



Mercy Public Hospitals Inc

# Research Report 2009



# Mercy Public Hospitals Inc Research Report 2009

Prepared by the  
Academic Research and Development Committee,  
Mercy Health

Our mission is to follow Jesus Christ in his mission of mercy through the delivery of health, aged care and community services.

Our vision is to build an enduring capacity and passion to serve those with special needs.

Our values are the key to who we are. They reflect our culture and traditions: Compassion, hospitality, respect, innovation, stewardship and teamwork.

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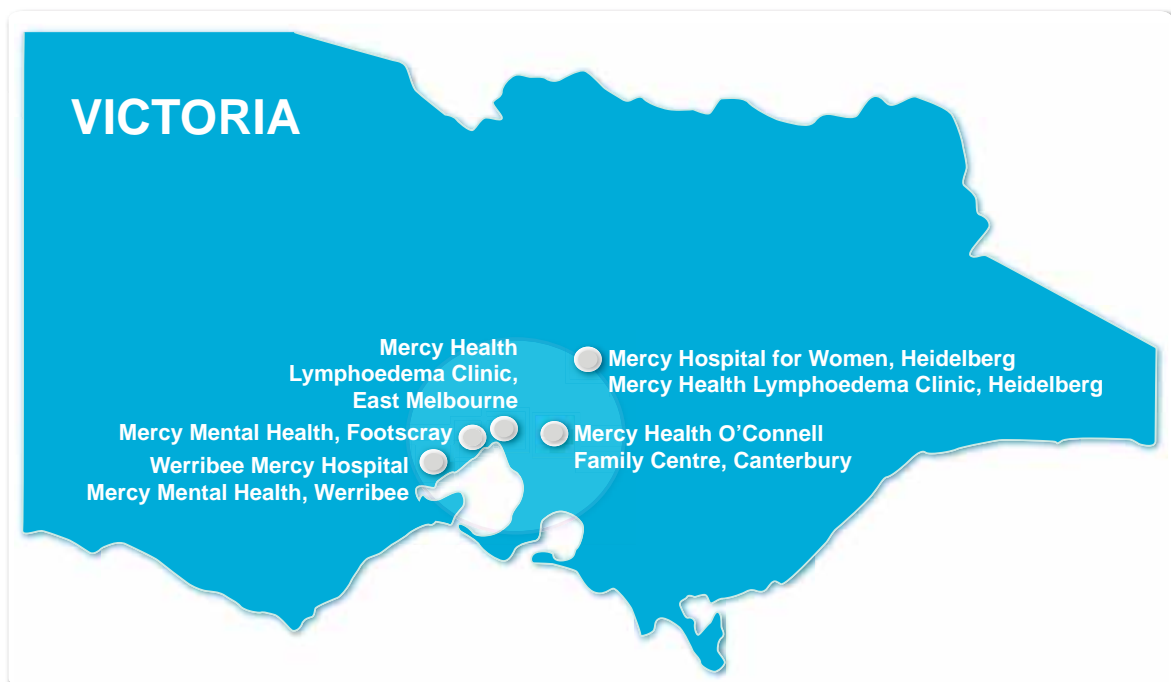
Mercy Health is a Catholic provider of health, community and aged care services. Founded by the Sisters of Mercy, we offer acute and subacute hospital care, aged care, mental health programs, specialist women's health, early parenting, palliative, home and community care, and health worker training and development.

We believe in the sacredness of life and the dignity of each person at every stage of life. We are committed to providing compassionate care to all people, regardless of culture or religion. Each year Mercy Health cares for nearly half a million people across Victoria, southern New South Wales and the Australian Capital Territory.

Mercy Public Hospitals Inc was established in 1986 by the Sisters of Mercy under Schedule 2 (Denominational Hospitals) of the Victorian Health Services Act 1988 (Vic). Mercy Public Hospitals Inc operates public health services in Victoria on behalf of Mercy Health.

These include:

- Mercy Hospital for Women, Heidelberg
- Werribee Mercy Hospital, Werribee
- Mercy Health O'Connell Family Centre, Canterbury
- Mercy Mental Health, Werribee and Footscray
- Mercy Health Lymphoedema Clinic, East Melbourne and Heidelberg



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## Message from the Chairman and CEO, Mercy Health



Mr Julien O'Connell, Chairman

It is with great pleasure that we commend, on behalf of the Board of Mercy Public Hospitals Inc, this report of research conducted in Mercy Public Hospitals Inc.

The report includes key clinical research undertaken during 2009. The diversity and the depth of research extend well beyond what might be expected of an organisation of our scale.

Many projects are conducted in collaboration with other organisations and reflect our commitment to partner with others to further positive clinical outcomes.

We believe that research, teaching and training are critical to the continuous improvement in quality and care outcomes. To ground this belief, we have established the Mercy Health Foundation with the defined purpose of raising philanthropic support for our research and teaching agenda.



Dr John Ballard, CEO

Mercy Health Foundation is well progressed to fulfil its immediate major projects: the establishment of Mercy Health Breastmilk Bank at Mercy Hospital for Women in Heidelberg, a first for Victoria; establishing a Chair of Aged Care; and funding Victoria's first Chair of Maternal Fetal Medicine.

At Mercy Health, our priority is always to emphasise care first. This can only be achieved through people committed to greater understanding and discovery in clinical practice.

Personally, and on behalf of the Board, we congratulate our extraordinary researchers for their achievements, contribution and commitment to improving health outcomes.

## Message from the Chairman, Academic Research and Development Committee



Associate Professor David Allen, Chairman  
Academic Research and Development Committee

This is the second *Mercy Public Hospitals Inc Research Report* produced by the Academic Research and Development Committee.

I would like to thank everyone who contributed to this report. I know that many contributors would want me to also thank Emeritus Professor Peter Carpenter and his secretary Ms Carole Branch who lead and co-ordinate the work of the Human Research Ethics Committee, Mercy Health. Their work is much respected and the entire committee must be acknowledged for the huge task they perform in keeping our research effort on track.

This year I would also like to acknowledge two other areas. Firstly, the research work performed by Professor Michael Permezel and his team in the University of Melbourne Department can only be described as outstanding.

Secondly, the research contribution from Professor Peter Dwyer and his team in urogynaecology has also been exceptional. Peter's efforts were rewarded in 2009 when the University of Melbourne appointed him as a full clinical professor.

As you read this report you will see that these and many other researchers have also done sterling work and we congratulate them all.

I also acknowledge the many funding sources that enable us to perform our research, with special mention of Mercy Health Foundation, Medical Research Foundation for Women and Babies and the Austin Pathology research grants.

Thank you to the members of the Academic Research and Development Committee 2009: Dr Jack Bergman, Ms Judy Czuchnowski, Dr Anita Govindan, Dr Genevieve Green, Ms Julie Hammett, Ms Jackie Keane, Professor Susan McDonald, Sr Helen Monkivitch, Professor Michael Permezel, Associate Professor Scott Simmons and Dr Andrew Watkins. Special thanks goes to Ms Vicky Karitinos who is my executive assistant and the minute secretary for the committee.

## New Projects Approved by the Human Research Ethics Committee, 2009



Professor Peter Carpenter  
Chairman, Human Research Ethics Committee

Membership of the Human Research Ethics Committee 2009:

*Ms Geraldine Gray, Associate Professor Michael McKay, Dr Andrew Watkins, Mr Paul Drinkwater, Mr Kevin Fell, Ms Christine Childs, Sr Helen Monkivitch, Fr Cormac Nagle, Professor Michael Permezel, Associate Professor Sue Walker, Professor Susan McDonald, Ms Susan Philips, Dr Deborah Cole*

### **08/52: FM85 and the incidence of feed intolerance**

This is an audit of 75 randomly selected discharged infants (<32 week gestation) where the infant's individual feeding regime will be analysed, concentrating on the administration of the fortifier FM85. Should the results indicate a feed intolerance a set of guidelines on the usage of FM85 will be drafted and trialled.

*Principal Investigator:* Ms Chelsea Webster  
*Mercy Health Sponsor:* Dr Andrew Watkins, Director of Paediatrics, Mercy Hospital for Women  
*Funding Source:* Lynn Tuttle Scholarship  
*Proposed Completion Date:* March 2011

### **08/53: A retrospective review of the use of cyclophosphamide in the management of relapsed ovarian cancer**

The objectives of this retrospective review are to assess the efficacy and tolerability of oral cyclophosphamide as treatment for patients with relapsed ovarian cancer. Information will be collected from three gynaecology-oncology centres: Mercy Hospital for Women, The Royal Women's Hospital and Peter MacCallum Cancer Centre. Information provided by this study will be used to plan a future study with more formal assessment of the tolerability and efficacy of oral cyclophosphamide.

*Principal Investigator:* Dr Danny Rischin  
*Mercy Health Sponsor:* Associate Professor Peter Grant, Head of Gynaecological Oncology, Mercy Hospital for Women  
*Collaborative Partners:* The Royal Women's Hospital, Peter MacCallum Cancer Centre  
*Proposed Completion Date:* October 2009

### **08/54: Survey of clinical management of lung cancer in Victoria 2003**

The aim of this study is to describe the treatment practices and outcomes for all patients diagnosed with lung cancer in Victoria in the first six months of 2003. Questionnaires are sent to treatment centres and doctors involved in the care of each of the 1,023 patients. The findings will be used to continue professional education to promote the optimal management of the disease. The results will also provide a comparison to a similar survey conducted in 1993 and assess changes in management practices over 10 years.

