt for ensuring Mr Richard Perry's service was formally acknowledged.

2003 also saw the establishment of the Fellowship in Gynaecological Endoscopic Surgery, which is a joint venture partnership between Christchurch Women's Hospital (CWH) and The Oxford Clinic Gynaecology and Obstetrics Centre.

The inaugural Fellow, Simon Jones, has proved an inspired appointment, and we have all been delighted by his enthusiasm, diligence, and rapid assimilation of surgical skills.

We are indebted to Ethicon Endosurgery for their ongoing support and encouragement for the Fellowship.

The team have contributed to two international research studies on endometriosis during 2003, and have now been approached regarding a further international study this year.

Table 1: Endoscopic Surgical Procedures

Endoscopic Surgical Procedures	2003
Hysteroscopic endometrial ablation	10
Laparoscopic appendicectomy	5
Laparoscopic adhesiolysis	44
Laparoscopic excision of lesions of pelvic cavity (presumably endometriosis)	50
Laparoscopy unspecified (?diagnostic)	39
Laparoscopic ovarian surgery	32
Laparoscopic tubal Surgery	22
Laparoscopic sterilisation	16
Laparoscopic hysterectomy	29
Staging laparotomy	4
Miscellaneous laparoscopy	4

Team members have been invited, and contributed in several educational forums in 2003, and we are currently advertising on our web site for an Advanced Laparoscopic workshop in Gynaecology in late June, 2004.

In conclusion, may I thank the team members for their support, service and encouragement, but also publicly acknowledge their financial commitment - which has seen our Fellowship successfully established and achieving international recognition.

It is important to note that diagnostic hysteroscopy, incontinence procedures, laparoscopic pelvic floor procedures, and other vaginal, abdominal and vulval operations have not been analysed for this report.

Note and Challenge for Future Reports

Compilation of this report has again proved a source of frustration for the team, due to the inaccuracies apparent in the current surgical coding system.

This was exemplified when we found that laparoscopic pelvic floor prolapse procedures and laparoscopic colposuspension procedures were not isolated from those performed by non-endoscopic techniques. Nor were we able to isolate different types of laparoscopic hysterectomy procedures.

Simon Jones
Laparoscopic Fellow

Unplanned Return to Theatre During the Same Admission

Christchurch Women's Hospital uses Royal Australia & New Zealand College of Obstetricians and Gynaecologists (RNZCOG) Clinical indicator 11.1 to measure unplanned return to theatre.

This indicator gives an index of early surgical morbidity, and may reflect less than optimal management.

Numerator: The number of patients having an unplanned return to theatre during the same admission

Denominator: The total number of patients having a gynaecological procedure

10 / 3548 = 0.3%

In 2003, there were 3548 gynaecological procedures carried out at Christchurch Women's Hospital (CWH), compared with 4779 in 2002.

Fourteen patients were identified as returning to theatre during the same admission. Data collection was via the CareSys system. Of these 14, two were excluded as they were planned two-stage oncology procedures, and two were excluded as they were non-gynaecological paediatric procedures performed in the gynae theatre.

Thus the indicator figure for 2003 was 0.3 percent, which, as in 2002, falls below the suggested mean of 0.4 percent and within the suggested threshold 0.3 to 0.6 percent

Haemorrhage was the major reason for return to theatre, as in 2002, involving 8 of the 10 cases. Four of these were repeat laparotomies requiring resuturing of the pedicles or vaginal vault after significant blood loss of 1.5 to 2 litres. This highlights the need for immaculate surgical haemostasis at the primary procedure.

Laparoscopic procedures accounted for three cases requiring return to theatre. These were all related to port site complications including haematomas and an umbilical hernia. Careful port site management and the use of open entry technique may have prevented these events.

Finally, there were again three cases of return to theatre following surgical evacuation of the uterus. Two of these (small bowel trauma and incomplete evacuation) were performed by unsupervised junior doctors acting up as registrars. Whilst evacuation procedures are relatively straightforward, this has been a recurring theme for this indicator subject, and reflects the need for greater supervision, support, and training of the more junior registrars during the afternoon acute list and out of hours procedures.

Kate Baker
Charge Nurse, Gynaecology Operating Theatre

Gynaecology **Operating Theatre** (GOT)

The Gynaecology Operating Theatre provides an acute and elective service covering gynaecology, caesarean sections and neonatal surgery. With a 1.5:1 registered/enrolled nurse ratio, the operating theatre cover is as follows:

Monday to Friday

24 hours on site for caesarean sections
0730-2100 on site cover for acute gynaecology and neonatal surgery
2100-0730 on call cover for acute gynaecology and neonatal surgery

Saturday, Sunday and Public Holidays

0730-2300 on site for caesarean sections
2300-0730 on call cover for caesarean sections
24 hours on call cover for acute gynaecology and neonatal surgery

In 2003, there were 2,412 elective and 2,168 acute procedures performed in the GOT, giving a total of 4,580 procedures performed during the year. This is a reduction of 199 from the 2002 figure.

Figure 1: GOT - Major Surgery

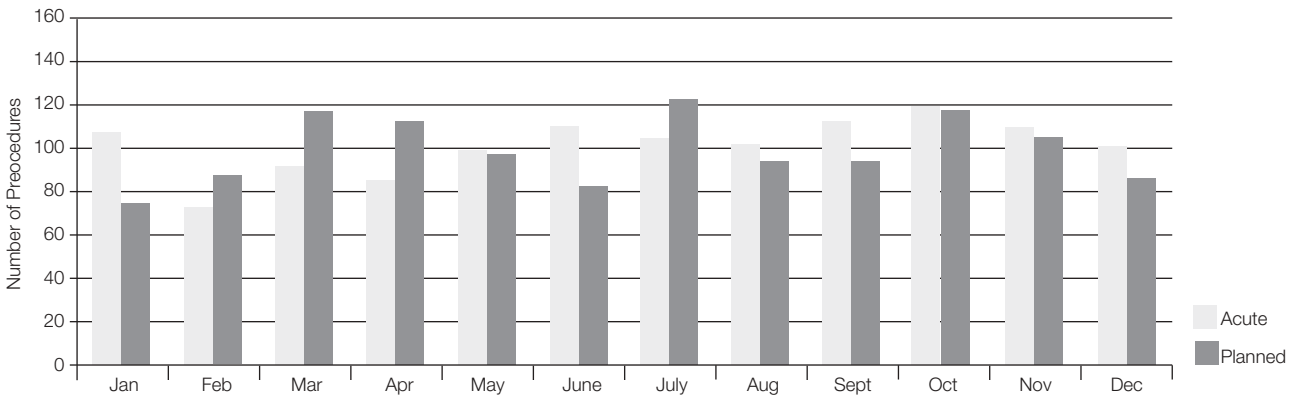
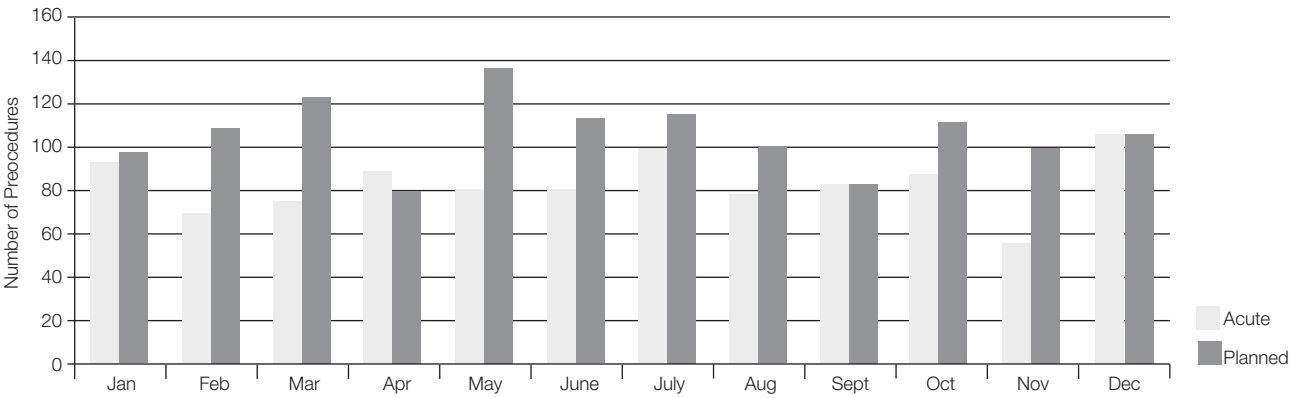


Figure 2: Minor Surgery



Ros Sanders-Hewett
Senior House Officer

Blood Transfusion for Gynaecological Surgery

Women's Health Division (WHD) uses the Royal Australian and New Zealand College of Obstetrics and Gynaecology (RANZCOG) Indicator 9.1 'Blood Transfusion for Gynaecological Surgery' as a general measure of surgical management. Blood is a finite resource and transfusion is not without risk. This study aims to compare the rate of transfusion for patients undergoing various modes of hysterectomy. For these indicators, surgery for malignancy is excluded and autologous blood transfusions are included.

Clinical Indicator 9.1

Numerator The number of patients receiving a blood transfusion during, or post abdominal or vaginal hysterectomy (excluding laparoscopic hysterectomy)

Denominator Total number of patients undergoing abdominal or vaginal hysterectomy (excluding laparoscopic hysterectomy)

Provisional threshold Not yet established

Methods

Using coding data, a list of all patients receiving blood transfusion and undergoing hysterectomy during the same admission was generated. The corresponding notes were examined to determine the indication for, and type of surgery, the timing of transfusion, and the reasons for blood being administered. Surgery for oncology was excluded.

A list of all hysterectomies was generated. In order to exclude oncology surgery, all radical procedures and procedures involving lymph node dissections were excluded. For the remaining patients, the histology for those who had surgery by either of the oncology consultants was examined, and those who had proven malignancy were excluded.

Results

Table 1: Clinical indicator 9.1

Year	Numerator	Denominator	(%)
2001	11	324	3.4
2002	19	323	5.9
2003	13	264	4.9

The Australian Council on Healthcare Standards has set a benchmark standard suggesting that the number of patients receiving a blood transfusion during/post abdominal or vaginal hysterectomy of 3.9 percent, however it is not clear whether this includes oncology cases or laparoscopic assisted vaginal hysterectomy (LAVH).

Comparison of Transfusion Rates in Different Types of Hysterectomy

The WHD wished to assess the rate of intra-operative or post-operative transfusion for the various types of hysterectomy to aid advising patients. These statistics include oncology patients and the data is from 2003. The transfusion rates for total abdominal hysterectomy (TAH) and LAVH were very similar at approximately four to five percent, but the rate following vaginal hysterectomy was markedly lower, at less than one percent.

Table 2: Comparison of Transfusion Rates Between Different Types of Hysterectomy

	Number of operations	Number of transfusions	(%)
TAH	168	8	4.8
TAH including oncology cases	234	12	5.1
Vaginal hysterectomy	114	1	0.9
LAVH	92*	4	4.4
LAVH including oncology cases	92	5	5.4

* The denominator for non oncology laparoscopic surgery was difficult to establish

Timing of Transfusion

The vast majority of transfusions are post operative. In fact there was only one intraoperative transfusion during 2003.

Table 3: Timing of Blood Transfusion

	Intra operative	Post operative
Abdominal hysterectomy	1	11
Vaginal hysterectomy	0	1
Laparocsopic assisted vaginal hysterectomy	0	5
Total	1	17

Table 4: Haemoglobin Levels Pre and Post Operative and Post Transfusion

	Minimum	Maximum	Median
Preoperative	73	139	122
Post operative	59	88	75.5
Post transfusion	90	135	106.5

Indication for Transfusion

A high proportion of those transfusions prescribed had no clear indication for the need for blood written in the notes. 11% (2) patients had “no symptoms of anaemia” or similar’ written in the notes, but then went on to receive blood. Many of the patients had more than one reason for transfusion documented.

Table 5: Indication for Transfusion

	Number	Percentage
No indication documented	5	27.8
Documented no symptoms of anaemia	2	11.1
Dizziness	7	38.9
Shortness of breath	6	33.3
Confusion	1	5.6
Overt bleeding	1	5.6

Further Therapy for Anaemia

Less than half of those who received a transfusion were given iron supplementation on discharge. Fewer of the anaemic patients were given iron (Fe) on discharge than the non anaemic.

Table 6: Further Therapy for Anaemia Post Transfusion

	No therapy on discharge	Given Fe on discharge	Percentage with no therapy
All transfusions	11	7	61.1
Post transfusion Hb <110	8	5	61.5

Table 7: Transfusion Rates for Gynaecological Admissions

Year	Total number of admissions	Total number of transfusions	Transfusions (%)
2001	5713	62	1.1
2002	5401	91	1.7
2003	5876	99	1.7

Discussion

The transfusion rate for gynaecological admissions has remained static over the past two years. It is difficult to compare the rates for transfusion and hysterectomy in previous years as the methods for data collection have been different. The data set was difficult to collect and ascertainment may have been incomplete. For example, the denominator for non-oncology laparoscopic assisted surgery was difficult to obtain. A computer database for surgical cases would be extremely helpful for re-audit.

The overall rate of transfusion for hysterectomy appears to be higher than that recommended by The Australian Council on Healthcare Standards; it is unclear why this is so.

From this data, vaginal hysterectomy has the lowest transfusion rate. Complicated surgery is unlikely to be undertaken vaginally, and those who have had abdominal surgery may have had predisposition to more complicated surgery and thus to blood loss.

The raw haemaglobin levels indicate that most of the transfusions were appropriate; however, this has to be correlated with symptoms. Unfortunately, there is a lack of clear documentation of the absolute indication for transfusion (27.8%). Certainly the number of patients with whom a discussion of the risks and benefits of transfusion was documented in the notes was very small. Documenting such discussions is essential.

Giving iron therapy on discharge is a small, but important measure. This audit should increase awareness of documenting this action.

Finally, this matter should be re-audited in a year to see if disseminating the information from this audit has been enough to change practice.

Dr Peter Sykes
Gynaecological Oncologist

Gynaecological **Oncology Service**

The key team members are designated below:

Gynaecological Oncologist:	Mike Laney, Peter Sykes
Radiation Oncology:	Scott Babbington, Chris Wynne, (Raghu Gowda)
Medical Oncology:	Bernie Fitzharris, David Gibbs
Pathology:	Lauree Hunter
Radiology:	Hamish Fraser, Hugh Roberts (Nigel Anderson)
Palliative Care:	Kate Grundy
Nursing GU:	Bea de Langen
Social Work:	Sarah Kidd
Occupational Therapy:	Sania Gugich
Phisiotherapy:	Hillary O'Dea
Dietician:	Helen Little
Chaplain:	Hilary Barlow
Maori Health Worker:	Doris Tamarapa

In 2003, we appear to have achieved a stable pattern of referral, seeing 191 new referrals to the multidisciplinary team at Christchurch Women's Hospital (CWH). There was a significant reduction in non-gynaecology tumours registered, and a modest increase in the registration of gynaecological tumours.

With the support of Drs Gary Fentiman, David Perez, John North, and Peter Fitzgerald in Dunedin we continue to provide an integrated multidisciplinary service available to all women in the South Island. We wish to thank all the referring practitioners for their support and are happy to be contacted regarding patients referred to the service.

Regular 2 weekly visits to Dunedin continue as well as 6 monthly visits to Invercargill. In 2004, we hope to commence 6 monthly visits to Nelson, Blenhiem and Timaru to provide improved contact and communication with our patients and referring specialists.

Clinical Data

Clinical data regarding new patients is tabulated below.

Table 1: New Registrations and Average Age of Oncology Patients

	Number of Women			Average Age of Women		
	2001	2002	2003	2001	2002	2003
Christchurch	185	197	191	57	57	56

Table 2: Reason for Referral to Oncology Service

	Number of Women		
	2001	2002	2003
Further treatment	1	1	0
New	168	184	183
Recurring	10	8	7
Not Stated	7	1	1
Total	186	194	191

Table 3: Primary Site of Disease for Gynaecology Oncology Patients

	Number of Women			Average Age of Women		
	2001	2002	2003	2001	2002	2003
Cervix	39	43	31	46	44	43
Endometrium	54	66	56	62	62	63
Ovary	43	51	71	50	57	56
Peritoneal	5	5	3	55	58	53
Tube	1	1	2	63	65	58
Unknown	3	1	2	76	73	61
Uterus	0	2	2	0	57	50
Vagina	7	1	2	68	80	67
Vulva	11	6	10	70	64	58
Non Gynae	22	21	12	55	61	26
Total	185	197	191	545	621	535

Table 4: Stage of Disease for Gynaecology Oncology Patients

	Cervix			Endometrium			Ovary		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
1				25	38	33	17	17	33
1A	16	14	11						
1B	20	20	13						
2	4	4	3	11	10	9	1	1	4
3	2	2	0	10	6	4	16	28	22
4			1		4	5	5	1	11
Unstaged		3	3			4			1
Total	42	43	31	46	58	56	39	47	71

Cervical Cancer

There has been a further reduction in the number of cervical cancers seen. Thanks to cervical screening, advanced cervical cancer is now a rare disease. For squamous cell cancers, there has been a small reduction in micro-invasive disease and a marked reduction in Stage IB disease. Interestingly, the main reduction in registrations in 2003 has been a reduction in non-squamous cell types, which are not expected to be reduced by cervical screening. It will be interesting to observe this trend over time. As the average age of women with cervical cancer continues to fall, and the median age of childbirth rise, carefully selected women are now offered fertility sparing surgery.