*Principal Investigator:* Professor Graham Giles  
*Mercy Health Sponsor:* Ms Wendy Dunn, Hospital Manager, Werribee Mercy Hospital  
*Collaborative Partner:* Cancer Council Victoria  
*Funding Source:* Victorian Cancer Registry  
*Proposed Completion Date:* March 2012



**08/56: Haemodynamic effects of milrinone in critically ill neonates**

This is a retrospective review of 13 medical records of babies who had milrinone treatment in Mercy Hospital for Women neonatal intensive care unit. The audit will then be published as a case series in a peer reviewed medical journal.

*Principal Investigator:* Dr Kai König

*Mercy Health Sponsor:* Dr Andrew Watkins, Director of Paediatrics, Mercy Hospital for Women

*Proposed Completion Date:* March 2011

**R09/01: Examination of pneumococcal responses in healthy Australian newborns (using cord blood samples from previous approved study R02/08)**

This study aims to measure specific and functional antibody to *S.pneumoniae* in cord blood samples and compare the placental transfer of passive immunity to *Strep pneumoniae* in three populations: Australian Indigenous newborns from Tiwi islands, African newborns from Gambia and newborn infants from Melbourne.

*Principal Investigator:* Dr Ruth Morley

*Mercy Health Sponsor:* Ms Karen Clark, Director of Nursing/Hospital Manager, Mercy Hospital for Women

*Collaborative Partner:* Murdoch Children's Research Institute

*Funding Source:* Foundation for Children

*Proposed Completion Date:* December 2009

**R09/02: Prospective observational study of serial cardiac function by transthoracic echocardiography in women with pre-eclampsia**

This 18 month proposed study on women with pre-eclampsia and healthy preterm women (control) is designed to investigate the cardiac function in women with pre-eclampsia using a form of ultrasound technology called "transthoracic echocardiography (TTE)". This study fol-

lows on from an extremely successful research study R07/32 – A prospective observational study comparing cardiac output assessment by Doppler echocardiography with arterial pressure wave analysis in term pregnant women.

*Principal Investigator:* Dr Alicia Dennis

*Mercy Health Sponsors:* Dr Bernadette White, Clinical Director Obstetrics & Maternity Services; Ms Theresa Bowditch, Deputy Director of Nursing, Maternity & Neonatal Services, Mercy Hospital for Women

*Funding Source:* ASA Research Fellowship/Edward Lifesciences Educational Grant

*Proposed Completion Date:* September 2010

**R09/03: MILC (mothers and infants lactation cohort) a multi-site cohort**

This 18 month prospective study will be conducted on 1,003 women who plan to breast-feed for at least some time after the birth of their baby. Eligible women will be recruited from three hospitals before discharge: Mercy Hospital for Women, Frances Perry House and The Royal Women's Hospital. The study will involve completion of an initial interview to collect demographic details, breastfeeding intentions including expressing and current feeding details. Telephone interviews will also be conducted at three and six month postpartum. The primary outcome for comparison is feeding any breast milk at six months. Secondary outcomes include exclusive breastfeeding, maternal confidence and satisfaction with infant feeding. An exploration of expressing practices will also be included in the study.

*Principal Investigator:* Dr Della Forster

*Mercy Health Sponsor:* Ms Kerri McEgan, Unit Manager Lactation Department and Mercy Health Breastmilk Bank, Mercy Hospital for Women

*Collaborative Partners:* The Royal Women's Hospital, Frances Perry House



*Funding Source:* La Trobe Research Grant  
*Proposed Completion Date:* September 2010

***R09/05: Endometrial nerve fibres in endometriosis and their response to surgical and hormonal therapy. A prospective randomised controlled trial.***

The purpose of this study is to try to develop a test of cure for endometriosis that is outpatient based. One hundred women presenting with pelvic pain will be considered for a randomised controlled trial at Mercy Hospital for Women over an 18 month period. All patients will have a hysteroscopy, laparoscopy and endometrial sample at the index visit, with endometriosis noted or excluded, then treated if present. At that time pain scores (VAS) will be recorded. There will be two arms in the trial determined after the laparoscopy: those with pelvic pain and no endometriosis and those with pelvic pain and endometriosis.

*Principal Investigator:* Dr Emma Readman  
*Mercy Health Sponsor:* Associate Professor Peter Maher, Head Endosurgery Unit, Mercy Hospital for Women  
*Proposed Completion Date:* September 2010

***R09/06: Phase II biomarker study of multi-marker ovarian cancer diagnostics (related to study R05/49)***

This three year study is an extension of previous work, R05/49 biomarkers of ovarian cancer. It is hoped this additional work will have more success in diagnosis of early stage ovarian cancer. Previous work has shown some advantage of multiple markers in blood samples especially in late stage ovarian cancer. In order to establish statistical validity it is necessary to examine a larger number of blood samples. The study also wishes to analyse tissue samples using new technology such as mass spectrometry.  
*Principal Investigator:* Professor Greg Rice

*Mercy Health Sponsors:* Associate Professor Peter Grant, Head Gynaecological Oncology Mercy Hospital for Women; Associate Professor David Allen, Deputy Head Gynaecological Oncology, Mercy Hospital for Women  
*Collaborative Partners:* HealthLinx; The Royal Women's Hospital; National University Hospital, Imperial College, London; Hammersmith Hospital, London

*Funding Source:* Fight Cancer Foundation  
Brockhoff Foundation, HealthLinx Ltd  
*Proposed Completion Date:* March 2012

***R09/07W: Case management review – QA activity***

A review of case management specifically within the Community Treatment Program at Mercy Mental Health has been underway since early 2008. A working party met regularly throughout 2008 to review current practice and make recommendations about improvements and changes. In order to gather baseline data, the working party requested a review of a number of randomly selected client files from the Community Treatment Program be conducted. To add to data already collected the working party requested a number of focus groups be conducted with Mercy Mental Health staff within the Community Treatment Programs. These focus groups present an opportunity for staff to provide feedback about their experiences of working within the community teams.

*Principal Investigator:* Dr Anita Govindan  
*Mercy Health Sponsor:* Dr Anita Govindan, Clinical Psychologist, Mercy Mental Health  
*Proposed Completion Date:* January 2010

***R09/10: The rapid obstetric screening echocardiographic (ROSE) examination for cardiovascular screening and monitoring in pregnancy***

This 12 month study seeks to recruit 500

pregnant women at Mercy Hospital for Women to assess the feasibility, acceptability, reproducibility and accuracy of a modified echocardiographic examination which is tailored to pregnant women (the ROSE examination). To include Aboriginal and Torres Strait Islanders in the study and to address the core values of ATSI health research of spirit and integrity, reciprocity, respect, equality, survival and protection and responsibility, the study has recruited an Aboriginal Liaison Worker as part of the research team.

*Principal Investigator:* Dr Alicia Dennis

*Mercy Health Sponsor:* Associate Professor David Allen, Deputy Head Gynaecological Oncology, Mercy Hospital for Women

*Funding Source:* Anaesthetic Department Special Purpose Fund

*Proposed Completion Date:* May 2010

#### **R09/11: Gastroschisis in Victoria – Case review**

Gastroschisis is a rare birth defect in which there is a separation in the abdominal wall. Through this opening protrudes part of the intestines which are not covered by peritoneum (the membrane that normally lines the inside of the abdomen). Four hospitals in Victoria are involved in caring for the majority of pregnant women with fetuses suspected of having this condition, one of which is Mercy Hospital for Women. This study proposes to review files of gastroschisis affected pregnancies from the past 10 years at Mercy Hospital for Women. The researcher also aims to collect equivalent data from The Royal Women's Hospital, Monash Medical Centre and The Royal Children's Hospital. De-identified data will then be used for publication of a case series in a peer reviewed medical journal.

*Principal Investigator:* Dr Alexis Shub

*Mercy Health Sponsor:* Dr Alexis Shub, Obste-

trician, Mercy Hospital for Women

*Collaborative Partners:* The Royal Women's Hospital, Monash Medical Centre, The Royal Children's Hospital

*Proposed Completion Date:* April 2010

#### **R09/12: Maternal sleep health and fetal outcomes**

Sleep complaints, including snoring, are common in late pregnancy. Snoring is also a common symptom of obstructive sleep apnoea (OSA). Outside of pregnancy, OSA is associated with the development of high blood pressure as well as other long term health problems. This seven month study will ask 250 women in late pregnancy if they have symptoms of OSA by completing two questionnaires about snoring. If symptoms are considered sufficiently high they may have OSA and an invitation to participate in a further study involving a sleep study (polysomnography) will be offered. The study seeks to determine whether these women have sleep disordered breathing (SDB) or OSA and to correlate these findings with pregnancy outcomes.

*Principal Investigator:* Dr Alison Fung

*Mercy Health Sponsor:* Associate Professor Sue Walker, Head Perinatal Medicine Unit, Mercy Hospital for Women

*Collaborative Partner:* Austin Health

*Proposed Completion Date:* December 2009

#### **R09/13: A review of the current actual pathway for breast, upper GI and genitourinary cancer patients against ideal patient management framework to map the patient pathways within Western & Central Melbourne Integrated Cancer Service hospitals**

This project aims to map the patient pathway for patients with breast, upper gastrointestinal and genitourinary cancer and patients with benign breast disease, looking where there are gaps in care, duplications and delays. This informa-

tion will then be compared to the “ideal patient pathway”. Ultimately, it is hoped to improve the co-ordination of care for patients in Western & Central Melbourne Integrated Cancer Service health services.

*Principal Investigator:* Ms Michelle Fleming

*Mercy Health Sponsor:* Ms Wendy Dunn, Hospital Manager, Werribee Mercy Hospital

*Collaborative Partners:* Melbourne Health, Western Health, Peter MacCallum Cancer Centre, St Vincent’s Hospital, The Royal Women’s Hospital

*Funding Source:* Western & Central Melbourne Integrated Cancer Service Funding

*Proposed Completion Date:* March 2011

#### **R09/14: Department of Health Integrated Cancer Services Audit 2009**

For the third consecutive year Western & Central Melbourne Integrated Cancer Service has been instructed to conduct an audit for the Department of Health. All integrated cancer services have been requested to perform the audit and all public hospitals in Victoria will be represented. Twenty histories will be audited of patients diagnosed with colorectal and breast cancer in the last 12 months. This audit aims to identify improvement opportunities, provide an opportunity for benchmarking and forms part of ongoing evaluation of cancer services in Victoria.

*Principal Investigator:* Ms Anne Adams

*Mercy Health Sponsor:* Ms Wendy Dunn, Hospital Manager, Werribee Mercy Hospital

*Collaborative Partners:* All hospitals under the Cancer Services Framework for Victoria

*Funding Source:* Western & Central Melbourne Integrated Cancer Service Funding

*Proposed Completion Date:* March 2010

#### **R09/15: First trimester screening and subsequent pregnancy outcomes**

This is a retrospective review of first trimester PAPP-A which may be regarded as an early marker of placental health and growth. The Maternal Serum Laboratory has agreed to release the PAPP-A MoMs of all Mercy Hospital for Women patients received from January 2003 until December 2008. The process is to create a population based centile as well as a customised centile for each infant. Then the data will be examined for associations between individual and collective adverse pregnancy outcomes and first trimester PAPP-A.

*Principal Investigator:* Associate Professor Sue Walker

*Mercy Health Sponsor:* Associate Professor Sue Walker, Head Perinatal Medicine Unit, Mercy Hospital for Women

*Collaborative Partner:* Genetic Health Services Victoria

*Proposed Completion Date:* May 2010

#### **R09/16: A Phase III study to evaluate the efficacy and safety of pazopanib monotherapy versus placebo in women who have not progressed after first line chemotherapy for epithelial ovarian, fallopian tube or primary peritoneal cancer**

This is a six year commercial, drug company sponsored study which hopes to recruit 900 participants, four of whom will come from the Department of Gynaecological Oncology at Mercy Hospital for Women. The trial drug is pazopanib which has been used in a number of trials for different cancers including ovarian cancer. This study is to administer pazopanib or a placebo during the progression free interval to see if pazopanib is effective in preventing or delaying the recurrence of the cancer.

*Principal Investigator:* Dr Danny Rischin

*Mercy Health Sponsor:* Associate Professor

Peter Grant, Head Gynaecological Oncology,  
Mercy Hospital for Women

*Collaborative Partner:* National Multicentre Trial

*Funding Source:* GlaxoSmithKline

*Proposed Completion Date:* July 2015

***R09/17W: Evaluation of psycho-educational group, "Reflections"***

The purpose of this project is to establish the effectiveness of a group program known as "Reflections" using simple pre/post questionnaires. Sixty-four participants will take part in this two year project. This new program is part of Mercy Mental Health within their Consultation and Partnerships (CAPS) service set up in response to the Primary Mental Health and Early Intervention Initiative of the Victorian Government. Five questionnaires (measuring depression, anxiety, wellbeing, behavioural and mental health symptoms and ability to establish personal goals) will be used to establish a baseline for each client. They will be re-administered in one of the six group sessions and then again at the three month follow up. It is hoped to demonstrate this as a low cost, meaningful way to improve mental health service.

*Principal Investigator:* Ms Linda Kite

*Mercy Health Sponsor:* Mr Mario Blandin de Chalain, Area Manager, Mercy Mental Health

*Funding Source:* Mercy Mental Health Consultation and Partnerships

*Proposed Completion Date:* October 2011

***R09/18: Local and regional determinants of vascular function in pregnancy complicated with diabetes mellitus***

Diabetes during pregnancy can cause complications in both the mother and the baby. Many of the problems caused by diabetes are due to damage of the blood vessels. The aim of this three and a half year study, using a combination of methods (microscopic, biochemical and

mechanical), is to detect differences in blood vessel function and function of the endothelium (1) between non-pregnant and pregnant women to understand how function changes with pregnancy, (2) women with normal pregnancies and women with gestational diabetes to study the effect of diabetes on blood vessel function, (3) women with pre-pregnancy diabetes (insulin dependent and insulin independent women) to examine if the extent and type of damage is different to that produced by diabetes that develops during pregnancy. The study hopes to recruit a total of 480 women.

*Principal Investigator:* Dr Marianne Tare

*Mercy Health Sponsor:* Ms Theresa Bowditch, Deputy Director of Nursing, Maternity & Neonatal Services, Mercy Hospital for Women

*Funding Source:* NHMRC

*Proposed Completion Date:* December 2012

***R09/19: Maternal acceptance of obstetric anaesthetic risk in relation to fetal risk***

During pregnancy, particularly in labour, an "immediate" caesarean section may be performed for the health of the mother, for the health of the fetus or for both. This two year study, through a questionnaire, hopes to survey 550 pregnant women and 200 obstetric, anaesthetic, midwifery and nursing staff to assess their attitudes to the risk of obstetric anaesthesia for an urgent caesarean section. The result will be presented as a visual representation of the risk to assist future mothers and staff.

*Principal Investigator:* Associate Professor Sue Walker

*Mercy Health Sponsor:* Associate Professor Sue Walker, Head Perinatal Medicine Unit, Mercy Hospital for Women

*Proposed Completion Date:* May 2011



***R09/20: Biomarkers of chronic lung disease and pulmonary hypertension in preterm infants (BICEPS study)***

Chronic lung disease of prematurity remains a significant burden for extremely low weight infants. Screening tools for severe forms are currently not in place. The purpose of this study is to investigate biomarkers for potential screening of chronic lung disease and associate pulmonary hypertension to facilitate timely diagnosis.

*Principal Investigator:* Dr Kai König

*Mercy Health Sponsor:* Dr Kai König, Staff Neonatologist, Mercy Hospital for Women

*Funding Source:* Medical Research Foundation for Women and Babies

*Proposed Completion Date:* September 2012

***R09/21: A 10 year audit of perinatal morbidity and mortality at Mercy Hospital for Women***

This is a 10 year audit of “term” perinatal mortality and serious morbidity at Mercy Hospital for Women. Statewide perinatal mortality is reported annually with relatively poor data obtained from the death certificate only. This audit aims for a more detailed analysis of approximately 100 cases in the 10 year period.

*Principal Investigator:* Dr Sarah Hunt

*Mercy Health Sponsor:* Professor Michael Permezel, Chair University of Melbourne Department of Obstetrics and Gynaecology

*Proposed Completion Date:* August 2011

***R09/22: A local experience with peripartum cardiomyopathy: Are the tides turning?***

This is a retrospective study of Mercy Hospital for Women medical records 1999 to 2009 to identify patients with peripartum cardiomyopathy. This is a relatively rare condition characterised by heart failure within the last month of pregnancy or five months post delivery. Experience is limited and there is a paucity of data in

the literature. The study aims to identify possible predisposing or causative factors, assess current management strategies and determine clinical outcomes. If required the treating cardiologist will be contacted to clarify clinical details and determine patient outcomes.

*Principal Investigator:* Dr Terasa Lancefield  
*Mercy Health Sponsor:* Associate Professor Sue Walker, Head Perinatal Medicine Unit, Mercy Hospital for Women

*Collaborative Partner:* Austin Health

*Proposed Completion Date:* June 2010

***R09/23: Advance Care Planning in community palliative care services***

This 12 month research project aims to develop, implement and evaluate a model of Advance Care Planning (ACP) for Community Palliative Care Services (CPCS). It is hoped this will provide an improvement in the quality of care for clients at their end of life. This is a national trial of the ACP model. The researcher hopes to recruit 18 participants at Mercy Palliative Care and 12 from Mercy Health Service Albury towards a total of 66 participants. The ACP model will focus on four key areas: staff education, client documentation, quality improvement strategies and staff management practices.

*Principal Investigator:* Dr Jeanine Blackford

*Mercy Health Sponsor:* Ms Carole Quayle, Manager Mercy Palliative Care

*Collaborative Partner:* La Trobe University  
*Funding Source:* Department of Health and Ageing

*Proposed Completion Date:* August 2010

***R09/24: Evaluation of competencies of new graduate midwives on entry into the workforce in Victoria***

This low risk survey will invite students from all universities which offer midwifery education in Victoria. Participation is totally voluntary and a

selection of students will be taken from each educational pathway, ie Postgraduate Diploma, Bachelor of Midwifery and Bachelor of Nursing/Bachelor of Midwifery (double degree). The survey is a self assessment of the participant's own perceived level of competence entering the workforce and later in their graduate year a repeat of that self assessment which will be measured against the clinical agencies' assessment of competence of graduates from each of the education pathways.

*Principal Investigator:* Professor Susan McDonald

*Mercy Health Sponsor:* Professor Susan McDonald, Professor of Midwifery, La Trobe University and Mercy Hospital for Women; Midwifery Professorial Unit, Mercy Hospital for Women

*Collaborative Partners:* La Trobe University, Australian Catholic University, Monash University

*Funding Source:* Australian College of Midwives MAVI Grant

*Proposed Completion Date:* June 2010

***R09/25W: Evaluation of psycho-educational group, "Rediscover"***

This 24 month research project aims to recruit 48 participants to assess the benefits of the psycho-educational mental health intervention "Rediscover" using a simple pre/post questionnaire. This new program is part of Mercy Mental Health within their Consultation and Partnerships (CAPS) service set up in response to the Primary Mental Health and Early Intervention Initiative 2001 of the Victorian Government. This initiative was first aimed at supporting primary care providers, usually GPs, in their treatment of people presenting high prevalence disorders such as anxiety and depression. However, more and more cases of low prevalence disorders such as schizophrenia

spectrum disorders are presenting to GPs. This program aims to provide practical assistance in such cases.