The commissioning of the new brachytherapy apparatus offers greater safety to patients and staff. It is planned Christchurch will offer this service to all South Island patients.

Outcomes for Women with Invasive Squamous Cell Carcinoma of the Cervix

Between 1999 – 2001, inclusive, 118 women with squamous cell cervical cancer have been treated in Christchurch. The results reflect an excellent prognosis for those with Stage IB disease but a very poor prognosis for older women with advanced disease. Morbidity is significant but usually mild, however, recording of morbidity may be incomplete and requires careful documentation. There were 44 women with Stage IA disease, and among these, no recurrences have occurred.

Of the remaining 74 women with higher stage disease, the mean age was 51.8 years. After a median follow up of 3.75 years, two have been lost to follow up, both well with an expected good prognosis. Twelve women have died, 11 of whom had persistent or recurrent disease. One has died of an unrelated cause, one has progressive disease, one woman has had a vaginal recurrence, which has been treated, and she is now alive and well.

By Stage the outcomes are as follows:

Stage IB

- 52 women
- Alive and well with no recurrence 46
- Lost to follow up 1
- Died of disease 3
- Died of Myocardial Infarction 1
- Vaginal recurrence – now alive and well 1

The overall disease-free survival, therefore, equals 92 percent at a median of 3.75 years.

Of those three who have died from disease, one had a small cell carcinoma and one was found to have Stage IIIB disease at the time of laparotomy. The third patient had a bulky IB2 lesion. If the first two are excluded, the disease specific survival of Stage IB non-small cell carcinoma of the cervix was 98 percent at a median of 3.75 years.

Stage IIA

There were seven women with Stage IIA disease. One was lost to follow up, one died of disease, and five were alive and well without recurrence.

Stage IIB

There were seven women with Stage IIB disease, two of whom have died of disease, and five who are alive and well.

Stage IIIA & B

There were seven women with Stage IIIA or IIIB disease. Of these women only one is alive and well, one has progressive disease 3.5 years following diagnosis, and five have died of disease. It is of note, that the mean age of these women is 70. The only woman who is alive and well was 40 at age of diagnosis; all others were over 65.

Table 5: Morphology of Gynaecology Cancers

Primary Site	Morphology 1	Morphology 2	Number of Women		
			2001	2002	2003
Cervix	Carcinoma	Adenocarcinoma	13	10	3
		Adenosquamous		2	
		Small Cell - NOS		1	
		Squamous Cell	24	26	26
	Sarcoma	Carcinosarcoma - (MMMT)		1	
		Undifferentiated			1
Endometrium	Carcinoma	Adenocarcinoma – Clear Cell	6	3	1
		Adenocarcinoma – Endometrioid	36	49	41
		Adenocarcinoma – Mucinous	1		
		Adenocarcinoma – NOS	4	1	
		Adenocarcinoma – Serous	4	3	3
		Undifferentiated		1	
	Sarcoma	Carcinosarcoma (MMMT)	1	1	3
		Endometrial Stromal – High Grade	1	2	2
		Endometrial Stromal – Low Grade	1	2	2
	Undifferentiated				1
Uterus	Sarcoma	Leiomyosarcoma		1	2
	Stromal Tumour	S.T.U.M.P			1
Ovary	Borderline Epithelial	Mucinous	6	2	11
		Serous	6	12	7
	Carcinoma	Adenocarcinoma – Clear Cell	3	3	3
		Adenocarcinoma – Endometrioid	3	2	9
		Adenocarcinoma Mucinous	2	6	1
		Adenocarcinoma – NOS	2	1	4
		Adenocarcinoma – Serous	15	21	27
		Small Cell – NOS	1		
		Squamous Cell - NOS			1
		Undifferentiated		1	
	Germ Cell Tumour	Dysgerminoma	1		
		Endodermal Sinus Tumour			1
		Immature Teratoma	2		
	Sarcoma	Leiomyosarcoma	1		
		Carcinosarcoma (MMMT)		3	4
	Stromal Tumour	Granulosa Cell – NOS	1	1	1
	Sertoli Leidig			1	

Table 6: Breakdown of Number of Women per Stage of Disease

	Alive (n)	Dead (n)	Lost to Follow Up (n)	Total (n)
Stage I A	44	0	0	44
Stage I B	47	4	1	52
Stage II A	5	1	1	7
Stage II B	5	2	0	7
Stage III A&B	2	5	0	7

Morbidities Associated with Disease Greater than Stage IA

Of the 74 women, 26 have some long term morbidities of the treatment. Two women had rectovaginal fistulas (Post RTT) requiring colostomy, two had laparotomy for small bowel obstructions. Other morbidities recorded include lymphoedema, three, dyspareunia, four, loss of libido, two, urinary incontinence, five, proctitis, two, hernia, one.

Endometrial Cancer

Endometrial cancer appears to be an increasingly common disease, but registrations did fall in 2003. It will be interesting to see how this trend continues and to compare this with cancer registrations in the South Island. Strategies for management of this disease are important. Fortunately, in 65 percent of cases, disease seems to be restricted to the uterus, but it is important that metastatic disease is detected and treated. Clinical review of our patients reveals that pre-operative selection of low risk patients is difficult. We would therefore recommend that all patients with endometrial cancer are managed in conjunction with the Gynaecological Oncology team. However 3/4 of women with Grade 1 tumours, and an endometrial thickness less than 2cm, have low risk disease and may be suitable for Total Abdominal Hysterectomy (TAH) and Bilateral Salpingo Oophorectomy (BSO) alone. Further review of MRI findings suggest that MRI offers a better indication of low risk disease, and that women with Grade 1 tumours, and less than 50 percent invasion on MRI findings, or Grade 2 tumours, and no myometrial invasion detected on MRI, are likely to have low risk disease.

The role of laparoscopic surgery in endometrial cancer continues to grow. There are numerous international publications supportive of its safety in selected patients, offering shorter hospital stays and recovery periods.

Ovarian Cancer

2003 has seen an increase in registrations of women with ovarian tumours, 52 women presenting with invasive ovarian tumours, and 19 with borderline ovarian tumours. Once again, observation of this trend will be interesting. While overall the results for women remain disappointing, median survival for women with advanced ovarian cancer is approximately three years, and significant numbers survive beyond five years. We continue to strive to offer women the best available treatments for this disease. More women from Christchurch than any other New Zealand center have taken part in GOG 182, the international trial comparing the efficacy of combinations of the most effective new chemotherapy drugs in ovarian cancer.

Research

In order to improve standards of care and knowledge of gynaecological cancer we pursue an active interest in research. Our Group are active members of Australia New Zealand Gynaecology Oncology Group (ANZGOG) and our patients are offered to participate in ANZGOG sponsored multicentre trials. Notably, at present, we are participating in GOG 182, a randomised trial comprising six (6) different modern chemotherapy regimens in the primary treatment of advanced ovarian cancer. This trial offers access to new drugs for our patients and offers them the hope of better survival and less morbidity for sufferers of ovarian cancer worldwide. In conjunction with the University of Otago, numerous local investigations are performed in union with junior staff and medical students. For 2003 publications, please see the University Department report. We also pursue laboratory-based investigations in conjunction with other New Zealand and overseas institutions. It is pleasing to see the non-medical multidisciplinary team undertaking research aimed to improve overall care for women with gynaecological cancer in the South Island.

We wish to acknowledge and thank the Cancer Society Canterbury Division for their support offered to our patients.

We wish to thank all our referring doctors and request that, where possible, we are informed regarding the follow up of patients, to enable us to make our follow up information accessible. We are also pleased to receive any feedback that may assist in the improvement of our service.

Sheryl Heeren
Gynaecology Nurse Educator

Brachytherapy and **Selectron** - Audit Report

The Audit

In October, 2002, the selectron machine was introduced, enabling gynaecology radiation practice to utilise up to date equipment. Gynaecology staff reviewed the practice of caring for women during brachytherapy treatment, utilising the new automatic after-loading system via the selectron machine, for linear vaginal applicators (LVA) and for fletcher suits in December, 2003.

The selectron audit tool was devised to enable staff to identify how to improve the provision of care for each woman. This enabled staff to identify:

- The reasons why they entered the room
- The length of time nursing cares took to complete
- Usage of the camera and telephone communications system
- The effects on each woman being nursed in isolation

A full, year-long audit of brachytherapy treatments was undertaken. One treatment during this time was the insertion of a fletcher suit apparatus, which at that stage was still being performed by the manual after-loading system, so was, therefore, not included in the audit results.

Prior to the commencement of the selectron, an audit was undertaken to ascertain the actual treatment times, so a comparison could be made between the two types of delivery systems; manual after-loading and automatic after-loading via the selectron. There was a slight change in the dose rates. From the results, it is clearly evident that treatment times have increased. This impacts on the accessibility of bed spaces while the treatments are in progress.

Table 1: Brachytherapy -Comparison in Treatment Times Between Manual Loading and Selectron Delivery Systems

Treatment Dose		Manual Loading	Selectron
Manual	Selectron		
24 Gy	20 Gy	11 hr 29 min	20 hr 06 min
40 Gy	30 Gy	31 hr 56 min	26 hr 03 min
60 Gy	60Gy	49 hr 43 min	66 hr 53 min

It was estimated prior to the start of using the selectron machine, that nursing cares would be able to be performed within ten minutes every four hours. Reasons for treatment interruptions included observations, nursing cares, giving of medications, treatment for nausea, a common side effect of treatment, and pressure area cares.

Nursing staff were very conscious of caring for these women within a short time frame. It was evident from the audit results that the longer the planned treatment times, the more time was required to perform the patient cares. The women themselves felt that isolation was not a concern for them as they had been well prepared with their pre-admission information.

The major problem in regards to nursing cares, was pressure area incidents. Three women developed blisters on their bottom's, one complaining of sore heels associated with bed rest. This necessitated extra vigilance by the nursing staff, thus increasing the number of times the selectron was stopped.

Other problems encountered during the delivery of the treatments ranged from: the wind blowing the door open causing the seal for the system to be broken, which resulted in the selectron removing the pellets from the apparatus; to movement of the inserted apparatus and loss of equipment, all of which were dealt with immediately. One alarm occurred indicating a stuck pellet, which was rectified over the telephone with an addition of four minutes, eighteen seconds being added to the woman's treatment time.

Feedback from women has been very positive as they feel that they have been well informed regarding the expectations during treatments. With the aid of the occupational therapist for the Gynaecology Service, special equipment has been purchased to assist women during their treatment. A donation of television and stereo has been a real asset for reducing the feeling of isolation. Two women identified that they would have appreciated visiting the unit prior to their admission to enable them to visualise their environment.

Changes to the fletcher suit apparatus were made in December, 2003, to be compatible with the selectron machine. Each woman undergoing this type of treatment will be reviewed in the same manner as the LVA, using the audit tool.

Table 2: Brachytherapy - Average Length of Treatment Times

Treatment Dose	No. of Treatments	Planned Treatment Time (hours)	Actual Treatment Time (hours)	Average Length of Treatment in Hours	Nursing Care Time Range) Hours
20 Gy	5	13.96 - 20.39	15.1-21.49	20.6	0.40 - 1.26
30 Gy	2	23.50 – 25.21	25.29 -26.37	26.3	1.24 – 2
60 Gy	10	41.54 – 83.40	43.48 - 88.15	66.53	1.50– 9.20

Conclusions

The introduction of the selectron treatment has been an asset for the Gynaecology Unit, and for women receiving brachytherapy treatment. Nursing staff are very conscious of the implications of caring for women in isolation and ensuring they deliver optimum care within a very short time frame. The amount of time used for nursing cares and interventions extended with the length of treatment times. Women have clearly indicated that isolation is not a major concern for them, especially with the entertainment centre available, and being well informed prior to admission, of what to expect.

The impact of longer treatment times has a flow on effect on the accessibility of bed spaces while treatments are in progress. With the construction of a purpose built facility in the new hospital, this may be of less importance. Discussions with the physicist identified the 60Gy treatments for large diameter applicators had greater treatment times and they were able to recalculate the radiation treatment times using increased numbers of sources. This decreased the treatment times by approximately 20 hours.

The length of treatment times increases the possibility of bed rest complications such as blisters and pressure areas forming. The women who developed blisters during treatment were women who had longer treatment times. The gynaecology staff have identified the need for purchasing a mattress that will be suitable for women who are required to remain in bed for such significant lengths of time.

Recommendations

The oncology staff will consider offering women the opportunity to visit the unit prior to admission. This could be arranged via the clinical charge nurse, or the gynaecology nurse educator.

The Unit purchase an appropriate mattress for the patient's bed.

Summary

The selectron machine has made a significant difference to the way women are cared for during brachytherapy radiation treatment. It has also meant a much safer environment for nursing staff to care for these women, with no radiation exposure.

With the assistance of all members of the multidisciplinary team, we can continue to improve the quality of care provided to each woman undergoing brachytherapy treatment.

Doctor Robert Aitken
Medical Director

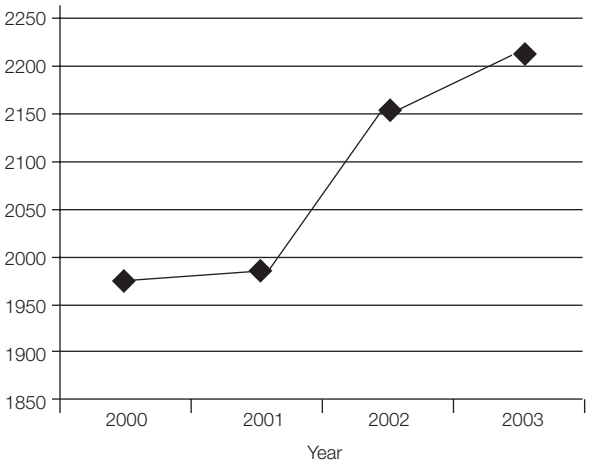
Kate Paterson
Nurse Manager

Lyndhurst Day Hospital

The Lyndhurst Day Hospital is the provider for first trimester terminations of pregnancy, for the women of Canterbury, Southland, and the West Coast of the South Island.

Despite the contraceptive education available, and reduction in the cost of oral contraception, the numbers of women seeking termination of pregnancy continue to increase each year.

Figure 1: Numbers of First Trimester Terminations



During the year of 2003, we performed an audit on the women attending Lyndhurst for termination of pregnancy. We gathered this information from the forms which we send to the Abortion Supervisory committee on a monthly basis

Our Audit looked at:

- Ethnicity
- Contraception stated (or claimed) to have been used at time of becoming pregnant
- Age of Woman
- Residency
- Numbers of previous terminations of pregnancy

It is of note, that in 2003, more than 38.5 percent of women presenting for a first trimester termination of pregnancy, are choosing to not use any form of contraception, and many will be having unprotected intercourse, despite education around this issue.

Table 5 shows that 34.3 percent of the women attending Lyndhurst Day Hospital are having a subsequent termination.