*Principal Investigator:* Ms Deborah Gant

*Mercy Health Sponsor:* Ms Deborah Gant, Graduate Nurse, Mercy Mental Health

*Funding Source:* Mercy Mental Health Consultation and Partnerships

*Proposed Completion Date:* November 2011

***R09/26C: What is best practice healthcare for lesbians and heterosexual women with life threatening illness?***

The main purpose of this four year research project is to examine the similarities and differences that may exist in the experiences and perceptions of 120 lesbian and heterosexual women with life threatening illness as well as those of their health care providers. These perceptions are to be obtained by in-depth interviews. The Mercy Health Human Research Ethics Committee has granted approval to a recruitment advertisement in Mercy Palliative Care's quarterly newsletter. This newsletter goes out to current clients, bereaved family members and donors to Mercy Palliative Care. Mercy Palliative Care will not be referring patients to this project.

*Principal Investigator:* Ms Barbary Clarke

*Mercy Health Sponsor:* Ms Carol Quayle, Manager Mercy Palliative Care

*Collaborative Partner:* Monash University

*Proposed Completion Date:* June 2013

***R09/27: Early electrophysiological markers of schizophrenia in young infants***

This 24 month research project aims to recruit 60 infants, aged between six and 12 months, whose mothers are diagnosed with schizophrenia or schizoaffective disorder and 60 infants whose mothers do not have either illness (controls). The recruitment will be at Mercy Hos-



pital for Women and Werribee Mercy Hospital's Mother-Baby Units. Participants are also being recruited from The Alfred.

*Principal Investigator:* Dr Jordy Kaufman

*Mercy Health Sponsor:* Dr Megan Galbally, Head of Unit, Perinatal Mental Health, Mercy Hospital for Women

*Collaborative Partners:* Swinburne University of Technology, The Alfred Psychiatry Research Centre, Monash Medical Centre

*Funding Source:* The Perpetual Trust

*Proposed Completion Date:* August 2011

#### ***R09/28: Placental reprogramming and pre-maturity***

The hypothesis of this study is that bacterial infection induces epigenetic modification of the placenta genome, alters placental phenotype and predisposes to preterm labour. To test this, three projects will be undertaken. Firstly, a retrospective case control study to characterise epigenetic changes in human placenta and fetal membranes that are associated with preterm birth (with and without bacterial infection). Secondly, an in vitro cell culture study using primary cells isolated from human tissues to determine the effect of bacteria on epigenetic modifications. Thirdly, an in vivo animal model to establish the effects of experimentally induced bacterial infection on placental and fetal membrane epigenetic modifications. This research is expected to take three years and will involve sample collection only of otherwise discarded specimens of placenta, membranes and cord.

*Principal Investigator:* Professor Greg Rice

*Mercy Health Sponsor:* Dr Martha Lappas, NHMRC RD Wright Fellow, Mercy Hospital for Women

*Collaborative Partners:* Baker IDI; University of Hawaii; Liggins Institute, New Zealand

*Funding Source:* Baker IDI Heart & Diabetes Institute, NHMRC

*Proposed Completion Date:* August 2012

#### ***R09/29: Australian Red Cross Blood Service – Monash University Neonatal Alloimmune Thrombocytopenia (NAIT) Registry***

This project is being conducted by TORC (Transfusion Outcomes Research Collaborative) which is a partnership between Monash University and the Australian Red Cross Blood Service. This project is to set up a national registry and involves the collection of data from patients treated for neonatal alloimmune thrombocytopenia (NAIT). This new national registry for NAIT should enable a better understanding of epidemiology, current management and resource utilisation, inform clinical practice and provide a platform for future clinical trials. This study is to be undertaken initially for three years and then evaluated. Due to the rareness of this blood disease it is presumed between two to five participants will be recruited each year from Mercy Hospital for Women.

*Principal Investigators:* Dr Erica Wood, Dr L Phillips

*Mercy Health Sponsor:* Dr Alexis Shub, Obstetrician, Mercy Hospital for Women

*Collaborative Partners:* Australian Red Cross Blood Service, Monash University

*Funding Source:* Australian Red Cross, Monash University

*Proposed Completion Date:* August 2012

#### ***R09/30: Collection of control sample from healthy pregnant women at Mercy Hospital for Women to assist in the study of severely ill pregnant patients with H1N1 at the Austin Hospital***

In July 2009, Austin Hospital had admitted 31 patients with severe H1N1 (six pregnant and 25 non pregnant patients) some of whom required

intensive care. Clinical work at Austin Hospital identified that a number of the very sickest ICU patients had a deficiency of IgG2, one of the subclasses of immunoglobulin IgG. It is believed that it was probably this that led to an immune deficiency resulting in severe H1N1. Fifteen to 20 well pregnant patients without H1N1 were needed to compare to those women affected by severe H1N1 in pregnancy and Mercy Hospital for Women was asked to participate.

*Principal Investigator:* Professor Lindsay Grayson

*Mercy Health Sponsor:* Professor Michael Permezel, Chair University of Melbourne Department of Obstetrics and Gynaecology, Mercy Hospital for Women

*Collaborative Partner:* Austin Health

*Proposed Completion Date:* October 2009

#### **R09/31: H1N1 influenza presentations**

This six month quality assurance study was raised in July 2009 due to the H1N1 pandemic. To ensure that Mercy Hospital for Women was optimally managing pregnant women who were known to be at high risk of severe infection and associated mortality, it was proposed to collect clinical data with the case record form on pregnant women infected with H1N1 influenza. This form will be completed by medical staff associated with the audit who are directly involved in patient care. Collection of this information is not additional to routine care practices and the data will be de-identified. Other hospitals in Melbourne such as The Royal Women's Hospital, Southern Hospital and the Austin Hospital have similar quality assurance exercises and it is hoped to collaborate with these sites and collate the de-identified data for a combined report.

*Principal Investigator:* Associate Professor Sue Walker

*Mercy Health Sponsor:* Associate Professor

Sue Walker, Head Perinatal Medicine Unit, Mercy Hospital for Women

*Collaborative Partner:* The Royal Women's Hospital

*Proposed Completion Date:* February 2010

#### **R09/32: Changing practice: Postnatal care at Mercy Hospital for Women, "Leading the Way"**

The purpose of this low risk project is to implement and evaluate an alternative model of postnatal care at Mercy Hospital for Women in line with the evidence based guidelines developed and implemented by the National Institute for Clinical Evidence (NICE) Guideline 37 for Routine Postnatal Care of Women and Their Babies (2006). The trial of this new model of postnatal care will be undertaken for a period of six months with staff and clients in the postnatal unit 5A at Mercy Hospital for Women. Through a questionnaire, patients and staff opinions from postnatal wards (5A, 5B and 5C) will be sought and evaluated.

*Principal Investigator:* Professor Susan McDonald

*Mercy Health Sponsor:* Professor Susan McDonald, Professor of Midwifery, La Trobe University and Mercy Hospital for Women; Midwifery Professorial Unit, Mercy Hospital for Women

*Proposed Completion Date:* July 2010

#### **R09/33: Investing in our future: Employment BN/BM students as Division 2 Nurses**

In 2008 a pilot group of five Bachelor of Nursing/Bachelor of Midwifery (BN/BM) students from La Trobe University was employed in their fourth year as Division 2 Nurses at Mercy Hospital for Women. The outcome of the pilot was judged to be successful by staff and students and as a result 10 BN/BM Division 2 places were made available in 2009 and funding has

been made available by the Department of Health to formally evaluate its implementation as a potential model that can be applied more broadly across the maternity services sector. This low risk research aims to evaluate this strategy with pre/post evaluation questionnaires to students and staff.

*Principal Investigator:* Professor Susan McDonald

*Mercy Health Sponsor:* Professor Susan McDonald, Professor of Midwifery, La Trobe University and Mercy Hospital for Women; Midwifery Professorial Unit, Mercy Hospital for Women

*Proposed Completion Date:* May 2010

***R09/34: Elective caesarean sections – continuity of care – a streamlined approach for women booked for elective caesarean sections in a tertiary facility***

This low risk research will formally evaluate, via questionnaire, the advantages and disadvantages in relation to the current “continuity of care” as identified by women booked for an elective caesarean section at Mercy Hospital for Women and the midwives who are caring for these women.

*Principal Investigator:* Professor Susan McDonald

*Mercy Health Sponsor:* Professor Susan McDonald, Professor of Midwifery, La Trobe University and Mercy Hospital for Women; Midwifery Professorial Unit, Mercy Hospital for Women

*Funding Source:* June Allen Practice Enhancement Fellowship, Nurses Board of Victoria

*Proposed Completion Date:* December 2009

***R09/35W: Barriers of assessing the effectiveness of community treatment orders: Experience at Mercy Mental Health***

In April 2009 the principal investigator commenced an internal retrospective audit on

all patients on community treatment orders (CTOs). The aim was to compare patient outcomes and the quality of care received during the 12 month period while on CTO against a 12 month period of being a voluntary patient. While undertaking this review, the investigator encountered several barriers which limited the sample size as too small to communicate any meaningful findings. However, the audit did highlight the areas in need of addressing to assess the effectiveness of CTO interventions. CTOs are actively used by Mercy Mental Health service and several other mental health services in Victoria. The researcher now wishes to write a paper regarding these barriers and required HREC approval for the proposed paper.

*Principal Investigator:* Dr Adegoke Okedara

*Mercy Health Sponsor:* Mr Mario Blandin de Chailain, Area Manager, Mercy Mental Health

*Proposed Completion Date:* December 2009

***R09/36W: Compliance to depot antipsychotic medication and the factors associated with compliance, among patients with schizophrenia attending depot clinics of Community Treatment Program A (CTP A) and Community Treatment Program B (CTP B) at Saltwater Clinic, Mercy Mental Health***

The aim of this low risk audit is to determine compliance rates, relapse rates and factors relating to compliance of depot clinic attendees (patients with schizophrenia) of the two Community Treatment Programs (CTP A and CTP B) based at Saltwater Clinic, Footscray. Participants (between 50 to 70 clients) will be those who are given depot clinic appointments during the period September 2009 to October 2009. It is hoped the findings of the study will improve service provision to patients who are on depot antipsychotics and will lead to improvement of compliance to depot antipsychotics in a clinic setting.

*Principal Investigator:* Dr Indika Jayathilake  
*Mercy Health Sponsor:* Ms Di Hawthorne, Senior Psychiatric Nurse, Mercy Mental Health  
*Proposed Completion Date:* October 2010

***R09/37P: Predictors of complicated grief and health outcomes in family caregivers of people with dementia***

The aim of the study is to examine the association of a range of factors including social support, demographic factors, relationship quality, psychological resilience, types of grief and satisfaction with care of relatives with dementia, with health outcomes and occurrence of complicated grief following bereavement in these caregivers.

*Principal Investigator:* Ms Patricia Shuter  
*Mercy Health Sponsor:* Ms Carol Quayle, Manager Mercy Palliative Care  
*Collaborative Partners:* Alzheimer's Australia, Queensland Health  
*Funding Source:* Queensland University of Technology Post Graduate PhD Allocation  
*Proposed Completion Date:* March 2011

***R09/39: Clinical audit assessing the accuracy of a "No Touch Thermometer" for measuring temperatures in preterm and term babies***

This clinical audit is designed to assess the accuracy of a new technology compared to an older technology on an instrument which is less invasive.

*Principal Investigator:* Ms Melanie Jarvis  
*Mercy Health Sponsor:* Dr Andrew Watkins, Clinical Director Paediatrics, Mercy Hospital for Women  
*Proposed Completion Date:* October 2010

***R09/40: New Directions: An equal start in life for Indigenous children (Mothers and Babies Services)***

New Directions is the Federal Government's policy framework for Aboriginal/Torres Strait Islander (ATSI) maternal and child health in the Government's "Closing the Gap" strategy. This study proposes to establish baseline data on women attending Mercy Hospital for Women for obstetric care and expecting an ATSI child and postnatal and paediatric care. The first phase of the New Directions program is to access medical files of 50 women whose baby was identified as ATSI and invite them to provide information about their service usage and identify any barriers or gaps.

*Principal Investigator:* Ms Joanne Borg  
*Mercy Health Sponsor:* Dr Andrew Watkins, Clinical Director Paediatrics, Mercy Hospital for Women  
*Collaborative Partner:* Department of Health and Ageing, OATSIH  
*Proposed Completion Date:* October 2013

***R09/41: Pregnant and postpartum women with H1N1 influenza admitted to ICU***

This research proposal was a request by the Australian & New Zealand Intensive Care Research Centre to access three hospital records of pregnant women with H1N1 influenza who were treated at Mercy Hospital for Women and Austin Hospital. Accessing these records was necessary to complete missing neonatal outcomes. Once received the data would be added to existing data to facilitate a publication before the northern hemisphere's flu season.

*Principal Investigator:* Dr Ian Seppelt  
*Mercy Health Sponsor:* Dr Andrew Watkins, Clinical Director Paediatrics, Mercy Hospital for Women



*Collaborative Partner:* Australian & New Zealand Intensive Care Research Centre  
*Proposed Completion Date:* December 2009

**R09/42: Time points audit for improving the provision of analgesia in labour**

The practice of providing epidural analgesia involves a number of time points from the initial request for analgesia to the point where the mother is comfortable after administration. These time points are frequently not documented. From a consumer perspective, the amount of time from the request for pain relief to actually becoming comfortable is important. This audit will provide information about this timing and help staff identify ways of making the process shorter.

*Principal Investigator:* Associate Professor Scott Simmons

*Mercy Health Sponsor:* Professor Susan McDonald, Professor of Midwifery, La Trobe University and Mercy Hospital for Women; Midwifery Professorial Unit, Mercy Hospital for Women

*Collaborative Partner:* Women's & Children's Hospital, South Australia

*Proposed Completion Date:* December 2010

**R09/43: Understanding human influenza specific T cell populations**

White blood cells, known as T cells, are critical for immunity against viruses. It has been suggested that the size (and therefore efficacy) of the immune response to viruses is largely determined by the number of virus specific T cells contained within the immune compartment. Since the vast majority of adult humans have been exposed to influenza virus during their lifetime, blood samples from the umbilical cord of placentas from women who have had uncomplicated births are to be used to test this rationale. The aim of this 24 month study is to collect the cord blood of 25 neonates who have not been

exposed to the virus and the information gained should provide a baseline understanding of naive or unexposed cells to influenza.

*Principal Investigator:* Dr Nicole La Gruton

*Mercy Health Sponsor:* Dr Martha Lappas, NHMRC RD Wright Fellow, Mercy Hospital for Women

*Collaborative Partner:* University of Melbourne

*Funding Source:* NHMRC

*Proposed Completion Date:* December 2011

**R09/44: Australasian maternity outcomes surveillance systems (AMOSS)**

AMOSS is an active surveillance system designed to collect non-identifiable data on rare or serious conditions in pregnancy. The aim is to conduct studies that will assist in developing the knowledge and improve the understanding on risks, diagnosis and treatment of rare conditions in pregnancy. This study is expected to take five years.

*Principal Investigator:* Associate Professor Elizabeth Sullivan

*Mercy Health Sponsor:* Dr Bernadette White, Clinical Director Obstetrics & Maternity Services, Mercy Hospital for Women

*Collaborative Partners:* RANZCOG, ANZCA, SOMANZ

*Funding Source:* NHMRC

*Proposed Completion Date:* December 2014

**R09/45: Assessment of antenatal-thalassaemia carrier screening in Victoria**

Beta thalassaemia is a condition associated with life long transfusion requirement, considerable childhood and adult morbidity and early mortality. It is recessively inherited and, with both carrier parents, there is a 1:4 chance of an affected child. This research is being undertaken by an experienced group of genetic researchers at four sites: The Royal Women's Hospital, Monash Medical Centre, Melbourne

Pathology and Mercy Hospital for Women. There are three parts to this proposed three year study. Phase 1 is interviewing health professionals across all sites regarding their knowledge, practice and attitudes to beta thalassaemia screening. Phase 2 involves interviewing women with/without partner having being diagnosed as a carrier in the last 12 months. Phase 3 is to review the records from women identified in Phase 2 to determine whether there are any differences between what was noted in the medical records compared to what was described by the women.

*Principal Investigators:* Professor Martin Delatycki, Dr Nicole Cousens

*Mercy Health Sponsor:* Dr Sue White, Clinical Geneticist, Mercy Hospital for Women

*Collaborative Partners:* The Royal Women's Hospital, Monash Medical Centre, Melbourne Pathology, Thalassaemia Australia

*Funding Source:* Bruce Lefroy Centre

*Proposed Completion Date:* January 2013

#### **R09/46: Australian and New Zealand Neonatal Network Register for Clinical Audit**

This register is an important national collection that has been successfully used since 1994 in improving the safety and quality of care of high risk neonates in Australia and New Zealand.

This application is seeking permission to continue work within the perinatal data set until 2019.

*Principal Investigator:* Associate Professor Elizabeth Sullivan

*Mercy Health Sponsor:* Dr Andrew Watkins, Clinical Director Paediatrics, Mercy Hospital for Women

*Collaborative Partners:* ACT Health, NSW Health, NT Health, Southern Health, Tasmania, WA Health

*Funding Source:* ANZNN

*Proposed Completion Date:* June 2019

#### **R09/47: Perinatal mortality by birthweight centile**

This research proposal will involve the analysis of data collected by the Victorian Perinatal Data Collection Unit on all births in Victoria over a 10 year period to determine what ideal growth is. The researcher will examine 650,000 records.

*Principal Investigator:* Dr Julia Francis

*Mercy Health Sponsor:* Associate Professor Sue Walker, Head Perinatal Medicine Unit, Mercy Hospital for Women

*Proposed Completion Date:* January 2012

#### **R09/48: Long term effects on sleep of methylxanthine therapy for apnoea of prematurity**

This 12 month study is a follow up program from study "R99/12 Benefits and safety of caffeine citrate in premature babies (CAP trial)". The original study was completed uneventfully and showed that caffeine treatment reduced ventilation requirement and chronic lung disease. The treatment and control cohorts have subsequently remained intact and engaged with the investigators. This follow up study is seeking permission to undertake sleep monitoring at the child's own home over a 12 hour period. Children will also wear a small activity meter (the size of a wrist watch) for two weeks and complete a sleep diary. Parents will be requested to complete a sleep questionnaire.

*Principal Investigator:* Professor C Marcus

*Mercy Health Sponsor:* Dr Gillian Opie, Neonatal Paediatrician

*Collaborative Partners:* Children's Hospital of Philadelphia; University of Pennsylvania; Monash Institute for Medical Research, Melbourne

*Funding Source:* National Institute of Health USA

*Proposed Completion Date:* February 2011



## Department of Urogynaecology, Mercy Hospital for Women

The past year has been very productive for the Department of Urogynaecology, which is clearly demonstrated through the publications listed below in international literature and presentations to international and national bodies. The aim of the department is to continue its research program, combining this with a clinical service of excellence in the area of urogynaecology and pelvic floor reconstruction.