Table 1: Ethnicity of Women undergoing Termination of Pregnancy

	2003	
	(n)	%
NZ European	1424	67.1
Maori	226	10.6
Chinese	170	8.0
Pacific Island	70	3.3
Korean	47	2.2
Asian 'Other'	39	1.8
Japanese	31	1.5
European 'Other'	28	1.3
British	27	1.3
Australian	23	1.1
Indian / Pakistani	17	0.8
African	10	0.5
Other	10	0.5
Total	2121	

Table 2: Contraception Stated (or Claimed) to Have Been Used at Time of Conception

	2003	
	(n)	%
Breastfeeding	1	0.05
Breastfeeding & Condoms	2	0.1
Breastfeeding & Progesterone only contraceptive pill	1	0.05
Condoms	713	33.6
Condoms & Diaphragm	1	0.05
Condoms & Natural Family Planning (NFP)	10	0.5
Condoms & Other	1	0.05
Condoms & Withdrawal	1	0.05
Diaphragm	5	0.2
Depo Provera	11	0.5
Intra Uterine Contraceptive Device	12	0.6
Morning After Pill	36	1.7
Morning After Pill & Condoms	46	2.1
Morning After Pill & NFP	3	0.1
NFP	31	1.4
None	818	38.5
Not Stated	13	0.6
Oral Contraceptive Pill (OCP)	377	17.8
OCP & Condoms	8	0.4
OCP & Morning After Pill	2	0.1
OCP & Morning After Pill & Condoms	1	0.05
OCP & Other	4	0.2
Other	6	0.3
Spermicide	1	0.05
Tubal Ligation	1	0.05
Vasectomy	4	0.2
Withdrawal	12	0.6
Total	2121	

Table 3: Termination of Pregnancy by Age Group 2003

	(n)	%
Under 16	21	1.0
16 – 20	497	23.4
21 – 25	607	28.6
26 – 30	409	19.3
31 – 35	319	15.0
36 – 40	200	9.4
41 – 45	64	3.1
46 and Over	4	0.2
Total	2121	

Table 4: New Zealand Residency Status

	2003	
New Zealand resident	(n)	%
Yes	1881	88.7
No	240	11.3
Total	2121	

Table 5: Numbers of Previous Termination of Pregnancy

	2003	
	(n)	%
0	1393	65.7
1	516	24.3
2	154	7.3
3	31	1.5
4	17	.8
5	5	.2
6	1	
7	0	
8	4	.2
Total	2121	

Neonatal Service

Neonatal Service Overview

Bernard Hutchinson
Service Manager
Neonatal Service

The Neonatal Service celebrated the end of 35 years in its present location at the beginning of 2003. This usually important event in a service's history, took a backseat to relocation planning, budgets, and meeting the challenges of key events such as Accreditation, Certification, and planning for the potential threat of severe acute respiratory syndrome (SARS).

Notable staff changes included reaching a full complement of consultants which positively impacts on morale, clinical care and training. Other key appointments were in social work and neuro-developmental physiotherapy vacancies. The neonatal nurse specialist (NNS) role experienced a period of consolidation. There was also the challenge for individual practitioners and the service together, to address issues of a title change from neonatal nurse practitioner (NNP) to NNS advanced (adv) and associated implications for the role. The clinical co-ordinator group continued to see greater expectations on their role, which includes frequently being at low risk deliveries when a paediatric registrar or NNS (adv) is busy at another delivery or procedure.

An emphasis on maintaining quality initiatives continued to be important both within the service, and in partnership with other areas. Nicola Austin, representing the Neonatal Service, and Dawn Hunter, the Women's Health Division (WHD) lactation consultant, achieved recognition for a tongue-tie audit that was entered in the Quality Health New Zealand Awards. Important nursing innovations included the introduction of a Nursing Journal Club, which critiques articles written on neonatal matters. Also introduced was a monthly nursing focus board. This included highlighting topics such as nasogastric tube placement, the use of sucrose in minor painful procedures and discharge planning. Clinical practice improvements included the introduction of humidified incubators. These sophisticated units have positive implications for the babies in fluid management, temperature control, and skin integrity. A retrospective audit of topical ointment had been assessed prior to the introduction of these incubators. Another focus was pain management for simple procedures such as blood taken by heel prick. This involved the introduction of sucrose. A pre-audit was completed, and a post audit will be completed in 2004.

An external audit resulted in the introduction of sharps bins that meet current health and safety requirements. There was also a review of the use of blunt needles that were contributing to needle stick injury. The replacement of these needles with a plastic cap has resulted in a safer working environment for the nurses. In line with cost effective practice, many line items of consumables were reviewed. This resulted in changing face masks for neonatal resuscitation, blood pressure cuffs, dressing sheets, and ensuring effective placement of nasogastric tubes by sourcing nasogastric tubes with numerical increments

The Neonatal Service has maintained links with various professional national organisations. These include the nurse educator's involvement on the Neonatal Resuscitation Guidelines group, which continued to meet throughout the year and produce guidelines that will impact on neonatal resuscitation procedures. There was also nursing representation on the National Intravenous Committee, the Flight Nurses Association (secretary), Infant Respiratory Guidelines group, and the New Zealand Association of Neonatal Nurses (NZANN) (chairperson). Other links included the now established yearly meeting of the South Island Neonatal Group (SING) being held in Christchurch. This showcased the creation of our parent education resource, which has made an impact on the provision of parent information and education based on local Christchurch data and relevant outcomes. The unit continued its link through service manager meetings with representatives from the College of Midwives.

The Neonatal Service has been able to support nurses in postgraduate studies in a significant way. This included a post graduate certificate in health sciences for three nurses, and a postgraduate Diploma in Health Sciences for two nurses. The CDHB management training was completed by one clinical co-ordinator. Two nurses also completed the New Zealand Quality in Health Care course, and two nurses completed the 'Flight Nurse Training' transport course.

The redesign process for the shift to the new hospital resulted in a change of focus as the year progressed. The physical layout of the rooms was finalised, and furniture and fittings were becoming more of a focus. By the end of the year the unit staff were increasingly becoming aware of the impact that the shift will have on the staff, infants and their families, and it's influence on clinical practice and supervision.

Neonatal Clinical **Nurse Educator**

Michael McIlhone RGON
Neonatal Clinical Nurse Educator

The Neonatal Service has a strong clinical education focus. As a service, we are committed to providing a high standard of care with a strong evidence-based focus. To achieve this, we believe in providing staff with every opportunity in the clinical area to advance and refine their clinical skills.

We have a strong adult learning and teaching philosophy which follows closely with the Canterbury District Health Board's (CDHB) direction that clinical staff are exposed to this type of learning. This is reinforced by the CDHB "buying" adult teaching courses from the Christchurch College of Education (CCE), for example; Preceptor Training and Graduate Certificate in Clinical Teaching. These courses are readily available to all neonatal staff members.

An advantage of working in a closely-knit environment is that it encourages a truly multi-disciplinary approach based on effective communication, consultation, and effective dissemination of information. For this reason, the role of the neonatal clinical nurse educator (NCNE) becomes quite multi-faceted, and there is always an overlap between professional disciplines when providing clinical education. This is in keeping with our overall Service Philosophy (WHD/Ref/532).

A challenge to the way in which clinical education was provided was laid down by the introduction of 12-hour shifts for nursing staff. At present, we have a ratio of 70 percent of nurses working 12-hour shifts, and the remainder working 8-hour shifts. In the past, the overlap between morning and afternoon shifts, allowed for a constant and captive audience, for which to provide clinical education on a daily basis. Practically, this is no longer feasible. In a response to this change in practice, the NCNE initiated a video education programme. Education sessions were still conducted, usually in the mid afternoon, and with the presenter's consent, the session would be video taped for viewing by staff, who for various reasons, were unable to attend the "live" presentation. This has been extremely successful, and time spent watching educational videos is entered into the individual staff training database. At present, the service has approximately 110 videos and CD's in the video library.

The service has also funded its own clinical library, utilizing donations from trusts, raffles, education committees, and vouchers from outside presentations given by neonatal staff. This facility has an excellent collection of textbooks that are readily available to all staff. In addition, the Neonatal Nurse's Education Fund finances the subscriptions to several online and hardcopy journals that are readily available throughout the clinical area, once again emphasizing our "evidence based care" approach. In addition, the education fund provides extra financial support to nurses attending conferences, or participating in postgraduate studies. This fund was created by nurses, for nurses.

The emphasis in the past year has been to encourage all registered nurses (RN) to work towards maintaining a professional portfolio. The passing of the Health Practitioner's Competence Assurance Act and the introduction of Competency Based Practicing certificates have significant implications on the clinical practice of all RNs. For this reason we have been developing a culture of "reflecting, recording and reporting" all clinical education that has been accessed or attended.

We aim to provide education in a manner that it can best be utilized when the individual staff member feels he or she has the time to focus on this important part of their professional practice. Once again this adheres to the adult education theory.

Required competencies for neonatal nursing staff include IV competency, adult CPR, and neonatal resuscitation. Although required Women's Health Division (WHD) competencies, these present opportunities for staff to explore their own practice and update their knowledge base as required.

The Neonatal Service has a strong and focussed preceptorship and orientation programme for all new nursing staff. This approach has proven extremely successful both in our retention and satisfaction levels. Our reputation for supporting new staff utilizing a well-structured programme that has been in use for approximately 8 years, is an extremely useful tool when recruiting new staff. We have approximately 18 preceptors who have all undertaken the CDHB Preceptor Training at the CCE. They are a committed and knowledgeable group of staff who value the input they have with new staff and student placements.

The NCNE maintains strong links with both the School of Nursing and the School of Midwifery at the Christchurch Polytechnic Institute of Technology (CPIT). Lectures are regularly given to the second year midwifery students on a variety of neonatal topics. Stage six nursing students are

encouraged to spend their final elective placement within the Neonatal Service. This has proved to be such a popular placement, a ballot is required to determine who will be awarded the placement.

Another initiative of the NCNE was to introduce a staff email list that allowed the dissemination of information regarding all upcoming clinical educational opportunities and relevant clinical memos. This has proved to be extremely successful and approximately 60 to 70 percent of neonatal staff have taken up the opportunity to be part of this initiative. It is not mandatory and staff are invited to be part of this network.

The advantage of working in a small tertiary institution is that it allows for regular collaboration amongst all of the three service educators. This allows for collective thinking and planning, and effectively cuts down on duplication.

The challenge for 2004 and 2005 is to continue to expand our "evidence based approach", and ensure it is successfully integrated in the new Neonatal Service on the Christchurch Hospital campus.

Table 1 : Neonatal Service Clinical Education Hours 2003

	2003	
	(n)	%
Precepting & orientation	822	15
Study days, Workshops (paid and unpaid)	964	17
Study days – facilitated by CNE	232	4
Video education	100	2
Formal clinical education hours	461	8
Outside lectures given by CNE	35	1
Nursing student hours	748	13
Midwifery student hours	776	14
Observers and other placements	240	4
Nanny students	1264	22
Total	5642	

Neonatal **Service Reports**

Nicola Austin
Clinical Director
Neonatal Services

Neonatal Service **Clinical Report**

Data is collated for all admissions to the Neonatal Service. A subgroup of data on admissions of babies born less than 32 weeks gestation, requiring respiratory support for more than 4 hours, and for infants who require surgery, is submitted to the Australian and New Zealand Neonatal Network (ANZNN), which began in 1995. Our local data set is used to compare our statistics and outcomes with the combined data from Australia and New Zealand.

The care our babies receive and the outcomes reviewed in this report are a tribute to all members of the Neonatal Service team. We are grateful to Nina Mogridge who collates the data for the service records and the ANZNN data submitted annually.

Table 1: Admissions to the Neonatal Service

	1998	1999	2000	2001	2002	2003
Number of admissions	511	598	629	602	736	743
Number of infants	487	571	603	578	726	736
Inborn	405	480	520	504	652	660
Outborn	82	91	83	74	74	76

For 2002 and 2003, our admission figures include all infants admitted to Level 3, 2 and 1, and are constant for the first time in a number of years. From 1998-2001, the admissions were to the Level 2 and 3 only. The percentage of inborn babies born in 2003 who are admitted to the Neonatal Service was 14.7 percent of inborn babies, compared with 15.4 percent in 2002. This apparent reduction is due to more babies in the Canterbury region birthing at Christchurch Women's Hospital (CWH).

Table 2: Transfers in to the Neonatal Service by Birthing Location

	2001	2002	2003
Other Christchurch Birthing Units	19	25	26
Ashburton	7	6	5
Timaru	3	5	13
Kaikoura/Hamner	0	1	1
West Coast	7	6	7
Nelson/Blenheim	3	1	0
Dunedin/Invergargill	16	8	13
North Island units	11	11	5
Homebirths / Born before arrival	8	11	6
Total	74	74	76

Our transfer or retrieval numbers have remained very constant over the last 3 years. In 2003, there were less transfers from North Island units due to those units being full despite no increase in the number of intensive care cots in those regions. Additional transfers, particularly from Timaru, Ashburton and the West Coast, occur in-utero and are included in the inborn statistics. This may, in part, account for some of the increase in inborn numbers. The majority from Dunedin and Invercargill were for surgical procedures, as we provide general and ophthalmic surgery for infants from Canterbury south.

Transport

The transport team is involved in just over 240 retrievals, transfers, back transports and escorts to services at Christchurch Hospital for surgery and diagnostic tests in radiology annually. The requirements of the team for staff and equipment are significant, and are not met by current funding.

In 2003, the increase in ambulance transports appears to be due to transfers to Christchurch Public Hospital (CPH), which will be avoided once we move to the CPH site. Movement of the babies around the hospital to x-ray and theatre will remain, and the need for specialised equipment and staff will continue.

Table 3: Retrievals and Transfers

	1999	2000	2001	2002	2003
Retrievals	99	73	64	70	79
Transfers out	4	2	8	6	1
Transfer to Greenlane	8	8	5	8	3
Back Transfers	45	46	47	63	47
Escort to CPH Xray	41	46	47	33	52
Escort to CPH -surgery	10	17	27	24	36
Air- Plane and helicopter	70	57	75	83	75
Ambulance	139	135	136	128	169

Table 3 outlines the retrievals and transfers for which our service has financial responsibility. Air transports are required for situations where clinical expertise is required urgently, or by location eg West Coast and Dunedin. Additional mothers were transferred with their infant in utero (11) because our unit was full.

Table 4: Admissions to the Neonatal Service by Birthweight

Birth weight	Live Births	Admitted	Admitted %	Survived	Survived % of Liveborn	Outborn Admitted	Outborn Survived	Survived % of Total Admitted
<500gr	6	1	16.6	0	0	1	1	50
500 - 749gr	15	12	80	8	53.3	3	2	66.6
750 - 999gr	11	11	100	11	100	3	3	100
1000gr - 1499gr	53	53	100	52	98.1	5	5	98.1
1500gr - 2499gr	273	238	87.1	237	99.6	15	15	99.6
>=2500gr	4170	345	8.3	343	99.9	49	48	99.2
Total	4528	660		651		76	74	

Survival for babies less than 750 grams improved in 2003. Overall, there were less infants admitted in 2003 who were less than 1000 grams, or less than 28 weeks gestation, although overall admission numbers remained the same. This resulted in a small increase in birth weighing 1000-1499 grams and of 29-31 weeks gestation.

Table 5: Admission to the Neonatal Service by Gestational Age

Gestational Age	Live Births	Admitted	Admitted %	Survived	Survived % of Liveborn	Outborn Admitted	Outborn Survived	Survived % of Total Admitted
<=28wks	49	41	83.6	37	75.5	8	7	89.7
>=29wks - <32wks	54	54	100	51	94.4	8	8	95.1
>=32wks and <=36wks	326	245	75.1	244	74.8	15	14	99.2
>=37wks	4099	320	7.8	319	7.8	45	45	99.7
Total	4528	660		651		76	74	

Table 6: Causes of Neonatal Death

Gestational Age	Birth Weight	Age Died (days)	Cause of Death	Congenital Malformation
20	355	0	Birthing Suite Termination	Cardiac anomaly
21	430	0	No Resuscitation	
21	440	0	No Resuscitation	
22	515	0	No Resuscitation	
22	470	0	No Resuscitation	
22	485	0	No Resuscitation	
23	530	16	Twin–Candida Sepsis Necrotising Enterocolitis	
23	510	1	Twin-Extreme Prematurity (EP)	
24	620	0	EP-Pulmonary interstitial emphysema	
24	590	12	Intestinal perforation	
24	715	1	EP-Respiratory failure	
24	615	0	No Resuscitation	
24	690	0	No Resuscitation	
29	380	14	Severe pulmonary hypertension	Twin to Twin transfusion
29	1240	6	Twin-Overwhelming sepsis	
30	1515	1	Respiratory failure	Tracheoesophageal fistula/ VACTERYL Syndrome
36	3750	1	Pulmonary Hypoplasia	Infantile polycystic kidney
36	2500	2	Respiratory failure	Undiagnosed diaphragmatic hernia
40	3335	1	Birth Aspyhxia / Pulmonary haemorrhage	

Causes of Death

These are the deaths in hospital before discharge home. All deaths were classified as neonatal deaths in 2003, occurring in the first 28 days after birth.

There were four infants whose death were due to, or associated with, congenital malformation. One was recorded in this data as the termination occurred after 20 weeks gestation. The other infants died, despite commencing intensive care. Parents are involved in the decisions to enter or withdraw care. This year, only one term infant died in association with a hypoxic perinatal event.

There were five infants whose deaths were due to the complications of extreme prematurity, with gestation of 23-24 weeks. Another two infants died at 29 weeks gestation, both, one of twins, due to sepsis and as a consequence of severe twin to twin transfusion.

Table 7: Numbers of Newborns Requiring Assisted Ventilation

Any ET Ventilation	1998	1999	2000	2001	2002	2003
<= 28 weeks	26	37	38	42	42	34
29-31 weeks	15	20	15	16	11	22
32-36 weeks	43	19	18	13	9	25
37+ weeks	26	21	18	15	18	19
Total	110	97	89	86	80	100

Figure 1: Assisted Ventilation

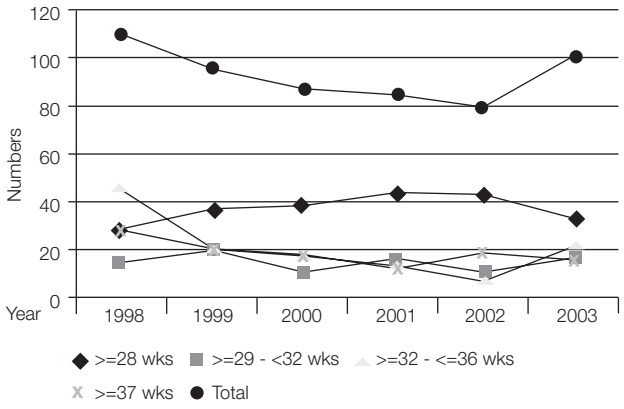


Figure 2: Continuous Positive Pressure Ventilation

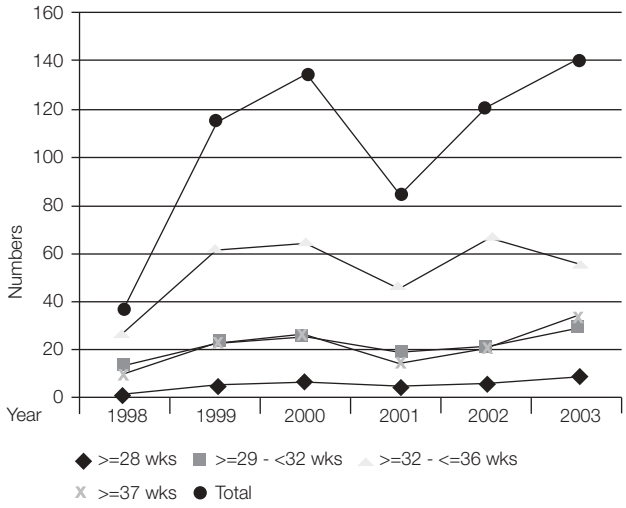


Table 8: Type of Assisted Ventilation Administered in 2003

Gestation	Admitted to Neonatal Service	Ventilation* Alone	CPAP** Alone	Ventilation and CPAP	No Ventilation
<=28 wks	48	6	12	28	2
>=29wks and <32 wks	62	8	32	14	8
>=32 and <=36 wks	261	20	58	5	178
>=37 wks	365	14	39	5	307
Total	736	48	141	52	495

*Ventilation – any form of endotracheal ventilation
** CPAP – Continuous positive pressure ventilation

Assisted Ventilation

All infants commence assisted ventilation in Level 3. Modes of endotracheal (ET) ventilation included intermittent positive pressure ventilation (IPPV), synchronized intermittent mandatory ventilation (SIMV), volume ventilation (VV), and high frequency ventilation (HFV). In 2003, there was an increase in the number of babies ventilated, and this occurred in the 29-36 week gestation groups

In 2003, we again saw an increase in babies requiring respiratory support, with 41 more babies receiving ventilation, CPAP, or both. In 2002, 30 more babies received ventilator support, compared with 2001. This lead to an increase in the total number of level 3 intensive care days for the unit in 2003.

Table 9: Continuous Positive Pressure Ventilation

CPAP only	1998	1999	2000	2001	2002	2003
<= 28 weeks	0	3	8	7	8	12
29-31	9	23	27	18	21	32
32-36	21	63	66	47	68	58
37+	5	24	29	12	22	39
Total	35	113	130	84	119	141

CPAP is delivered by nasal prongs that sit only a few millimetres into the nostril. It is less invasive, and better tolerated by the infants than with past methods.

A further increase occurred in 2003 in the number of babies managed with CPAP alone (see Table 9). The only decrease was in the 32-36 week gestation infants. Twenty-five percent of infants less than 29 weeks now receive CPAP as their only respiratory support.

Comment

There were no equipment changes in 2003, and we continue to use EME flow driver and Fisher and Paykel binasal bubble CPAP, the latter usually in the infants over 32 weeks gestation.

Surgical Cases

In 2003, 21 infants needed surgery in the neonatal period, either in the Neonatal Service, theatres at CWH, or were transferred to the Christchurch Hospital theatres. Fewer infants required surgery for persistent patent ductus arteriosus, but we had an increase in the number of cases with intestinal perforation, most often due to necrotising enterocolitis. Additional infants had inguinal hernia surgery prior to discharge

at Christchurch Hospital. A close-working relationship exists with the paediatric surgeons. The increase in cases of gastroschisis has lead to a staff nurse undertaking a New Zealand audit on this trend, which is also occurring internationally.

Table10: Surgical Cases

Surgery	2001	2002	2003
Patent Ductus Arteriosus ligation	6	6	1
Central venous line insertion	5		1
Gastroschisis /Omphalocoele	3	3	7
Oesophageal Atresia/ TOF	2	2	3
Duodenal anomlaies		2	0
Colon atresia	2		0
Ileal perforation / NEC	2	1	4
Hirshprungs	1	1	1
Meconium Ileus		1	
Imperforate Anus		4	0
Stoma	1		0
Bladder extrophy	1		0
Urologic		2	1
Gastroscopy	1		0
Diaphragmatic hernia	1	1	1
Neurosurgical		3	1
Thoracic mass			2

Table 11: Incidence of Intraventricular Haemorrhage

Gestation		1998	1999	2000	2001	2002	2003
<30/40	Total	30	36	39	40	67	49
	Grade 1	2	4	5	8	8	4
	Grade 2	3	1	2	3	12	4
	Grade 3	0	5	2	0	5	0
	Grade 4	2	0	0	0	0	1
>=30 and <32	Total	23	26	32	21	28	43
	Grade 1	4	0	9	1	2	2
	Grade 2	0	0	1	0	1	2
	Grade 3	0	0	0	1	0	0

Table 12: Retinopathy of Prematurity (ROP) Data for babies alive and remaining in the unit from 6 weeks post delivery when examinations start.

Gestation		1998	1999	2000	2001	2002	2003
<30/40	Total	30	36	39	40	67	49
	Stage 1	5	10	10	9	21	8
	Stage 2	3	6	4	1	3	3
	Stage 3	2	0	2	1	1	1
	Stage 4						
>=30 and <32	Total	23	26	32	21	28	43
	Stage 1	0	2	3	0	1	3
	Stage 2	0	0	1	0	0	1
	Stage 3	0	0	0	0	0	0

Morbidity

Intraventricular haemorrhage (IVH)

The data is for all babies < 32 weeks gestation admitted to CWH who have a scan in the first 10 days of life.

Significant ultrasound abnormality includes Grade 3 and 4 haemorrhages. High-grade abnormality remains uncommon. We monitor this outcome against the ANZNN data annually. Over 95 percent of eligible babies have an ultrasound in the first 10 days. Our rate of any IVH and Grade 3 or 4 are within the clinical indicator acceptable levels.

Infants < 31 weeks and < 1250 grams have routine retinal examination from 6 weeks after birth until maturity of the retina vascularity is reached. In 2003, no infant was treated for Stage 3 ROP. Examinations are performed on the unit by Associate Professor Richard Clemmett, Ophthalmology. Our data supports the suggestion that screening criteria could be reduced to under 30 weeks gestation.

Table 13: Sepsis

Gestation		1999	2000	2001	2002	2003
<30/40	**Total**	**36**	**39**	**40**	**67**	**49**
	Early Sepsis	4	0	1	0	2
	Late sepsis	13	12	17	11	8
	Bacterial- non CNS	7	5	6	2	2
	CNS	8	6	9	7	7
	Fungal	2	1	2	2	1
>=30 and <32	**Total**	**26**	**32**	**21**	**28**	**43**
	Early sepsis	0	1	0	0	2
	Late sepsis	0	1	3	3	4
	Bacterial	0	0	0	1	3
	CNS	0	2	3	2	3
	Fungal	0	0	0	0	0
>=32 wks	**Total infants**				**570**	**565**
	Early sepsis				2	3
	Late sepsis				4	5
	Bacterial-non CNS				2	6
	CNS				4	2
	Fungal				0	0

Sepsis

Infants with positive blood cultures excluding those thought to be due to contaminants are listed below.

Early onset sepsis (< 72 hours of age) was more common in 2003. There were a total of seven early septicaemias. As expected, *Group B Streptococcus* (two term infants, one preterm), and *Escherichia coli* (one preterm) are the two most common organisms identified. More infants are treated for suspected infections, but blood cultures are frequently negative because of appropriately given maternal antibiotics before birth. From August 2003, we have been participating in a multi-centre trial of immunoglobulin in confirmed or suspected sepsis. We recruit approximately three babies per month.

Our rate of late onset sepsis is low compared to other units. *Coagulase Negative Staphylococci* (CNS) is the predominant organism and is often found in very preterm infants, or surgical infants who have required a central venous line for fluids and total parenteral nutrition. One case of systemic fungal infection occurred early, and was associated with chorioamnionitis and extremely preterm birth.

Table 14: Chronic Lung Disease

Gestation		1998	1999	2000	2001	2002	2003
<=28 weeks	Admitted to Neonatal Service	26	40	44	51	54	48
	02 at 28 days % of admitted	80.7	70.9	59	70	50	47
	02 at 36/40 % of admitted	46	45	45	50.9	30	16
	Home on 02 %	11	19	22	25	14.8	6.3
29-31 weeks	Admitted to Neonatal Service	31	47	51	47	41	62
	02 at 28 days %	0	14	7.8	12.7	14.6	6.5
	02 at 36/40 %	0	8	7.8	8.5	9.8	6.5
	Home on 02 %	0	4	0	2	7.3	3.2

Chronic Lung Disease

The criteria used to define chronic lung disease (CLD) of prematurity is oxygen dependency, or respiratory support, eg CPAP, at 36 weeks post conceptual age.

Again, in 2003, the rate of CLD at 36 weeks gestation has decreased. This has occurred again in association with the trend for smaller infants < 28 weeks who are most at risk of CLD receiving earlier or only CPAP for ventilator support. Our levels of CLD have been average when compared to the ANZNN data previously.

Conclusion

This data from 2003 again shows a high level of admission and increased activity and acuity of the babies who are admitted to the Neonatal Service. The continued reduction in the morbidity measures of CLD and ROP is pleasing. We had two significant periods where we were stretched beyond our capacity over a 2-month period in 2003. Staff at all levels are to be commended for the extra effort that they make at these times. The extra pressure this causes can not be underestimated.

Anne Morgan
Neonatal Outreach Facilitator

Neonatal **Outreach Service**

During 2003, the Neonatal Outreach Service (NNOS) has strived to maintain a high-quality service to families who have had infants in the Neonatal Service. The staff in the NNOS continue to build networks in the community to enhance supports for these families.

For families with multiple social and disability issues, the outreach nurses provide support and guidance to link families into appropriate services to ensure their needs are met. If referral to services pre-discharge have already been made, the outreach staff will maintain contact with the families until the services engage.

There was a request from the Canterbury Plunket Society to provide education to their nurses around developmental issues of prematurity. A morning workshop was held to try and address this need. The feedback identified that more work in this area needs to be undertaken.

The NNOS has a working relationship with the Children's Outreach Service at Christchurch Public Hospital. The two services have worked together to produce a series of booklets to educate families on enteral feeding. Abbott Laboratories undertook the printing of two of the booklets.

The NNOS received funding from Child Hope Children's Charitable Trust for two electric breast pumps and six backpacks for the 'A' size oxygen cylinders. The breast pumps are used by mothers who are struggling to establish and maintain lactation while breast feeding their premature infant, or are unable to breast feed their infant due to a chronic condition. The backpacks are used to help families who have an infant on home oxygen to transport the small cylinder when they are out and about.

Outreach Statistics for 2003

While the number of admissions to NNOS is down from 2002, the number of contacts is only 30 less than in 2002. The reason for this is twofold. Firstly, there were a high number of infants with acuity of (1). While this in itself indicates that the time spent with the family was less than 30 minutes per visit, these infants often required more visits than in previous years. A reason for this is the change in the Well Child contract held by Plunket whereby the number of additional visits that are allocated to the family over and above the core contract has been reduced. The number of additional supports provided by Plunket is also dependent on deprivation area. For NNOS this has meant continuing with extra visits between the first and second Plunket visit.

The second reason for the increase in contact numbers is due to some of our long-term infants presenting with several complex issues. The outreach nurses then work alongside community agencies to help manage or resolve these issues.

The average numbers for the acuity (3) infants are also up due to more infants being borderline transfer to another service as their condition is close to resolution (eg. on home oxygen), so they have stayed with NNOS to maintain consistency of care. Infants who are tube fed because of heart defects or cleft palate/lip issues stay with NNOS until their surgery is complete or until undertaking their first surgery post discharge from the Neonatal Service. The timing of this surgery varies and may result in increased length of stay for these infants within the NNOS.

The number of infants on the Neonatal Abstinence Syndrome (NAS) home programme has remained low in 2003. These numbers fluctuate annually and are not indicative of a downward trend. See Table 3.

Table 1: Health Concerns on Discharge

	2002		2003	
	(n)	%	(n)	%
Commenced on NAS community programme	13	3.4	13	4.5
Discharged on home oxygen	7	1.9	7	2.4
Discharged on enteral feeding	8	2.1	6	2.1
Discharged for palliative care	1	0.3	-	-
Discharged with a nasopharyageal tube in place	1	0.3	1	0.3
Admitted to Service because going home on CPAP	1	0.3	-	-
Discharged with apnoeas monitor	28	7.4	22	7.7
No concerns on discharge	317	84.3	238	83.0
Total	376		287	

The gestation range of infants admitted to the service is the same as 2002, with the gestation being between 24 – 41 weeks, with a median of 33 – 35 weeks.

Neonatal Outreach Acuity

Acuity (1): We noted that apart from the initial assessment visit that could take up to 1 hour, subsequent contacts would take up to 30 minutes of a nurse's time. These families adjusted very quickly to the transition from hospital to home and had few, if any problems.

Acuity (2): Families were identified as acuity (2) when visits/ contacts took up to 40-45 minutes of the nurse's time after the initial assessment visit. Generally any problems here were related either to feeding, where it may have taken longer to establish breastfeeding, or to apnoea monitor care, or there may have been ongoing social issues to work through.

Acuity (3): Finally the third group of infants were those who were given acuity (3). These children went home with additional health issues or may have had multiple social issues to be addressed. The time spent with these families usually involved an average of 50-60 minutes of the nurse's time per contact.

Table 2: Infants on Neonatal Abstinence Programme

	2001	2002	2003
No. of Infants on Programme	34	13	13

Table 3: Babies Admitted to Service

	2001	2002	2003
No. Babies Admitted to Service	358	376	287
Contacts	-	2639	2608

Table 4: Neonatal Outreach Acuity

		2002			2003	
Acuity	(n)	%	ALOS*	(n)	%	ALOS
1	94	52.8	28.3	198	68.9	27.2
2	96	36.5	41.8	70	24.3	45.8
3	19	10.7	74	19	10.7	137

* ALOS - Average length of stay with the Outreach Service

Carole Spencer
Research Nurse

Neonatal **Research Activity**

Studies in Progress:

Neurological and Psychological Outcomes of Very Low Birth Weight (VLBW) Infants

Research Team: Lianne Woodward, Terrie Inder, Nicola Austin, Carole Spencer

Aims of this study

- To describe the neurologic, cognitive, motor, behavioural, and social development of a regional cohort of VLBW (<1500G) children assessed at age 4 years. This will involve comparing the function of VLBW infants with a sample of full term control children, matched for gender and term age, on a range of developmental measures.
- To examine, within the VLBW group, the relationship between Magnetic Resonance Imaging (MRI) and neuro-behavioral data obtained at term equivalent, and children's subsequent developmental outcome measures at 4 years.
- To examine the extent to which early risk is moderated by VLBW children's postnatal experiences in the family, and in preschool/early intervention settings.

We are now into the 5th year of follow-up on our children in this longitudinal study. Many papers have been published or are in the process of being published regarding outcomes for the child and the mother. (See bibliography)

Funding: Neurological Foundation of NZ and NZ Health Research Council.

Links with Commercial Research

Researcher: Liz Buckland

The Neonatal Service embarked on a research project, funded by the manufacturers of the neonatal brain monitor, BrainZ Instruments. Facilitated by Staff Nurse Liz Buckland, who had been involved previously with the electroencephalogram monitor, for clinical research purposes. The project was called 'The User Interface Trial', and was approved by the Christchurch and Auckland Ethics committees.