Dr Yik Lim

### Overview of Researchers

Mr Kobi Stav completed his two year Urogynaecological Fellowship in the Department of Urogynaecology in 2009. Kobi was a qualified urologist from Israel and his contribution to the department both clinically and in research has been outstanding. We wish Kobi well in his future career in Israel.

Dr Gerry Agnew, a gynaecologist from Ireland is the International Urogynaecology Fellow in the department completing a two year fellowship. Gerry's research interests are in intersitial cystitis and uterovaginal prolapse.

Dr Joseph Lee will be completing his two year fellowship in urogynaecology in early 2010. Joe will be completing his third year of urogynaecology subspecialty training at the Monash Medical Centre. Joe's research interests have been into the anatomical and functional results of uterovaginal prolapse surgery and he is presently in charge of a prospective or randomised study of two types of mid-urethral slings in the treatment of women with stress incontinence.

This year Dr Lore Schierlitz, with members of the department, published a trial comparing the retropubic Tension free vaginal sling to the transobturator Monarc sling in women with intrinsic sphincter dysfunction stress incontinence. This was published in *Obstetrics and Gynaecology*, one of the leading international journals. This prospective randomised study has been of such importance that it has changed the worldwide management of women with intrinsic sphincter dysfunction stress incontinence.

Dr Yik Lim with the fellows also completed a study comparing the results of the new Advantage slings to those of the Tension free vaginal tape. Results of the study were presented at the International Federation of Gynecology and Obstetrics (FIGO) annual meeting in Cape Town, South Africa and also at the Australasian Gynaecological Endoscopy & Surgery (AGES) Pelvic Floor Symposium in Melbourne.

Dr Alison De Souza and other members in the department are investigating in a prospective study the effects of pregnancy and childbirth on urinary and sexual function.

## Publications

Stav K, Dwyer P, Roberts L. Pudendal neuralgia – Fact or fiction? *Obstet Gynecol Surv* 2009; 64; 190-199.

Fatton B, Dwyer P, Tan P, Achtari C. Bilateral extraperitoneal uterosacral vaginal vault suspension: A two year follow up longitudinal case series of 123 patients. *Int Urogynecol J Pelvic Floor Dysfunct* 2009; 20; 4:427-34.

Stav K, Dwyer P, Rosamilia A, Chao F. Women over estimate daytime frequency: The importance of the bladder diary. *J Urol* 2009; 181; 5:2176-80.

Stav K, Dwyer P, Rosamilia A, Lim Y, Alcalay M. Transvaginal repair of anterior enterocele following anterior exenteration in females. *Int Urogynecol J Pelvic Floor Dysfunct* 2009; 20; 4:411-5.

Stav K, Dwyer P, Rosamilia A, Schierlitz L, Lim Y, Lee J. Risk factors for trocar injury to the urinary bladder during mid-urethral sling procedures. *J Urol* 2009; 182 (1):174-9.

Dwyer P. Minimally invasive surgery in urogynaecology. *Int Urogynecol J Pelvic Floor Dysfunct* 2009; 20:485-486.

Schierlitz L, Dwyer P, Rosamilia A, Lim Y. Letter re Tension free vaginal tape is more effective than the trans-obturator tape in women with stress urinary incontinence and intrinsic sphincter deficiency. A prospective randomised study. *Obstet Gynecol* 2009; 113 (6) 1368-9.

Stav K, Dwyer P, Rosamilia A, Schierlitz L, Lim Y, Lee J. Repeat synthetic mid-urethral sling for women with recurrent stress urinary incontinence. *J Urol* 2009. [Epub]

Lim Y, Dwyer P. Effectiveness of mid-urethral slings in the treatment of intrinsic sphincteric related stress urinary incontinence. *Current Opin Obstet Gynecol* 2009; 21(5):428-33.

Stav K, Dwyer P, Rosamilia A, Schierlitz L, Lim Y, Lee J. Risk factors of treatment failure of mid-urethral sling procedures for women with urinary stress incontinence. *Int Urogynecol J Pelvic Floor Dysfunct* 2009; Oct 24. [Epub]

## Book Chapters

Lee J and Dwyer P. Selection of mid-urethral slings for women with stress urinary incontinence. Santoro P. Wieczorek C. Bartram (eds). *Pelvic Floor Disorders: Imaging and a Multidisciplinary Approach to Management*. Springer-Verlag Italia; 2010.

Stav K, Dwyer P, Rosamilia A, Schierlitz L, Lim Y, Lee J. Mid-urethral sling procedures for women over 80 years. *Neurourol Urodynam* 2009.

## Oral and Poster Presentations

- Dwyer P. Invited lecture. "Pudendal neuropathy: Fact or fiction?" XVIII FIGO World Congress of Gynaecology and Obstetrics, Cape Town, South Africa 2009
- Dwyer P. Invited lecture. "The role of cystourethroscopy in gynaecological surgery. Prevention and early detection of urinary tract injury." XVIII FIGO World Congress of Gynaecology and Obstetrics, Cape Town, South Africa 2009
- Dwyer P. Ulf Ulmsten Lecture. "Urinary tract injury: Recognised complication or medical negligence?" International Urogynecological Association Annual Scientific Meeting, Como, Italy 2009
- Dwyer P. "The use and misuse of slings in prolapse surgery." International

Urogynecological Association Annual Scientific Meeting, Como, Italy 2009

- Stav K, Dwyer P, Rosamilia A, Schierlitz L, Lim Y, Lee J. "Risk factors for trocar injury to the urinary bladder during mid-urethral sling procedures." International Urogynecological Association Annual Scientific Meeting, Como, Italy 2009
- Stav K, Dwyer P, Rosamilia A. "Women over estimate daytime frequency: The importance of the bladder diary." International Urogynecological Association Annual Scientific Meeting, Como, Italy 2009
- Manning J, Dwyer P, Rosamilia A, Murray C, Thomas E. "Prospective randomised study of the effectiveness of botulinum toxin for treatment of refractory painful bladder syndrome." International Urogynecological Association Annual Scientific Meeting, Como, Italy 2009
- Dwyer P. Lectures. "Post-hysterectomy vaginal vault prolapse: Extraperitoneal uterosacral ligament suspension." Medicolegal consequences of urinary tract injury AGES Pelvic Floor Symposium, Melbourne, Victoria 2009
- Dwyer P. Keynote speaker. "Pelvic pain and pudendal nerve injury. The role of cystourethroscopy in gynaecological surgery in the detection of urinary tract injury." AAVIS 11th Annual Scientific Meeting on Pelvic Surgery, Noosa, Queensland 2009
- All consultants and fellows of the Department of Urogynaecology. Various lectures in the field of urogynaecology. AGES Pelvic Floor Symposium, Melbourne, Australia 2009
- Yik L. Lecture on surgical management of overactive bladder. XVIII FIGO World Congress of Gynaecology and Obstetrics, Cape Town, South Africa 2009

- Yik L. "Do the Advantage slings work as well as the TVT?" Oral presentation. XVIII FIGO World Congress of Gynaecology and Obstetrics, Cape Town, South Africa 2009
- Yik L and Joseph L. Lectures on vault hygiene at hysterectomy and laparoscopic vs vaginal procedures for vaginal vault prolapse. Northern Victoria Obstetrics and Gynaecology Meeting, Beechworth, Victoria 2009

#### Visiting International Speakers

- Dr Julio Alvarez, gynaecologist, Chile
- Dr Kodikari, New Zealand
- Dr Lin, China
- Dr Rob Moore, a leading urogynaecologist from Atlanta, USA to lecture and demonstrate the new Elevate mesh repair system
- Professor Ajay Rane, a leading urogynaecologist from Queensland to demonstrate the new MiniArc sling operation



### **Research Grants and Funding**

- \$100,000 grant from American Medical Systems was awarded to staff of the Department of Urogynaecology, Mercy Hospital for Women and Monash Medical Centre to run a multicentre randomised controlled trial comparing the new single incision MiniArc sling with the Monarc sling
- \$40,000 grant for a sexual function project, Dr Alison De Souza

### **Academic Awards and Achievements**

- Dr Lore Schierlitz: Certificate of Urogynaecology, Royal Australian and New Zealand College of Obstetricians & Gynaecologists
- Dr Alison De Souza: Certificate of Urogynaecology, Royal Australian and New Zealand College of Obstetricians & Gynaecologists
- Professor Peter Dwyer, appointed Clinical Professor, University of Melbourne



Professor Peter Dwyer

## Department of Anaesthesia, Mercy Hospital for Women

The Department of Anaesthesia continues to expand its activities across a range of clinical areas from oral and poster presentations at national and international meetings to groundbreaking primary clinical research. Particularly exciting is the work documenting the heart function of pregnant women in a range of conditions using ultrasound. The department also continues to develop a strong external reputation through collaborations with other Australian centres and overseas academic bodies. The appointment of a research midwife has been an important step in the ongoing production of high quality publications.



Associate Professor Scott Simmons

### Research Activities –

#### Overview of Key Researchers

- Cardiac function studies – Dr Alicia Dennis, Dr Julian Castro, Clinical Associate Professor Scott Simmons, Ms Caroline Carr, Professor Michael Permezel, Associate Professor Colin Royse
- Investigating cardiovascular system function in women with treated and untreated pre-eclampsia using transthoracic echocardiography and minimally invasive cardiac output monitoring (PhD studies)
- Cardiac function studies in healthy pregnant women (PhD studies)
- Transthoracic echocardiography in obstetric anaesthesia and obstetric critical illness – the rapid obstetric screening echocardiography (ROSE) examination – ongoing three year project
- Cochrane systematic reviews focusing on birthing analgesia and anaesthesia choices – Associate Professor Scott Simmons, Dr Alicia Dennis and Dr John Crowhurst
- Time Points Audit for improving the provision of analgesia in labour – Associate Professor Scott Simmons – collaborative study with Women's & Children's Hospital, South Australia

#### Research Projects

- General anaesthesia for caesarean section: Five years experience at Mercy Hospital for Women. Dr Ian Letson. Initial project completed. Further period of review to be requested.
- A prospective observational study of serial cardiac function by transthoracic echocardiography in healthy term pregnant women undergoing elective caesarean delivery and healthy non pregnant women (controls). Dr Alicia Dennis, two year progress report received.