Three nurses who work in the Neonatal Service were trained to use the Brain Monitor. They were required to use the monitor in a set group of different clinical settings / conditions. This allowed the manufacturers to elucidate changes needed for the monitor's graphic interface, the patients' comfort, and ease of use for the professional user. These nurses are now able to use the skills they have gained for the benefit of the Neonatal Service.

Inflammatory Cascade and Oxidative damage in the Newborn (the ICON study)

Research Team: Brian Darlow, Fook Choe Cheah, Nina Mogridge, Christine Winterbourn

Aim of this study:

- To examine the contributions of inflammation and oxidative damage to the development of chronic lung disease in very preterm infants.

Our group has undertaken research in this area for the past 12 years, in the main utilising tracheal aspirates from ventilated infants, as well as plasma and urine samples. Fook Choe Cheah, who held the Sulaiman Daud Scholarship at Otago University, has just completed his PhD with our group entitled "Lung inflammation and oxidative injury in hyaline membrane disease: the role of NF-kappaB activation in pulmonary leukocytes".

Funding: Most recently, funding has been Lotteries Health (2002 for 2 years), and Child Health Research Foundation (2004 for 2 years). The latter will support a half-time research nurse position.

International Neonatal Immunotherapy Study (INIS)

Research Team: Brian Darlow, in conjunction with the Australian and New Zealand INIS Trial Management Group, and the National Perinatal Epidemiology Unit, Oxford, UK.

Aim of this study:

- To test the hypothesis that addition of non-specific, polyclonal intravenous immunoglobulin IgG (IVIG) to standard antibiotic therapy in babies with proven or suspected serious infection, reduces death and/or major disability at 2 years of age.

This is an international, multicentre, randomised, controlled trial that will enrol 5,000 infants worldwide. Brian Darlow is the principal investigator in New Zealand, with currently three centres enrolling (26 infants in Christchurch to date) and four about to commence.

Funding: NZ Health Research Council (2003 over 5 years)

ICE Trial

Research Team: Brian Darlow, Nicola Austin, in conjunction with Sue Jacobs and others (Royal Women's Hospital, Melbourne).

Aim of the study:

- To determine the effect of whole body cooling of newborn babies with hypoxic ischaemic encephalopathy (HIE) to 33.5C for 72 hours on survival, free from major sensorineural disability at 2 years.

The condition being studied is uncommon (we have estimated five eligible infants a year in Christchurch) and recruitment for this multi-centre study is somewhat behind schedule. In common with several other centres, we have yet to recruit our first infant.

Breastfeeding Research in the Neonatal Service

Researcher: Carol Bartle

Aims of the study:

- To perform an audit of breast milk exposure and breast feeding in all infants admitted to the Neonatal Service over a 6-month period.
- To explore the experiences of women initiating and maintaining lactation after their babies are admitted to intensive care.

An audit looking at 303 babies admitted to the Neonatal Service over 6 months and their feeding outcomes has been completed and will be released in May 2004. The second aim has been to undertake qualitative research to identify how women make sense of their experiences, and to establish what assisted them best with their mothering/breastfeeding journey. There are 13 women enrolled in the study, and all interviews and transcribing has been completed. The analysis and result writing is now taking place, and a report will be available early next year.

Carol Bartle is the Canterbury Cot Death Research Fellow, funded by the Canterbury Medical Research Foundation, and the results of this research will be submitted as part of a Masters in Health Sciences degree.

Follow-up of all Admissions to a Regional Neonatal Intensive Care Unit (NICU) compared with controls (FOOTPRINT)

Research Team: Brian Darlow, Nicola Austin, John Horwood, Beth Wynn-Williams, Nina Mogridge.

Aims of the study:

- To assess how well babies who have required admission to the Neonatal Service at Christchurch Women's Hospital (CWH) are doing at 2 years of age.
- To compare this outcome with a group of healthy babies born at term who did not require admission to Neonatal Service.
- To trial a simple parent-reporting scheme on how children are doing at 2 years of age.

Six hundred and eighty seven infants were enrolled in the study (387 Neonatal Service admissions and 306 term controls) in 2001. Follow-up at 2 years of age was completed in March, 2004. Data analysis is underway.

Funding: NZ Health Research Council (2000 over 3 years)

Follow-up of the Parents of Infants Admitted to a Regional NICU Compared with Controls (PARENTS)

Research Team: Roger Mulder, Janet Carter, Brian Darlow, Beth Wynn-Williams.

Aims of the study:

- To assess the impact on the mother and father of having an infant admitted to the Neonatal Service compared to control infants born at term and not admitted.
- To assess what additional assistance or intervention would be most helpful at this time.

This is a companion study to FOOTPRINT. Three hundred and seventeen infants admitted to the Neonatal Service and their parents, and 109 control families were recruited in the PARENTS study. Questionnaires have been completed soon after birth, at 9 months, and at 2 years. Data analysis is ongoing and a paper on early outcomes is in press.

Funding: Lotteries Health (2000 for 2 years) and University of Otago Research Grant.

Neurological Outcomes of Infants Exposed to Methadone During Pregnancy

Research Team: Lianne Woodward, Terrie Inder, Trecia Wouldes, Carl Kuschel, Carole Spencer, Jill McKie

Aim of the study.

- To examine the effect of prenatal methadone exposure on infant's health and development, neurological functioning, and cerebral development.

- To examine within the methadone group, the relationship between maternal dose, and a range of measures of infant health and neurological development.

Recruitment started November 2002, and will continue until November, 2004. Twenty-eight mothers who have taken methadone during pregnancy, and ten 'control' mother and babies have consented thus far. We estimate a total of 40 in each group. All mothers are interviewed and complete a questionnaire, and all children receive neurological examination, assessment, meconium testing, and a MRI of the brain.

Follow-up commences in June, 2004.

Funding: Lottery Grants Board.

Actual Versus Intended Pulse OXimetry Saturation in Premature Infants at Risk for Severe Retinopathy of Prematurity (the AVIOX study)

Research Team: Brian Darlow, in conjunction with Jim Hagadorn (Tufts-New England Medical Center, Boston).

Aims of the study:

- To compare the actual and intended oxygen saturation achieved in infants <28 weeks gestation over the first four weeks of life.
- To compare the performance of a standard and a new generation oximeter.

CWH was one of 14 centres in three countries contributing to this study, which is a preliminary study for a proposed major international collaboration, aimed at assessing the impact of higher or lower oxygen saturation targets in extremely premature infants. The AVIOX study data were presented at the AAP meeting in San Francisco, May, 2004.

Once again I will pay tribute to the culture and commitment to research within the Neonatal Service. Many staff members contribute significantly to the above studies. It is this team effort that makes our research successful.

Allied Services Reports

Canterbury Health **Laboratories**

Tania Foster
Phlebotomist

Staff

There is one full time laboratory technician and one full time phlebotomist employed at the Christchurch Women's Hospital (CWH) site. The main duties of the laboratory technician are to maintain and keep operational, the laboratory and point of care equipment located on site. The laboratory technician also performs inpatient blood collection rounds, and dispatches specimens to the main laboratory site at Christchurch Hospital. The phlebotomist provides a blood collection service to the Outpatient Department.

In December, Margaret Gale who held the laboratory technician position for 9 years, resigned. Margaret decided to try a West Coast lifestyle and moved to Hokitika. Margaret was replaced by Tania Foster, who previously worked as an intravenous (IV) technician at Christchurch Hospital.

Analysers

At CWH there are two blood gas analysers, the large 860 model in the Neonatal Service, which measures blood gases, electrolytes and metabolites, and the smaller 348 model in the Birthing Suite, which measures blood gases and blood pH. The Neonatal Service also has a bilirubinometer, which measures bilirubin levels in neonates.

The laboratory technician ensures that these analysers are always working properly, and trains staff members to use them correctly. Like all automated equipment, they can cause extreme frustration when they malfunction, so a considerable amount of time is spent in correcting problems, following strict maintenance schedules, and running internal and external quality control programmes, in order to confirm and maintain correct analyser function.

A Beckman Coulter full blood count analyser was added to the repertoire in October. The obstetricians require on-site blood counts when fetal blood samples are taken. Canterbury Health Laboratories worked with the Obstetric Department staff to choose the appropriate analyser and ensure compatibility with the analysers at the main site.

As medical and surgical decisions can be made on such results, it is imperative that these analysers remain accurate.

Phlebotomy

The technician also performs venipunctures (phlebotomy) on adult patients and heel pricks on babies. This entails three ward rounds daily. A phlebotomist is also located in the Outpatient Department.

Table 1: Billed Tests* Performed at CWH Laboratory

Analysis	2001	2002	2003
Blood Gases/Lactates	9122	8414	4750
Bilirubin	800	630	173
Pregnancy Tests	171	154	133

*further testing is performed by WHD staff but is not recorded through the Laboratories Billing System

Canterbury Health Laboratories Test Volumes and Dollar Values January to December

Table 2: Maternity Inpatient

	2002		2003	
Unit	Quantity	Total ($)	Quantity	Total ($)
Burwood Birthing Unit	272	2,720	344	3375
Lincoln Hospital	21	73	7	63
Rangiora Hospital	16	46	70	375
Administration	12	75	16	180
Ward 5	20,351	108,588	20,746	102,336
Ward 6	80	368	-	
Ward 7	22	198	11	482
Birthing Suite & Caesar OT	46,533	316,661	42,094	306,611
Case Management Midwives	1,778	10,802	2,485	16,244
Total	69,085	439,531	65,773	$429,666

Table 3: Maternity Outpatient

	2002		2003	
Unit	**Quantity**	**Total ($)**	**Quantity**	**Total ($)**
Burwood Birthing Unit	29	569	9	130
Lincoln Hospital	-	-	11	151
Rangiora Hospital	-	-	1	7
Administration	5	92	5	106
Ward 5	441	1,899	619	3,345
Birthing Suite & Caesar OT	6,907	76,667	6,165	85,562
Case Management Midwives	8,435	72,295	9,097	83,018
Total	15,817	151,522	15,907	$172,320

Table 4: Neonatal Inpatient

	2002		2003	
Unit	**Quantity**	**Total ($)**	**Quantity**	**Total ($)**
Intensive Care Unit	74,420	252,924	75,114	235,761
Intermediate Care	28	75	32	175
Administration	15	125	365	3,940
Total	74,463	253,124	75,511	239,876

Table 5: Neonatal Outpatients

	2002		2003	
Unit	**Quantity**	**Total ($)**	**Quantity**	**Total($)**
Intensive Care Unit	2,086	20,900	1,685	17,524
Administration	3	24	24	254
Total	2,089	20,924	1,709	17,778

Table 6: Gynaecology Inpatient

	2002		2003	
Unit	**Quantity**	**Total ($)**	**Quantity**	**Total ($)**
Assessment Unit	25,365	18,1312	26,382	199,314
Cervical Screening - Admin	3	33	2	22
Colposcopy Service	119	1,333	48	1,740
Day Surgery	220	2,154	282	2,246
Gynaecology Unit	19,145	112,670	17,967	111,516
Lyndhurst Hospital	12	188	7	130
Operating Theatre/Recovery	2,835	134,445	7,079	384,597
Outpatients	2,615	25,740	3,023	29,208
Recovery	349	1,485	351	1,504
Sterile Services	224	1,816	101	926
Total	50,887	461,176	55,242	731,203

Table 7: Gynaecology Outpatient

	2002		2003	
Unit	**Quantity**	**Total ($)**	**Quantity**	**Total ($)**
Assessment Unit	660	6,032	456	5,431
Colposcopy Service	3,741	1,985	3,936	235,210
Day Surgery	68	257	72	444
Gynaecology Unit	3,250	37,286	2,235	19,569
Lyndhurst Hospital	9	246	1	39
OT/Recovery	5,576	307,844	1,961	107,809
Outpatients	15,624	169,052	13,684	151,790
Recovery	39	503	37	464
Sterile Services	4	37	3	36
Total	28,971	523,242	22,385	520,792

Table 8: Division Inpatient

	2002		2003	
Unit	**Quantity**	**Total ($)**	**Quantity**	**Total ($)**
Administration	348	$3,892.94	21	93

Table 9: Division Outpatient

	2002		2003	
Unit	**Quantity**	**Total ($)**	**Quantity**	**Total ($**
Administration	48	$572.83	-	-
Grand Total	241,708	$2,296,096	236,529	$2,111,728

Blood Bank

On behalf of Women's Health Division (WHD), the laboratory technician oversees the function of the Blood Bank, to ensure the NZBS (New Zealand Blood Service) guidelines relating to the reception, storage and/or return of all blood and blood products are followed. This is to ensure the correct check procedures are in place, that correct stock levels of blood products and their expiry dates are maintained, and to follow up any discrepancies relating to these.

Chaplaincy Service - 2003

Dianne Smith
Chaplain WHD

The Chaplaincy Service provides spiritual & emotional care for patients, families and staff, thus contributing to the multidisciplinary approach to health care adopted by Women's Health Division (WHD).

The Inter-Church Council for Hospital Chaplaincy (ICHC) currently employs chaplains through its contract with the Ministry of Health (MOH). The Christchurch Hospitals' Chaplaincy Board oversees the work of the chaplains. The Board consists of representatives from local churches, chaplains, and hospital management.

Focus of Work

The Chaplaincy Service is available to all areas of the WHD, including Maternity, Gynaecology, and Neonatal Services.

A significant part of chaplaincy work is involvement with women and families experiencing loss of a baby either through early miscarriage, termination of pregnancy, intrauterine death, stillbirth, or neonatal death. The service provides a supportive presence in times of crisis and assists people through transitions of despair, helplessness, guilt, fear, anxiety, as well as those who are trying to find meanings and make sense of their life experiences. Chaplains enable people to tap into their spiritual resources as a source of strength and hope. These may or may not have their origins in formal faith backgrounds. Chaplains often assist women and families to acknowledge the event, express their feelings, honour, and farewell their baby through the facilitation of simple meaningful rituals, blessings, or more formal larger funerals. An increasing number of families are choosing to arrange a funeral, cremation, or burial without funeral director involvement. Chaplains often play a significant role in coordinating these arrangements. Celebration of birth through blessings, naming, baptism is also part of the chaplains' work.

Hospitalisation for a lengthy antenatal period brings a variety of stresses to both women and their families. Developing a listening relationship helps to make women's stay in hospital more manageable. In the Neonatal Service, where babies may be in hospital for 1-3 months, families often find it helpful to have a supportive non-medical presence with whom they can share their hopes, joys, and fears.

In the Gynaecology Unit many women's issues are related to the healing or loss of reproductive ability. While for some, there may be a sense of celebration and moving to a new phase in life, others experience grief associated with their loss of reproductive ability, a perceived loss of womanhood, and different future possibilities for younger women in particular. There is often a strong interest in celebrating womanhood as well as expressing grief and loss through ritual.

The chaplain is included in the weekly multi-disciplinary oncology meetings to plan and assess women's ongoing care. Many Oncology patients are from other parts of the South Island and so isolation from home, family, and friends can add to the stresses associated with cancer diagnosis and surgery. The chaplain's contribution in this area is through a neutral presence and an ability to visit regularly. Listening to stories is one of the privileges of chaplaincy work. Story telling can often bring new meanings and connections for women, thus contributing to their spiritual and emotional wellbeing. Where women have a faith background, prayerful support is also offered and valued.

Staff can be affected by a number of situations, and often talk through their issues with the chaplain. Officiating at weddings of staff and/or their families has been a pleasure, adding to the celebratory aspect of chaplaincy. At times, staff request blessing of rooms and special places, particularly after a death or when a space/room changes its original purpose. As a resource for staff, the Chaplaincy Service has multi-faith contacts and can network with other professionals and groups in both the community and hospitals.

The Chaplaincy team in the WHD is part of the Chaplaincy Service covering the five public hospitals in Christchurch. This service is available 24 hours a day, seven days a week. The WHD ecumenical position is .75FTE and is supported by two volunteer chaplaincy assistants, the chaplain to Maori, a Catholic chaplaincy assistant and a priest from St Mary's Catholic Church.

The chaplains value and enjoy working alongside nurses, midwives, social worker/counsellors, as well as other allied health and medical staff.

Table 1 : Visits to the Chaplain

	2002		2003	
	(n)	%	(n)	%
Patient visits	2052	75	2085	73
Family / Whanau visits	257	9	263	9
Staff visits	411	15	498	17
Total visits	2720		2846	

Table 2: General Data

	2002 (n)	2003 (n)
Education Sessions	11	54
Acts of Worship / Ritual	136	260
Urgent Calls to Serious Situations	411	498

Child Protection Service

Sue Miles
Child Protection Co-ordinator
Child Protection Services

The Child Protection Service (CPS), located at Christchurch Hospital, was established as a result of the implementation of the Children, Young Persons and Their Families Act, 1989.

The CPS is available to all staff working throughout the Canterbury District Health Board (CDHB) with the exception of the Mental Health Division.