- Prospective observational study of serial cardiac function by transthoracic echocardiography in women with pre-eclampsia. Dr Alicia Dennis, six month progress report received.
- The rapid obstetric screening echocardiographic (ROSE) examination for cardiovascular screening and monitoring in pregnancy. Dr Alicia Dennis, six month progress report received.
- Time Points Audit for improving the provision of analgesia in labour. Associate Professor Scott Simmons. Approved October 2009.

### Publications

Dennis A, Arhangelschi I, Simmons S, Royse C. Prospective observational study of serial cardiac output by transthoracic echocardiography in healthy pregnant women undergoing elective caesarean delivery. *Int J Obstet Anesth* 2009; 10.1016/j.ijoa.06.007. [In press]

Lai C, Dennis A, Graham J. High output cardiac failure in a woman with hereditary haemorrhagic telangiectasia. *Anaesth Intensive Care*; 38(2). [In press]

Simmons S, Crowhurst J, Cyna A, Dennis A. Combined spinal epidural versus spinal anaesthesia for caesarean section (Protocol). *Cochrane Database of Systematic Reviews* 2009; Issue 4; Art. No.: CD008100. DOI: 10.1002/14651858.CD008100.

Simmons S. When you need to know: The obstetric anaesthesia scientific evidence project (editorial); *Anaesth Intensive Care*; 37(3):351-53.

Lancefield T, Farouque O, Dennis A et al. A local experience with peripartum cardiomyopathy: Are the tides turning? *Heart, Lung and Circulation Vol 18; Supp 3; pS167-S168* 2009; DOI 10.1016/J.HLC.2009.05.381.

Dennis A. *Obstetric Medicine Vol. 2 Number 1* 2009; March letter.

Dennis A, Walker S, Crowhurst J, Drinkwater P. The availability of intravenous labetalol in Australia. *Anaesth Intensive Care*; 38(2). [In press]

Crowhurst J. Over-the-counter misnomers. *Aus Prescriber* 2009; 32:3:60.

Jeffries K, Shub A, Walker S, Hiscock R, Permezel M. Reducing weight gain in pregnancy: A randomised controlled trial; *Med J Aust*; 191(8) 429-33.

### Oral and Poster Presentations

- Dr Alicia Dennis. Invited speaker. "Cardiac function in healthy pregnant women." Heart Research Institute, Sydney, New South Wales 2009
- Dr Alicia Dennis. Invited speaker. "Cardiac function in healthy pregnant women." University of Western Sydney, Sydney, New South Wales 2009
- Dr Alicia Dennis. Invited speaker. "Transthoracic echocardiography in peripartum cardiomyopathy." RANZCOG/ANZCA CME Meeting, Adelaide, South Australia 2009
- Dr Alicia Dennis. Invited speaker. "Transthoracic echocardiography and obstetric critical illness." ANZCA Annual Scientific Meeting 2009 [<http://www.anzca.edu.au/events/asm/asm2009/abstracts/>]



transthoracic-echocardiography-in-obstetric.html]

- Associate Professor Scott Simmons. Invited speaker. "Epidural ultrasound." RANZCOG/ANZCA CME Meeting, Adelaide, South Australia 2009
- Associate Professor Scott Simmons. Invited speaker. The future of obstetric critical care. RANZCOG/ANZCA CME Meeting, Adelaide, South Australia 2009
- Associate Professor Scott Simmons. Invited speaker. "Is Mendelson still relevant in 2009?" ANZCA Annual Scientific Meeting 2009
- Dr John Crowhurst. Invited speaker. "Anaesthesia and Obesity in Pregnancy." Obesity in Pregnancy Seminar, Eastern Health Box Hill Hospital, Melbourne, Victoria 2009

### Collaborations

Visiting overseas speakers or researchers:

- Multidisciplinary seminar organised by the Department of Anaesthesia and Midwifery Department with overseas invited speakers Dr Helen Scholefield and Clare Fitzpatrick

Visits by staff to other departments:

- Dr Alicia Dennis, University of Sydney, University of Western Sydney, Heart Research Institute Sydney

Other research collaborations:

- Dr Alicia Dennis commenced collaborative research with University of Sydney, University of Western Sydney and international collaboration with Harvard University and the University of Florida with her ongoing

work investigating cardiac function in women with pre-eclampsia

- The Multidisciplinary Critical Care in Obstetric Anaesthesia Seminar, UK

### Research Grants and Funding

- Australian Society of Anaesthetists PacMed/LMA PhD Fellowship, Dr Alicia Dennis, ongoing
- Edwards Lifesciences Educational Grant, Dr Alicia Dennis, ongoing
- SonoSite Transthoracic echocardiography machine loan, Dr Alicia Dennis, ongoing

### Academic Achievements

- Dr Alicia Dennis, PEARLS (Pre-eclampsia Research Laboratories – Heart Research Institute Australia) Scholar 2009-10

### Other

- Associate Professor Scott Simmons, Dr Alicia Dennis and Dr John Crowhurst are reviewers for *International Journal of Obstetric Anaesthesia* and *Anaesthesia and Intensive Care*
- Associate Professor Scott Simmons and Dr Alicia Dennis are both executive members of the Obstetric Anaesthesia Special Interest Group ANZCA/ASA/NZSA

## Department of Obstetrics and Gynaecology, University of Melbourne, Mercy Hospital for Women



Associate Professor Sue Walker

In 2009, the University of Melbourne continued to drive an intensive research agenda within the Department of Obstetrics and Gynaecology at Mercy Hospital for Women. As one of the leading tertiary hospitals in women's health in Australia, the hospital has a responsibility to advance the research agenda and to give research a substantive profile alongside ever increasing clinical demands and the equally important role in teaching and training.

It is to Mercy Health's credit that the significant clinical contribution made by university staff such as Associate Professor Sue Walker, Dr Elizabeth McCarthy and Dr Alexis Shub is recognised. In return they provide the university with the support it needs to advance research to the combined benefit of the university, the hospital and women's health.

Mercy Health continues to see the hospital as a leader in women's health research and provides strong support to the department. Pivotal in this respect is the establishment of the Mercy Health Foundation and the prospect of the Mercy Health Foundation supporting a Chair of Maternal Fetal Medicine at Mercy Hospital for Women.

Sue Walker remains an inspiration to all clinical researchers at the hospital. Facilitation

of registrar research has been particularly rewarding and a bright future of academic activity and research at the hospital is assured. As Head of the Perinatal Unit at the hospital, Sue has an intensive clinical load managing women with often extremely complex pregnancies.

Despite this onerous responsibility, she has gathered an enthusiastic team of researchers in her department and has been a leader in establishing collaborative research arrangements with researchers within Austin Hospital. She has shown that our relationship with Austin Hospital can be an important link to research expertise, in addition to the clinical support provided. Sue delivered a plenary address at the International Federation of Obstetrics and Gynaecology (FIGO) in Cape Town, South Africa 2009.



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Dr Martha Lappas

Dr Martha Lappas is now in the middle of a prestigious five year NHMRC fellowship. She continues to have research grant success and a stream of publications centred around her principle research interests including preterm labour, rupture of the fetal membranes and gestational diabetes mellitus. Two outstanding PhD students, Ms Sarah Holdsworth-Carson and Ms Michelle Colomiere, are nearing completion and we look forward to reporting thesis completion and graduation this year.

Dr Harry Georgiou and Dr Megan Di Quinzio have supervised Ms Jan Heng to PhD completion and her thesis is now with the examiners. Her work has evolved from the

groundwork of Megan Di Quinzio and has produced very exciting results, which have now been published in a high citation index journal. Jan will continue her perinatal research as a postdoctoral fellow in Canada and we wish her well with her future career.

Professor Greg Rice is an NHMRC Professorial Fellow with interests in both perinatal research and the early diagnosis of ovarian cancer. Having left the Baker Research Institute at the end of 2009 after a five year association, we will now be able to increase his research presence at Mercy Hospital for Women. In 2010 we welcomed three scientists from his team who relocated from the Baker Research Institute to the university department. We anticipate an increase in this long standing collaboration.

Those familiar with the department will be aware of the critical role played by the research midwives in the conduct of research at Mercy Hospital for Women. The responsibility carried as the interface between the patients and the researchers has never been more apparent. Ms Astrid Tiefholz and Ms Gay Fleming deserve particular mention for their enormous contribution to our research effort. The department also recognises the contribution made by the Human Research Ethics Committee as well as the contribution of the honorary clinical staff.

Special mention is made of Professor Peter Carpenter, Chair of the Human Research Ethics Committee; Clinical Professor Peter Dwyer; Associate Professors Peter Maher, Lachlan de Crespigny, David Allen, Peter Grant and Sonia Grover; as well as Doctors Kai Koenig, Charles Barfield, Clare Collins and Dan Casalaz.