The child protection co-ordinator is a member of the Papanui Child Youth and Family Care and Protection Resource Panel, and also chairs the Child Protection Network, whose members come from a number of government and community agencies.

The principle objectives of the child protection co-ordinator's role are:

- To facilitate multidisciplinary teams that review child protection cases at Christchurch Hospital and Christchurch Women's Hospital (CWH) Special Child Assessment Network (SCAN) team.
- To identify, promote, and co-ordinate policy for the CDHB for the management of child protection in accordance with the requirements of the Children, Young Persons and Their Families Act, 1989.
- To train and educate CDHB staff in child protection in a culturally appropriate manner and provide training assistance to community agencies as required.
- To promote, co-ordinate, and integrate child protection services within health and outside agencies, Department of Child Youth and Family Services (CYFS), Police, and Justice Department.
- To maintain a clear and accurate administration, system co-ordinating, and overseeing other child protection staff.

The CWH SCAN team is a multidisciplinary group, consisting of the child protection co-ordinator, paediatrician, midwife, social worker, ward manager, neonatal outreach nurse, and a Plunket representative.

Multidisciplinary teams are acknowledged internationally as the best way to respond to care and protection concerns, and the team meets weekly to discuss referred cases where such concerns exist. Recommendations are made and are actioned by assigned person/s.

Table 1 : SCAN Statistics

	1999	2000	2001	2002	2003
Meetings Held	41	47	44	38	44
Average No. of Cases Per Meeting	2.4	3.3	4.7	4.7	7.1
Meetings Cancelled/ Public Holidays	11	5	7	14	8
New Referrals	39	68	71	61	95
Cases Reviewed	97	151	135	58	216
Referred Antenatally	32		40	37	54

Ninety-five new referrals were discussed at CWH SCAN meetings in the year 2003. Referral rates decreased by ten between the years 2001 and 2002. There was also a decrease in the number of cases reviewed during this period of time. I noted in my last annual report that the data was unlikely to reflect the number of women receiving services from the Women's Health Division (WHD) within the CDHB where there were care and protection issues. In the year 2003, there were 95 referrals to SCAN. This equates to a 52 percent increase when compared to referral levels in 2002.

The increase in referrals is likely to be due to a number of factors:

- Referral levels mirror societal trends that indicate that there has been a marked increase in child protection issues being dealt with by statutory and non-statutory agencies working in the area of child protection.
- There is greater awareness of Family Violence as a “Health” issue particularly since the publication of the Ministry of Health (MOH) Family Violence Intervention Guidelines on Child and Partner Abuse 2002.
- The employment of a team of midwives (team care midwives) who deal with complex cases where there are multiple health issues.
- The improvement of processes within the CPS.
- Publications in the Childbirth Communique have all contributed to the increase in referrals.

Antenatal referrals although increasing overall have decreased when viewed as a percent of the total number of referrals. This is the third year in a row that antenatal referrals

have declined. In 2001, 66 percent of referrals were antenatal referrals. This year, 57 percent of referrals were antenatal referrals. This is a crude measure and does not tell us the reasons behind the reduction of antenatal referrals. However, it is my observation that there are still a percentage of cases where an antenatal referral would have been beneficial for the mother and her unborn child. Empirical evidence supports the view that outcomes for women, children and babies improve when targeted interventions are implemented at an early stage.

Age of Mothers Referred to SCAN Team

Table 2 indicates that women referred to SCAN for child protection issues have had children at an earlier age than the wider population of New Zealand. Research indicates that parents under the age of 20 years are more likely to abuse or neglect their children. Whilst many young mothers parent extremely well, it is important to remember that this is a population that is likely to need more support and assistance with their parenting.

In last year's report, I highlighted the child protection issues in relation to young mothers. This year I would like to highlight the growing population of older women having babies where there are child protection issues. Some of these women have previously had all their children permanently removed from their care. Forty-five percent of women who give birth and who have been referred to SCAN are over the age of 26 years. Twenty percent of women were aged 30 years or older. Most women in the above mentioned categories have previously given birth to a number of children prior to reaching the age of 26 years. We need to examine whether CDHB is providing these women with sound, pragmatic information on contraception, in a consistent well managed way, that meets their needs.

Table 2: Women per Defined Age Categories

Age	No. in 2002	No. in 2003
16 – 20	16	18
21 – 25	21	34
26 – 30	12	22
30 +	12	21
Total	61	95

Risk Factors

All women referred to the CWH SCAN team have risk factors impacting on their lives.

Figure 1: Women Referred to CWH SCAN Team Affected by One or More Risk Factors

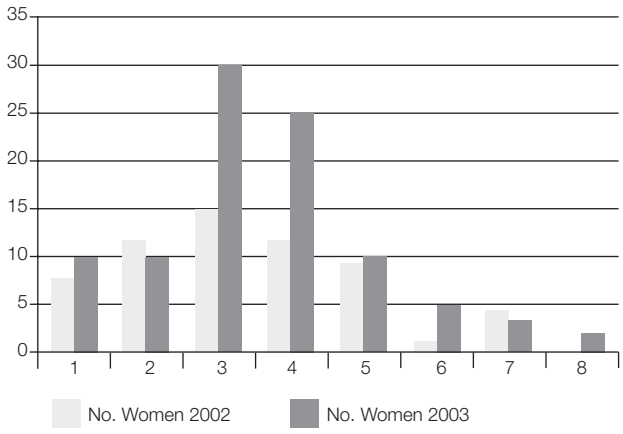


Figure 1 indicates that in 2003, 79 percent of women referred to SCAN had three or more risk factors impacting on their lives. This compares with 67 percent in 2002. The data indicates that the issues that women have to deal with are becoming more complex and therefore are likely to be more problematic for them when they are parenting. Recognising these risk factors is vital in helping to ensure the safety and wellbeing of babies. It also allows professionals to work in a proactive way, ensuring that targeted interventions are put in place, so that families can make changes prior to matters reaching a crisis point. Research indicates that when proactive measures are put in place with families, we can expect to find a 40 percent reduction in the number of children who are physically abused. The anecdotal evidence that I have collated indicates that there have been no cases of physical abuse of babies or infants who have been admitted to Christchurch Hospital where the risk factors have been identified and the case presented to the CWH SCAN team.

Table 3 illustrates that social problems and unstable home life are predominant risk factors for women referred to CWH SCAN meetings in 2003. In 2003, 38 percent of women referred to CWH SCAN had drug use as a risk factor recorded on their SCAN referral form. This is a marked increase. In 2002, only 24 percent of women referred to SCAN had drug use recorded as a risk factor. Interestingly, lack of support was not sighted proportionally as a risk factor in as many cases in 2003. Forty-one percent of women referred to SCAN in 2002 had lack of support recorded as a risk factor. This year, figures indicate that only 36 percent of women lacked supports in their lives. Referrals where drug and alcohol issues are a risk factor decreased from 56 percent (2001), to 45 percent (2002), but increased to 48 percent in 2003. Referrals

Table 3: Risk Factors Impacting on Women Referred to the SCAN Team

Risk Factor	Women 2002 (%)	Women 2003 (%)
Historical CYFS	N/A	55
Social problems	68	54
Unstable home life	41	39
Drug use	24	38
Lack of support	41	36
Mental illness	31	34
Domestic violence	27	29
Young mother	23	17
Unable / unwilling to care	12	17
Alcohol use	21	13
Premature	11	5

Note: Multiple risk factors present in 79 percent of cases.

where mental illness is a risk factor have increased from 29.5 percent (2001), to 31 percent (2002), and continue to climb with 34 percent of cases having mental illness recorded as a risk factor in 2003. These trends indicate that the level of support that women are receiving may have increased slightly but the mental health and drug and alcohol issues that they face have increased. Past involvement with CYFS was the biggest risk factor recorded on SCAN referral sheets with 55 percent of women having had historical involvement.

Child, Youth and Family Service Involvement

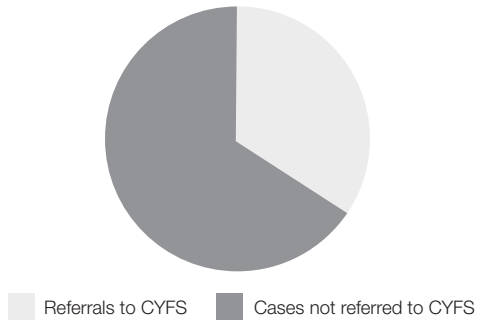
In 2003, referrals were sent to the CYFS in 37.9 percent of cases. Data was collected in a different manner in 2002, so a direct comparison can not be made. However, in 2001, 56 percent of cases referred to SCAN were referred to CYFS, 67 percent of cases were referred to CYFS in 1999, and 55 percent in 1998. SCAN referrals indicate that women now have a greater number of risk factors impacting on their wellbeing.

In a climate where in general professionals are more aware of their responsibility to the safety and wellbeing of children and where the overall referrals to CYFS have increased markedly in the last few years, it is a concern that there has been a considerable reduction in referral rates to CYFS in 2003.

Ethnic Origin

In 2003, 56 percent of cases referred to SCAN were of New Zealand European ethnicity. 32 percent of women referred to SCAN were of Maori ethnicity, making them the second largest group referred. Three percent were of Pacific Island ethnicity and four percent were from other ethnic groups not individually recorded. In five percent of cases ethnicity was

Figure 2: CWH Hospital SCAN Team Referrals 2003



unknown due to referral forms not being completed or ethnicity not being defined by the client. Due to ethnicity not being filled out on referral forms in 40 percent of cases in 2002, little credibility could be drawn from these figures.

New Zealand Europeans make up the largest ethnic group at 56 percent of referrals in 2003. This compares with 66 percent (2001), 75 percent (2000), 72 percent (1998).

Maori families continue to make up the second largest group of referrals to the CWH SCAN team, at 32 percent. This compares with 22 percent (2001), 27 percent (2000).

Due to the high levels of referrals of Maori clients it has been of great benefit to have two Maori representatives on the SCAN panel to address cultural issues and the safety needs of Maori children.

Figure 3: CWH SCAN Team Referrals by Ethnicity 2003

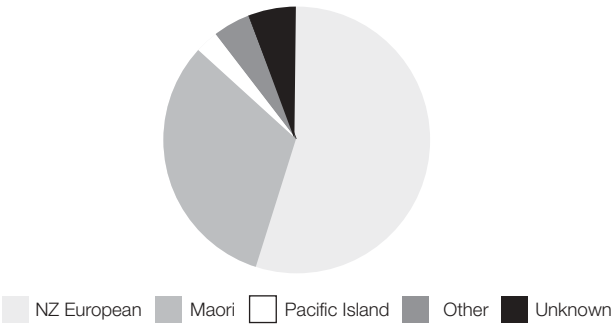
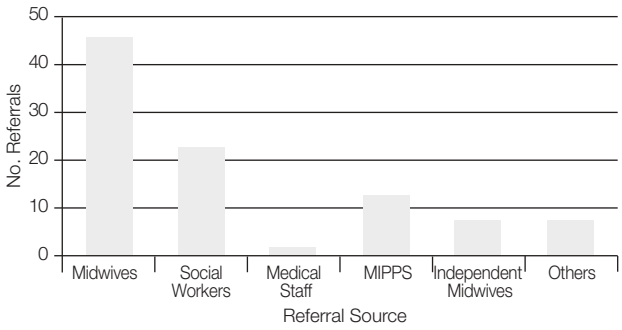


Figure 4: CWH SCAN Team Referral Sources



Source of Referral to SCAN

Figure 4 shows that midwives continue to be highly represented as a referral source. Most referrals are from CWH midwives at 45 (47%) in 2003. However there are increasing numbers of independent midwives referring to SCAN. CWH Social Workers are the second largest referring group at 22 (23%) in 2003.

Summary and Recommendations

The number of referrals to CWH SCAN team has increased by 52 percent in 2003 when compared to referral rates in 2002.

Information has been sent to all independent midwives in Christchurch to inform them of the function of the CPS and SCAN team, and an article promoting these services has been published in an edition of the Childbirth Communique. There has been an increase in the number of midwives attached to the hospital and training within CWH, and Christchurch Polytech has also been initiated. These measures have resulted in greater numbers of SCAN referrals in 2003.

The dramatic increase and seriousness of child protection cases being managed within the WHD of CDHB in 2003 whilst reflective of societal trends, nevertheless highlighted gaps in policy, protocol, and practice. A review of the SCAN team at CWH by the Audit Team of CDHB was conducted to assist in progressing the CPS within the WHD

The CPS has been working towards the implementation of an overarching policy for child protection in the CDHB, and consistent Terms of References for SCAN/Child Protection Advisory Committee teams within the CDHB. A database is currently being developed to ensure that child protection data held in the Mental Health Division of the CDHB is integrated with data held by the CPS, which services the WHD and all other areas within the CDHB. The database will allow on-line referrals, and also allow designated users immediate access to information held by the CPS. The audit endorsed the above initiatives that will help to promote the safety and wellbeing of unborn children, children, and young persons.

The audit also highlighted the need for:

- Greater co-ordination and improved working relationships in the area of child protection, both internally and externally
- Further comprehensive training of staff and the SCAN team members in child protection
- The development of a risk assessment tool for midwives
- The improvement of operational procedures in relation to the SCAN team process, and the management of child protection cases within CWH

A second audit commissioned by the MOH specific to Child Protection Services, within all DHBs throughout New Zealand, found several facets of the CPS at CDHB to be exemplary and, in particular, noted the development of the above mentioned database as innovative.

The Child Protection Service CDHB was ranked second in New Zealand. However there are many recommendations that need to be implemented to continue to improve services in this area. Many of the recommendations are extensions on current practice within the CPS and can be easily implemented. However other audit recommendations like “the development of a formal training plan that stipulates that all clinical and non clinical staff receive regular ongoing training on child abuse and neglect” will require increased funding in this area, and is therefore more difficult to implement. Currently, training is conducted in an inconsistent and unco-ordinated manner within the CDHB.

Kaaren Mathias (Family Violence Project Manager) was working on the implementation of the MOH Family Violence Guidelines within CDHB. However, due to the discontinuation of her position in April 2004, progress in this area is jeopardised.

Child abuse and neglect is a health issue. We do not have to look too far within the CDHB to see the ongoing and increasing financial and social issues that the abuse and neglect of children has cost the CDHB.

Greater understanding of our responsibilities in this area, increased funding for training, further development and implementation of policy and procedures, and increased agency cooperation need to be promoted in 2004.

Infection Control Summary Report

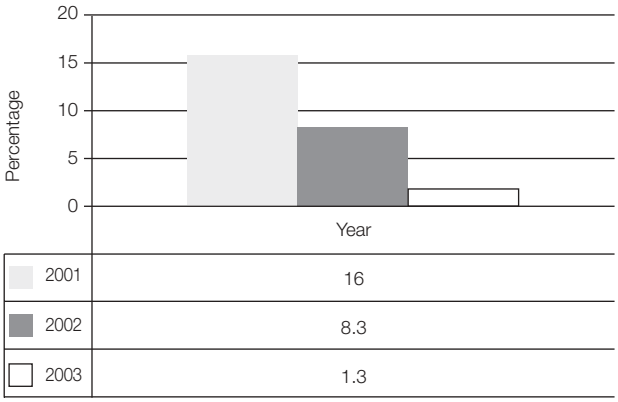
Margaret Burns
Nurse Specialist Infection Control

The Canterbury District Health Board (CDHB) is obliged to comply with the Health and Disability Services Act 1993. Under this Act the Infection Control Service is mandated to ensure the CDHB can demonstrate compliance with the New Zealand Standard Infection Control NZS 8142;2000.

The Infection Control (IC) Service's core business is to limit the introduction and transmission of infection within defined institutions. The IC Service's aim is to minimise nosocomial (or hospital) acquired infections in patients, residents, clients and healthcare workers, through coordinated processes of education, surveillance, antimicrobial useage, quality and risk management, outbreak intervention, and setting specific yearly goals.

Women's Health Division (WHD) has a part-time infection control nurse (ICN), a multidisciplinary Infection Control Committee (that provides the forum for regular consultation between Infection Control and other hospital staff), and an Infection Control LINK Group – identified IC disciples that act as a link between Infection Control and clinical areas.

Figure 1: Average Caesarean Section Deep Wound Infection Rate



2001	16
2002	8.3
2003	1.3

Quarterly surveillance of all patients undergoing caesarean sections to determine rates of post-operative wound infections continues. Ideally, results would show no infections, however, what they do show is a significant reduction in reported rates of infection. (refer to Figure 1)

Patients undergoing emergency caesarean sections are still twice as likely to contract a post-operative wound infection than elective caesarean sections.

Environmental audits throughout clinical areas are undertaken biannually in conjunction with cleaning services, clinical staff and quality services. These audits have, on occasion, resulted in significant changes to practices. For example, manual cleaning of instruments and equipment no longer occurs in clinical areas when it was identified that areas did not have sufficient space, expertise or facilities to undertake this process safely. At the very least, the audits act as a reminder to staff that the physical environment in which we work, and patients reside, needs to be maintained in a clean and tidy state.

In April, 2003, the Quality Team, Infection Control and the company that supplied sharps containers for the CDHB undertook a sharps disposal safety audit throughout WHD. Issues such as the need for education on segretation of waste, locality of sharps disposal containers, and container size were identified. As a result of the audit, sharps containers were upgraded where deemed appropriate to aptly sized and located ones.

The Infection Control Unit monitors blood stream infections (BSI). Between July, 2002 and June, 2003, Christchurch Women's Hospital (CWH) had 17 patients with BSI that were determined to be hospital acquired (HABSI). This is down from 29 for the previous period, an improvement of 41 percent. The report for the July, 2003 – June, 2004 period has not been compiled at the time of writing.

For the annual period, February, 2003 to January, 2004, 285 CDHB staff blood and body fluid exposures (BBFE) were reported to the CDHB Infection Control Unit at Christchurch Hospital. This indicated a slight increase from 2002 (278), however, the inclusion of statistics from Ashburton and Community District Hospitals may account for this increase. WHD accounted for 49 (17%) of BBFEs. Whilst some injuries are unavoidable, it is likely that stringent adherence to infection control principles of standard precautions may result in a reduction of reported exposures.

Concerns were raised that patient Methicillen Resistant Staphylococcus Aureus (MRSA) risk assessment was not being undertaken consistently in Gynaecology Pre-Admission Clinic and Acute Gynaecology Assessment (AGA). As a result, an initial audit was undertaken that confirmed these concerns. With additional regular education and reinforcement of CDHB policy, results continue to improve. Clinical audits are now undertaken every six months.

The Institute of Environmental Science and Research LTD (ESR) annual summary of the national surveillance of multi resistant MRSA 2003 reported that there was an increase in the incidence of multiresistant MRSA (mMRSA) of 9.3 percent from 2002 – 2003. For this reason, the CDHB remains vigilant in its screening of patients and staff potentially infected or colonised with MRSA.

Having the Quality Health NZ Standards of Infection Control as a guideline has resulted in the collection of consistent and useful data that is meaningful to our organisation.

Chairperson **Professional Advisory Committee** (PAC)

Michael McIlhone RGON
Chairperson
WHD Professional Advisory Committee

The Midwifery and Nursing Professional Advisory Committee (PAC) continued on its evolutionary path as it determined how best to represent the professional needs of registered nurses and registered midwives employed within the Women's Health Division (WHD). Since its conception in 2000, the committee has continued with its strategic role, particularly, in providing advice and submissions to the General Manager (GM) of the WHD. The committee aims to provide professional leadership and direct links between clinical staff and the GM.

Elections were held in November of 2003 for the position of chairperson. The Clinical Nurse Educator from the Neonatal Service, Michael McIlhone was re-elected for a further term of 2 years.

During the course of 2003, after internal consultation, the committee decided to reduce the number of members required to attend monthly meetings. The reason for this was to streamline the course of monthly meetings and to reduce the workload of committee members. It was decided that for each meeting there would be one representative from each of the following groups: educators, service managers and charge nurse/midwives. In addition, all three elected clinical representatives; the chairperson and the maori health representative would also attend. Individuals were identified as the representative for each group and would fulfil a 2-year responsibility. Other members are welcome to attend meetings as they deem appropriate, and are encouraged to attend when significant issues are being discussed, or we host a visiting speaker.

During 2003, the PAC began to investigate the feasibility of appointing a Director of Midwifery / Professional Midwifery Advisor for the WHD and develop a recommendation around its findings. The GM of the WHD was instrumental in this strategic planning initiative. Work on this project is at an advanced stage and a final recommendation is expected in the second half of 2004.

Several guest speakers who provided their own insight in to professionalism within their own disciplines addressed the committee.

- Director of Nursing Ashburton Hospital, Mary Ross gave a presentation on the concept of Magnet Hospitals.
- Midwifery Advisor, NZ College of Midwives Norma Campbell, hosted a discussion on the position of Director of Midwifery.
- General Manager WHD, Pauline Burt sought the PAC's opinion regarding strategic issues.
- WHD Quality Facilitator, John Kenny presented feedback received during the re-accreditation process regarding the PAC.

The Gynaecology Service Manager, Catherine Dwan represents the PAC and WHD at the monthly CDHB Directors of Nursing meetings. Catherine is able to then feed directly back to both the PAC chairperson and the committee on a monthly basis. Although we do not have a formally recognised director of nursing at WHD we are indeed fortunate to have someone with Catherine's insight and experience representing our best interests.

The PAC continues to be in the forefront when it comes to celebrating International Nurses and International Midwives days. In 2003, each Service was presented with a suitably chosen textbook to mark the occasion. This was due to the generosity of the WHD management team and we anticipate this will become a yearly event.

During 2003, a total of nine meetings were held. The optimum is to hold 11 meetings in a year, but other commitments sometimes preclude this goal being achieved.

The committee continues to develop its strategic and professional profile and is in the process of updating its WHD website. Our achievements are not so much measured in operational gains or savings, or even tangible rewards, but more so in the promotion of professionalism amongst registered nurses and registered midwives, and offering constructive advice on all matters that affect the same.

Nutrition Service

Helen Little
Dietitian

This report provides a summary of the contribution that the team of dietitians has provided to all clinical areas within the Women's Health Division (WHD). The information in this report is based on Nutrition Service statistics, and a summary of quality projects and improvements during 2003.

The following statistics were collected in 2003, compared to 2002:

Table 1: Nutrition Service Consultations 2003

	2002	2003	% Difference
Outpatients	621	800	+22.3
Inpatients	1925	1888	-2.0
Day Patients	35	61	+42.6
Women attending education sessions	380	338	-11.1

Quality Projects Undertaken in 2003

- Nutrition Service internal customer survey
- Audit of infants below 1500 grams at birth, with low vitamin A and E levels
- The development of a nasogastric feeding protocol for post-op ovarian cancer patients
- Student dietitian, project undertaken regarding a proposal for a 24 hour meal service for the Birthing Suite

New information sheets for patients written include:

- Dairy-free diet for breastfeeding women
- Vegetarian food sources of iron
- Hyperemesis and nasogastric feeding
- Information for parents of infants utilising the Neonatal Service regarding home tube feeding and special formulas
- Forms for women in Diabetes Clinic regarding insulin management and dietary guidelines

Conferences attended:

Carol Perwick	• Diabetes / New Zealand Dietitians Association (NZDA) Conference September 2003
Helen Little	• NZDA Conference • Received award for Best Literature Review in NZDA Journal titled "The Management of Gastro-Oesophageal Reflux in Preterm Low Birth Weight Infants" • Nutricia Study Day on paediatric gastroenterology, November 2003

Service Improvements:

Outpatient dietitian hours were increased to meet the demand of additional outpatients commenced in July 2003.

Additional hours for administration of service commenced July, 2003.

General

The numbers of women attending the diabetes physician clinic has increased, which is in turn reflected in the increase in dietitian outpatient volumes. Other services that have increased the demand for dietitian outpatient appointments are the methadone clinic, and referrals for women with hyperemesis.

The small decrease in inpatient volumes has been offset with an increase in the number of women seen in Day Ward with hyperemesis. Dietitians have a major role in the management of hyperemesis patients, which has resulted in more women being followed up after their hospital admission and an increase in referrals to our service.

Nutrition Service now arrange all equipment, education, and follow up of all women with hyperemesis that go home with nasogastric feeding. Written information for women planning this procedure has been introduced.

The number of women attending education sessions, regarding breastfeeding and nutrition, has dropped as classes stopped in October, 2003.

The Nutrition Service internal customer survey showed that the service was rated highly by all clinical areas within Christchurch Women's Hospital (CWH). Recommendations

from the customer survey have been actioned and included in the quality planner for 2003/2004 year.

The audit of infants below 1500g at birth with low vitamin A & E levels resulted in a change to the Micelle E prescription protocol. Information for parents of infants on special formula or tube feeding at discharge has been introduced during 2003.

The nasogastric feeding protocol for post-op gynaecology oncology patients was developed and implemented in 2003. This was revised in September, 2003.

The dietitian is a key member of the diabetes physician clinic, and a large number of resources have been developed for this area that are regularly being updated

Report Recommendations

The Nutrition Service requires an increase in outpatient funding, particularly for women with diabetes, to be able to continue the excellent outpatient service provided for the WHD. Clerical assistance is required to convert a manual outpatient booking system to a centralised computer booking system.

Summary

The Nutrition Service continues to provide a comprehensive service for women and babies in all clinical areas within the WHD.

Occupational Therapy

Sania Gugich
Occupational Therapist

The Occupational Therapy Service has been in place now at Christchurch Women's Hospital (CWH) for 21/2 years. It was established as a sole practitioner position funded 0.3FTE. The main area of service provision is within the Gynaecology Unit, particularly oncology.

Referrals from the Maternity Service have remained steady over the past 12 months for women with complex obstetric needs.

Changes in 2003

The Occupational Therapy service is utilised by women of any age, however the ageing population often means women have more complex medical conditions at the time of routine gynaecology surgery and/or oncology surgery.

The demand for clinical occupational therapy practice both for inpatient/outpatient assessment and service provision has increased by 30 percent over the past year.

Statistics indicate an average of 32 patient initial/ongoing consultations occurring each month, together with approximately four to five outpatient home visits per month. Occupational therapy intervention from CWH is available for up to 6 weeks post discharge. Over the past 12 months, this 6-week timeframe has been further challenged by oncology patients requiring occupational therapy review and assessment/service provision at various stages of their disease progression. With oncology patients being admitted to CWH from other geographical locations, occupational therapy transfer of referrals to other centres for ongoing service is an important aspect of patient care.

The occupational therapy role within CWH continues to be focussed on the women's ability to perform their daily tasks and manage safely and independently at home.

Intervention includes:

- Inpatient assessment and provision of assistive equipment for use within the home environment
- Pre and post discharge home visit assessment with provisions of housing modifications
- Complete patient transfer referrals to Occupational Therapy services in other regions
- Liaison with/referral to other services.
- Management of/promotion of Occupational Therapy services within CWH

The service is located within Gynaecology Unit 1. Hours of work are Tuesday, Thursday and Friday 9a.m. – 3p.m.

Pharmacy

Barbara Robertshawe
Pharmacist

In January we farewelled our Pharmacist, Kirsten Simonsen as she moved to Dunedin with her family. We thank her for all of her work in developing the current Pharmacy Service at Christchurch Women's Hospital (CWH) and wish her well in the future. Currently the CWH pharmacist position has been filled by two pharmacists; Barbara Robertshawe (Monday, Tuesday and Wednesday), and Rachael Turnbull (Friday). A pharmacist is on site at CWH on Monday, Tuesday and Wednesday until approximately 2p.m. and between 10.30a.m. - 12.30a.m. on Fridays.

The responsibilities of the pharmacist include visits to the Neonatal Service and Gynaecology Unit where patients' medication charts are reviewed on a daily basis. In addition, liaison visits are made to the maternity areas twice a week to enable regular contact and help to identify any problems that midwifery staff may be encountering.

The pharmacist's role includes, but is not limited to:

- Checking drug doses, routes of administration, and compatibilities
- Answering drug information queries
- Therapeutic drug monitoring, eg. gentamicin & vancomycin dose recommendations
- Medication history taking
- Discharge planning, including smoothing supply difficulties
- Medication counselling, eg. writing yellow medication cards, demonstrating inhaler technique
- Standardising drug profiles
- Drug utilisation review
- Provision of education for staff
- Membership of the IV Medication and Fluid Committee
- Attendance at monthly Incident Report Meetings

New projects that were undertaken by pharmacists at CWH during 2003 include:

- An update of all pharmacy information folders on the wards
- Standardisation of pharmacy reference texts supplied to each ward including provision of a perspex display stand in which to keep them
- A review of antibiotics used peri-operatively in Gynaecology Operating Theatre
- Participation in a review of the place in therapy of the mirena intra-uterine contraceptive device (IUCD)

The Pharmacy Department at Christchurch Hospital provides backup, (including dispensing of all medications and the sterile manufacture of total parenteral nutrition (TPN)), for the CWH on-site Pharmacy Service. They can be contacted Monday to Friday (8a.m. to 5p.m.) and also Saturday mornings. An on-call pharmacist and the Clinical Pharmacology Drug Information Department are also available.

Physiotherapy

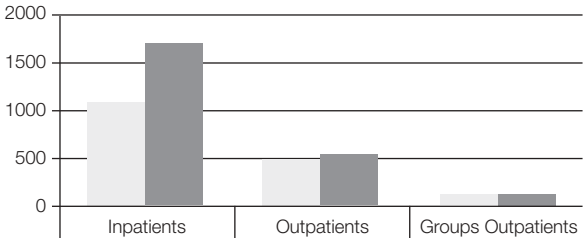
Maree Frost
Physiotherapy Co-ordinator

Objectives set for 2003 were achieved. These include:

- Permanent clerical support position of 15 hours per week
- Collation of outpatient data onto patient management system (PMS)
- Prioritisation of professional development for physiotherapists, including monthly in-service education, case reviews, and study leave
- Undergraduate programme established for fourth-year physiotherapy students
- Audit of referrals from maternity wards (see results under Inpatient Volumes)
- Participated in in-service education to educate and inform Christchurch Women's Hospital (CWH) consultants and Christchurch general practitioners of physiotherapy management of incontinence and pelvic floor disorders.

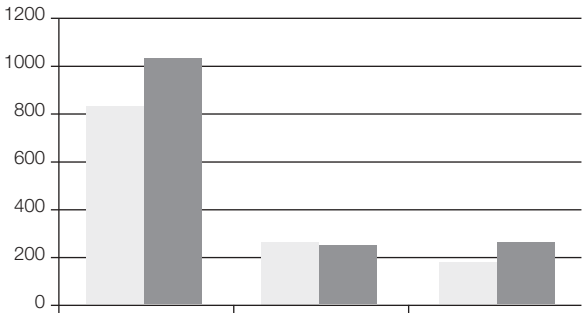
Patient Data

Figure 1 : Physiotherapy - Maternity 2002 / 2003 Patient Data



	Inpatients	Outpatients	Groups Outpatients
2002	1099	479	151
2003	1718	504	149

Figure 2 : Physiotherapy - Gynaecology 2002 / 2003 Patient Data



	Inpatients	Outpatients	Groups Outpatients
2002	824	268	177
2003	1017	263	262

Inpatient Volumes

Inpatient contacts saw some increase in both maternity and gynaecology wards. Changes to delivery of service on the maternity wards included stopping routine caesarean delivery follow ups, to give priority to essential patient treatments. An audit was conducted between November and December, 2003 to assess the efficiency of inpatient referrals from the maternity ward staff (see Audit Results).

Audit Results: Inpatient Referrals from Maternity Wards

- Ward staff were not identifying all of the patients that could benefit from physiotherapy input with 65 percent of patients being identified directly by the physiotherapist, and 35 percent by ward staff
- Most treatment areas had been identified by ward staff, showing that there is a general understanding of the types of conditions for which physiotherapy can benefit, but under-referring was seen in all areas
- Physiotherapists identified 70 percent more problems in the area of perineal pain problems and those with issues following instrumental delivery than ward staff recognised

Outpatient Volumes

The trend of increased referrals for continence management continued throughout 2003. With only one experienced staff member managing this area, waiting times were up to 8 months at its peak. To accommodate demand, funding was approved in July 2003 to allow almost 40 percent more outpatients to be treated per year. We are working towards this objective as we strive to obtain permanent experienced staff to the position.

Outpatient volumes are comparable to 2002 in both the Maternity and Gynaecology services. This in part was due to the need to decrease outpatient volumes in the first part of the year until a funding increase was approved.

On average, 13 patients per month either cancelled, or did not attend. Strategies are in place to try to reduce this number as it impacts on our overall volumes. We will monitor this throughout 2004. Waiting times for continence referrals have returned to 2-3 months, due in part to CWH consultants controlling the rate of referrals to the Physiotherapy Service (see 2004 Objectives).

Patient Groups

Outpatient group (parent education classes, antenatal exercise classes, TENS classes) numbers were consistent with 2002.

The antenatal exercise class was discontinued at the end of 2003 due to no allocation of funding from the Canterbury District Health Board (CDHB). We submitted a proposal requesting the continuation of this class and we have had much support from women who wish to attend. Literature also supports the benefits of pelvic floor muscle training both antenatally and postnatally in reducing the incidence of stress incontinence [2, 3]. Exercise classes are seen as an effective way of educating women [1].

Inpatient group (pre-discharge education following gynaecology surgery) numbers increased due in part to more sessions being made available to patients. This service will be reviewed in 2004.

Looking Ahead to 2004

We start the year with a decrease in FTEs due to a loss in staff. We are hopeful to attract experienced staff to the area and thus build upon the strong team ethos we pride ourselves on.

2004 Objectives

- Establish individual portfolios to track performance standards, and thus comply with the Health Practitioners Competency Assurance Act
- Review gynaecology inpatients service, comparing against evidence-based practice
- Educate maternity ward staff in identifying all appropriate referrals to the Physiotherapy Service, and maintain communication links
- Re establish antenatal exercise class
- Work with the Gynaecology Outpatient Department to develop a more efficient care plan for the management of patients with continence and pelvic floor disorders

We look forward to a busy year ahead as we review service areas, implement changes, and plan for relocation in 2005.

References:

1. Gerard L. 1977. Group learning behaviour modification and exercise for women with urinary incontinence. *Urologic Nursing*, Mar 17(1): 17-22.

2. Mason L, Glenn S, Walton I, Hughes C. 2001. The relationship between ante-natal pelvic floor muscle exercises and post-partum stress incontinence. *Physiotherapy*, Dec 87(12): 651-61.

3. Meyer S, Hohfeld, P, Achtaric, De Grandi P. 2001. Pelvic floor education after vaginal delivery. *Obstetrics and Gynaecology*. May 97(5 Pt 1): 673-7.

Radiology Service

Rex de Ryke
Charge Sonographer

2003 was yet another year of changes for the Radiology Department at Christchurch Women's Hospital (CWH). I took up the charge sonographer position in early August and inherited a well-organized department staffed by a wonderful group of professionals including clerical staff, sonographers and radiologists.

For the first time in many years, the department is fully staffed with sonographers allowing greater patient throughput and a greater commitment to both student sonographer and radiology registrar training.

This is reflected in the statistical analysis below:

Table 1: Number of Scans /FTE Sonographers

	Number of Scans 2001	FTE 2001	Scans / FTE 2001	Number of Scans 2002	FTE 2002	Scans / FTE 2002	Number of Scans 2003	FTE 2003	Scans / FTE 2003
Jan	813	3.0	271	691	2.7	289	766	3.0	255
Feb	812	3.0	270	649	2.7	270	674	3.0	225
Mar	854	3.0	284	666	2.6	302	776	3.0	259
Apr	767	3.0	255	708	2.0	354	707	3.0	236
May	763	3.0	255	674	2.6	306	921	3.0	307
Jun	827	3.0	275	614	1.6	383	819	3.0	273
Jul	876	3.0	292	497	1.6	355	808	3.0	269
Aug	818	3.0	272	588	2.0	294	919	3.0	306
Sep	746	3.0	248	637	2.4	280	865	3.0	288
Oct	714	3.0	238	630	2.6	286	862	3.0	287
Nov	732	3.0	244	592	2.8	246	840	3.0	280
Dec	499	3.0	166	597	2.6	271	870	3.0	290

Our sonography students again had a 100 percent pass rate in their examinations, which is not only a credit to their hard work but also to that of the entire department, which has an active, and progressive education program in place.

The department has been actively involved in the set up and participation in the Fetal Maternal Medicine (FMM) Unit, and we are grateful to have a strong working relationship and interactions with Professor Pippa Kyle and her staff. Her expertise has been of even more importance to us with our Section Head Rachael McEwen going on maternity leave, and respected radiologist Nigel Anderson leaving us for a year's sabbatical late in the year.

As with the rest of CWH, the Radiology Department has been actively involved in the accreditation process, and we are pleased to report that the department met or exceeded all credentialing parameters.

During 2003, the department also looked at upgrading some of its older ultrasound equipment, and, to this end, we trialed several units throughout the year. This has resulted in the purchase and installation of a new unit in February of 2004.

2003 also saw the installation of a PACs link with Christchurch Public Hospital (CPH) allowing various departments to electronically view images and reports for radiology examinations performed at CPH. The department and hospital will be fully PACs integrated when we move to the new hospital next year.

In conclusion, though we lost some key staff members towards the end of 2003, we head into 2004 with renewed excitement about the future of radiology and its role within CWH.

Social Work and **Counselling** Service

Darral Campbell
Professional Advisor Social Work

The Women's Health Division (WHD) Social Work and Counselling Service experienced a busy year in 2003 with an overall increase in referrals in all areas. Addressing the increasing workload has been challenging but has been helped with the creation of an additional social work position in the Obstetrics / Maternity Service and with increased social work and counselling hours at Lyndhurst Hospital.

Table 1: Social Work Referrals by Service Area

	2003	
	(n)	%
Gynaecology	479	41
Obstetrics / Maternity	321	27
Neonatal	379	32
Total	1179	

The gynaecology social workers continue to provide an increasingly specialised counselling service to oncology patients, both inpatient and outpatient, who make up the largest group of those referred to our services. Counselling for second trimester termination of pregnancy also contributes significantly to the number of referrals. Balancing the demands of acute and increasingly involved work in gynaecology sometimes necessitates a period of waiting time.

In all areas (gynaecology, maternity and neonatal), the number of women referred from other District Health Boards, and the resulting travel accommodation issues, take up much social work time. Our service continues to work towards the creation of a position outside of social work to deal with this.

The social workers in the obstetrics / maternity and neonatal services experience increasingly complex presentation of care and protection cases involving interface with Child Youth and Family Service (CYFS) and many other community agencies.

Referrals for counselling related to depression, other mental health issues, and grief and loss continue to increase.

The addition of 10 hours counselling at Lyndhurst Hospital has helped address the number of women seen for first trimester termination of pregnancy counselling.

Table 2: Social Work FTE Levels

	2003 FTE
Professional Adviser	0.4
Gynaecology	0.6
Gynaecology	0.7
Obstetrics / Maternity	0.8
Obstetrics / Maternity / Neonatal	0.8
Neonatal	0.8
Lyndhurst	0.5
Lyndhurst	0.6
Lyndhurst	0.4
Total	5.6

Planning for the future service includes a desire to have a greater interdisciplinary team focus with the ability to have identified social workers working specifically in areas such as fetal abnormality and oncology. This would potentially allow for earlier introduction to work with clients and an increased interdisciplinary perspective and collegial support structure.

Privacy Officer Report

Rowena Croft
Privacy Officer

Role of Privacy Officer

The privacy officer is responsible for:

- Encouraging compliance with the 12 principles of the Privacy Act 1993 and in particular the 12 Rules of the Health Information Privacy Code 1994
- Dealing with requests for personal information and issues concerning personal information generally
- Working with the privacy commissioner when he is investigating complaints of "interference with privacy" where an individual has claimed that one has been caused by the agency.

Aim of Privacy Officer Report

This is the first year the privacy officer has contributed a report to the Women's Health Division (WHD) Annual Clinical Report. The aim of this report is to provide:

- Information about the role of the privacy officer within WHD
- Statistics relating to information requests in 2003

Background Information

The clinical records supervisor assumed the role of privacy officer until February, 2001 when the responsibility was delegated to a member of the Quality Team. The WHD privacy officer is responsible for releasing self, parent/guardian, and third party requests. Clinical Records Department staff are responsible for releasing health provider requests except when they are referred to the privacy officer due to the complexity of the request, or due to the amount of information requested by the health provider.

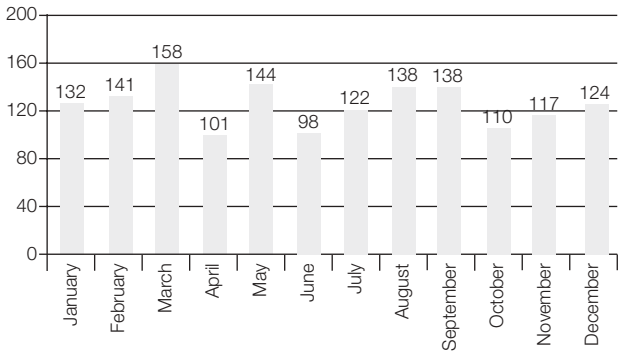
Methods of Data Collection

An excel database documenting requests for release of information from a patient's clinical records was commenced in February, 2001 and was replaced in June, 2003 by the software system called Quality Complaints Management System (QCMS).

Data has been collected using four categories:

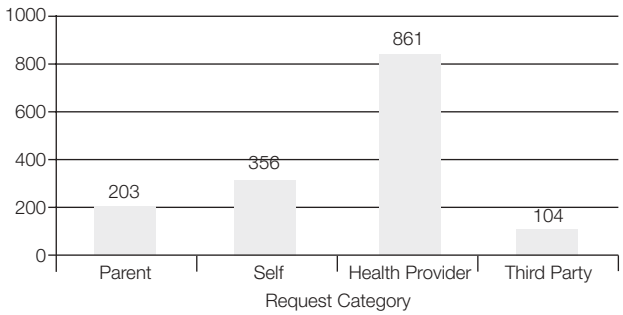
- Patients requesting their own information, ie about the births of their children, surgery, outpatient appointments, colposcopy treatment, times of birth, blood groups
- Parents requesting information about their children, provided the child is under 16 years of age or, when a child is over 16 years, there is consent from the child to release their information to the parent
- Health provider requests – inclusive of other hospitals, general practitioners (GP) and specialist doctors: may include discharge summary, operation report, histology report, delivery summary, outpatient summary, correspondence.
- Third party requests by external agencies requiring information on, or specific events relating to, an individual, e.g. from insurance companies, solicitors, the police, Work & Income NZ, the Health & Disability Commissioner, Accident Compensation Corporation (ACC), the coroner, Child Youth & Family Service (CYFS), social workers

Figure 1: Total Number of Requests 2003



In 2003 there was a total of 1524 requests for information from clinical records received by the WHD privacy officer and WHD Clinical Records Department staff, resulting in a total increase of 103 requests (7 percent increase) compared with the 1421 total requests in 2002.

Figure 2: Total Number of Privacy Requests by Category



Requests from health providers provide 56.5 percent of all total requests in 2003. There was a 40 percent increase in health provider requests in 2003, compared with 2002 (521 requests). Data from health provider requests released by Clinical Records was not routinely collected until March 2003, which accounts for a portion of this increase.

Self-requests provide 23.3 percent of all total requests and there was a 21 percent decrease in requests from the 449 requests in 2002.

Parent requests provide 13.3 percent of all total requests and decreased by 43 percent from 359 in 2002, to 203 in 2003. A reason for this may be a change in practice from automatically sending out the records of children when a woman requested information about the births of her children to only releasing the information when specifically requested, or when the parent/guardian consent box was signed on the request form.

Third party requests provide 6.8 percent of all total requests and increased by 31 percent compared with the 72 requests processed in 2002.

Table 1: Third Party Privacy Requests in 2003

Third Party Requests	2002	2003
ACC	1	3
Coroner	2	1
CYFS	2	1
Health & Disability Commissioner	1	5
Insurance companies	11	15
Legal (solicitor/lawyer) - external	6	16
Legal - Internal	2	1
Police	8	3
Work & Income New Zealand	12	22
Other	27	29
Total	72	104

Lawyers/solicitors (62%) and Work & Income NZ (45%) requesting information from a patient's clinical record provided the most significant increases from the 2002 figures.

Summary

Gathering statistics relating to privacy requests is in its infancy. The accuracy of some request categories is questionable because it is unknown from the request whether the woman is requesting her information for herself or obtaining her information on behalf of someone else.

Under Section 22c of the Health Act, 1956 health providers (e.g. GPs, specialist doctors, lead maternity carers (LMC)) are entitled to receive health information about a patient under their care from another health provider. This health information can be released without consent from the patient. Information could be withheld if the holder of the information reasonably believes that the patient, to whom the information relates, does not want it to be disclosed.

If health providers would still prefer to obtain written consent from their client then utilisation of the request form developed by WHD would be helpful in obtaining more accurate data collection relating to the categories of privacy requests. This form provides a consent box for a woman to sign to release her information to a third party, ie named midwife.

Gynaecology General Practitioner (GP) Liaison

Jeni Berryman
Gynaecology GP Liason

The Gynaecology GP Liaison is a new position for Christchurch Women's Hospital (CWH), which commenced with the Gynaecology Department in June, 2003. Although based at CWH, I work closely with the GP Liaison team in Christchurch Public Hospital, and attend a formalised monthly meeting with them. The GP Liaison team also works alongside Pegasus Health in some projects.

The GP Liasion role, which is a widely established position within District Health Boards throughout New Zealand, arose from the introduction of the Ministry of Health (MOH) Waiting List Policy. The goals of the Waiting List Policy were to ensure that patients were seen, reviewed, or treated within six months of referral, and that all patients were given certainty for assessment and treatment, or a plan of care. The GP Liaison role's aims are to improve communication, and the efficiency of the referral processes at the primary and secondary healthcare interface, and hence to facilitate the implementation of the Waiting List Policy initiatives.

A summary of my activities for 2003 follows:

Distribution of Referral Guidelines to General Practice

To assist with the transfer of care of patients on the waiting list back to GP care, the Canterbury District Health Board (CDHB) developed a resource manual "CDHB Hospital Referral and Management Guidelines" with a CD-Rom version. These were distributed to all general practices in June, 2003, and visits were then arranged with GPs who were high referrers or who had requested visits. The visits were undertaken by the GP Liaison team and Pegasus Health Practice facilitators.

Consultant Questionnaire

A questionnaire was distributed to all consultants, introducing some proposed GP Liaison initiatives and requesting comments on the consultants support or criticism of these activities. I received an excellent response and this has proved to be a valuable resource document for prioritizing initiatives. The questionnaire covered the following activities:

- Fax Advice Service
- Quality of GP referral letters
- The design of a GP gynaecology referral form
- GPs up-skilling in the insertion of the levonorgestral-releasing device (mirena) and pipelle biopsy
- GP attendance at outpatient clinics
- Management of frequent attendees at Acute Gynaecology Assessment (AGA)
- Requesting contributory articles for the GP Liaison quarterly newsletter.

Attendance at Gynaecology Outpatient Clinics

For several months after starting in my new position, I attended the outpatient clinics and observed and participated in the triage of referral letters, and the clinical assessment of patients. This was extremely helpful in understanding the referral processes from the secondary care perspective. It was also a valuable opportunity to meet staff and consultants.

Outpatient Hysteroscopy Referral Form

This form was designed by Dr Di Poad to promote the service to GPs, and to ensure that referrals were made according to the referral guidelines for heavy menstrual bleeding (HMB). A copy of the form was sent to all general practices and a daily reminder of the service continues to appear on the "End of Day Pack" (a summary of the CDHB services for patients for the day).

Upskilling of GPs with Pipelle Biopsy and Mirena Insertion

In November, an education meeting was held for GPs to discuss the referral guidelines for heavy menstrual bleeding and to give instruction on the insertion of the mirena device and the taking of pipelle biopsies. GPs were then invited to attend a gynaecology outpatient clinic and have the opportunity of undertaking these procedures under consultant supervision. These clinics commenced in 2004 and are to occur on a monthly basis. Further education meetings are to be held in 2004.

Further Information Required Form

A "Further Information Required" form was designed with the Outpatient Department charge nurse's assistance. This form was to facilitate the seeking of further information from the GP, when required, for the more efficient triage of the GP's

referral letter. We anticipate that this form will be a helpful tool to educate GPs on referral guidelines, and to improve the quality and appropriateness of the referral.

Ministry of Health (MOH) Audit on Impact of Referral Guidelines on Referral Practice

In November, an audit was undertaken at the request of the MOH. The audit was to assess the impact of the introduction of the Referral Guidelines on the quality of GP referral letters for heavy menstrual bleeding (HMB). In Canterbury the distribution of the "CDHB Hospital Referral and Management Guidelines" folder and CD-ROM version, had been the only opportunity to promote the Guidelines. At the time of the audit, specific promotion of the HMB Guidelines had not taken place. This has caused us to question the audit findings. However it is hoped that the audit will be a basis on which to conduct a further audit in 2004, following initiatives to promote the Guidelines.

Elective Services

I am also working with Pam Boyd (waiting list project nurse) and the Elective Services Group at CWH, developing and implementing strategies to deal with the management of the Waiting List Policy.

In October, I attended the Elective Services Forum held by the MOH in Wellington. This forum is attended by project managers and GP Liaisons and is held on a six- monthly basis. This was a helpful introduction to the variety of work that has been undertaken nationwide for Elective Services.

A presentation was made of an electronic decision guide for GP referrals for HMB and bleeding in early pregnancy. This system is being trialled at present by the MOH, and is an exciting development. Hopefully, Canterbury may be able to link up with the pilot studies following the establishment of a working group.

My first 6 months at CWH has been a challenging time, but I have been heartened and encouraged by the enthusiastic support I have received from everyone. I look forward to continuing the work at the primary / secondary care interface, improving processes to manage the demand for hospital services, and ultimately achieving better patient outcomes.