**Dr Martha Lappas Perinatal Research Group**

*Group Leader Martha Lappas BSc Hons PhD; Scientific Advisor Greg Rice BSc Hons PhD; Research Staff Amber Mitton BSc Hons; Ratana Lim BSc Hons; PhD Students Sarah Holdsworth-Carson BSc Hons, Michelle Colomiere BSc Hons, Mahalia Chai BSc Hons; Clinician Michael Permezel MD MRCP MRCOG FRANZCOG*

***Understanding the onset of human labour and parturition***

Ms Sarah Holdsworth's PhD research has explored the biochemical basis of human parturition with a particular emphasis on those molecular mechanisms responsible for the onset of labour. This is an extremely important area of research as preterm birth affects more than 20,000 pregnancies in Australia each year, but little is known about why preterm birth occur and even less is known about how to prevent it. Preterm birth accounts for 85 per cent of all early infant deaths and is associated with greatly increased rates of long term disabilities including cerebral palsy, intellectual handicap, neurocognitive disorders and other sensorineural dysfunction. Sarah's thesis is nearing completion.

***The physiology of fetal membrane rupture***

Preterm rupture of fetal membranes precedes about a half of all preterm delivery. In order to develop clinically useful interventions, a better understanding of the physiological mechanisms involved in membrane rupture is essential. Ms Mahalia Chai is investigating the cause of fetal membrane rupture with a view to the future development of clinically useful interventions to reduce this potentially devastating complication of pregnancy.

***Pathophysiology of gestational diabetes mellitus (GDM)***

Ms Michelle Colomiere had undertaken her PhD exploring the molecular mechanisms of insulin action in gestational diabetes. A better understanding of the regulatory pathways that mediate insulin action may lead to the identification of molecular targets for therapy. In particular, the role of various inflammatory pathways in the biochemical mechanisms involved in insulin resistance associated with GDM has been examined, with these pathways representing novel approaches to developing agents for efficacious clinical management strategies for the management of GDM.

Michelle has made a number of important presentations and already has publications accepted. Like Sarah, Michelle expects to submit her thesis in 2010.

**Dr Harry Georgiou Perinatal Research Group**

*Harry Georgiou BSc (Hons) PhD, Megan Di Quinzio MD FRANZCOG, Jan Heng BBiomedSc (Hons), Amy Bohren BA (Hons), Gabrielle Fleming, Greg Rice PhD MHA, Michael Permezel MD FRANZCOG*

***Biochemical markers for the prediction of preterm birth***

*Harry Georgiou BSc (Hons) PhD; Megan Di Quinzio MD FRANZCOG; Jan Heng BBiomedSc (Hons); Greg Rice PhD MHA; Michael Permezel MD FRANZCOG*

The impact of infant morbidity and mortality associated with preterm birth cannot be overstated. Our lack of understanding of the aetiology of preterm birth limits our ability to identify and implement efficacious management and intervention strategies to minimise the adverse effects on the baby. The lack of a rapid and reliable screening test to identify asymptomatic women who are at risk of developing preterm labour further limits the early detection of disease onset and the implementation of preventive therapies.

An early detection test with a high positive predictive value and high sensitivity would represent a major advance to the discipline and afford the opportunity to evaluate alternative treatment and clinical management strategies.

The objectives of this project are three-fold: (1) to identify and characterise protein biomarkers found in human cervicovaginal fluid that are associated with impending labour and prelabour rupture of membranes, (2) to validate these labour associated biomarkers in a large clinical cohort and (3) to develop and evaluate the clinical utility of a multiple biomarker screening

test for the prediction of term and preterm labour.

Over the past three years, PhD student Ms Jan Heng has identified and evaluated putative biomarkers of labour found in the cervicovaginal fluid of pregnant women. Using high throughput proteomic technologies, Jan has also validated a number of putative biomarkers in a large clinical cohort and found the expression of these biomarkers to be altered before the onset of labour. These biomarkers include an anti-inflammatory cytokine, matrix metalloproteinases, cysteine proteases and inhibitors, and antioxidant enzymes. The differential expression of these proteins provide an insight into their temporal changes before the onset of labour, giving us a better understanding of the triggers and processes involved in human parturition. These biomarkers are also currently being evaluated for their ability to predict labour onset.

The development of multivariate classification models represents a promising approach to improving diagnostic efficacy and clinical utility. We envisage that a multiple biomarker screening test may provide improved sensitivity and positive predictive value than the currently used fetal fibronectin test to predict preterm labour. The triage of at risk women into a high surveillance model of care will not only minimise the risk of preterm labour but will allow novel and targeted preventive treatments to be evaluated.

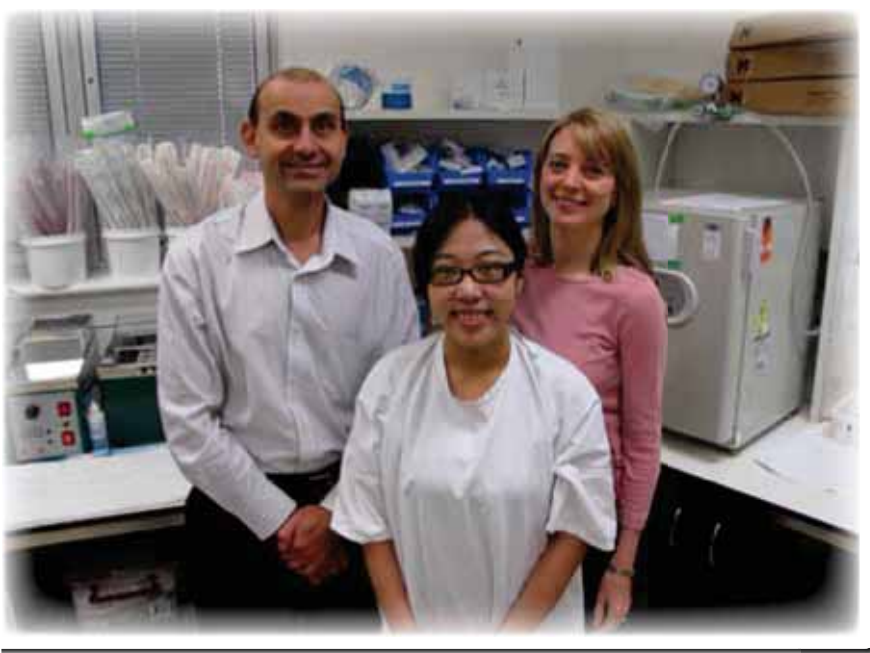
In 2009, this research was presented at two international conferences: the Society for Gynecologic Investigation, Glasgow, UK and the International Federation of Placenta Associations in Adelaide, South Australia. In October, Jan presented this research at the



Austin Life Sciences Research Week. She was the winner of the GlaxoSmithKline Prize for Scientific Research and a finalist for both the Austin Hospital Medical Research Foundation Young Investigator Award and the Austin Life Sciences Award for Basic Research.

Low birthweight, possibly reflecting an adverse uterine milieu, not only increases perinatal morbidity but confers a lifelong susceptibility to common chronic adult diseases such as coronary artery disease, diabetes and stroke. This challenging concept has been

verified by numerous large epidemiological studies and is readily reproducible in various small and large animal models. A longstanding view held that growth in the first half of pregnancy was fixed and variations in fetal size occurred only later. However, evidence has emerged over the past decade that suggests the pathological mechanisms causing low birthweight may begin earlier than previously thought. We have conducted a large prospective study to better investigate the link between low birthweight and the first trimester.



Dr Harry Georgiou, Dr Megan Di Quinzio,  
Ms Stella Liong

Jan submitted her PhD thesis in December 2009 and will soon take up a Post Doctoral Research Fellowship at the Samuel Lunenfeld Research Institute, Mount Sinai Hospital in Toronto, Canada.

***First trimester prediction of low birthweight***

*Harry Georgiou BSc (Hons) PhD; Yulinda Thio; Stephen Tong MBBS MRANZCOG; Chris Russell MBBS; Michael Permezel MD MRCP FRANZCOG*

Given the significant body of evidence from in vitro human and in vivo animal studies pointing to the critical role of the immune system in implantation and placentation, we measured maternal serum concentration of 27 major cytokines at 7-10 weeks of gestation in pregnancies destined to result in a small for gestational age (SGA) baby. We compared levels to pregnancies where birthweight was appropriate for gestational age. Of 21 detectable analytes, 14 varied significantly in association with SGA. Besides interferon- $\gamma$  (IFN- $\gamma$ ) which was raised, most cytokines were lower in association with SGA, including major pro (Interleukin (IL)-2, IL-7, IL-12p70) and anti-inflammatory (IL-1 receptor antagonist, IL-4,

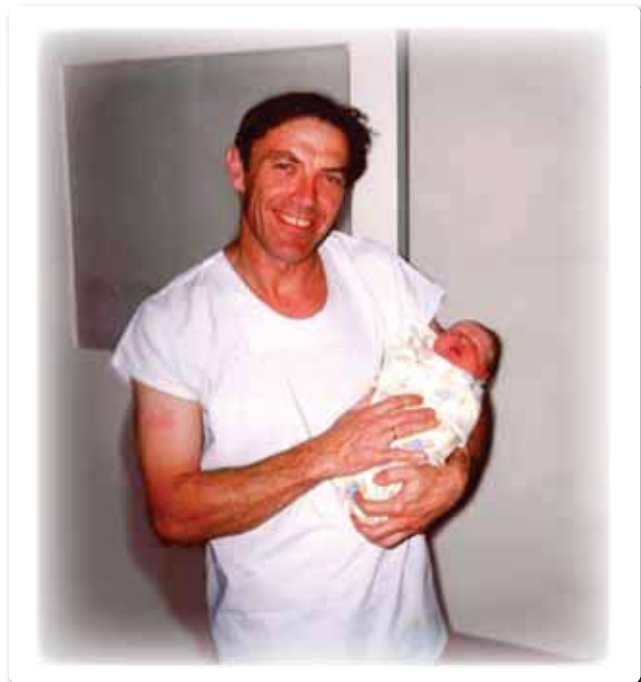


IL-10, IL-13) cytokines. Some chemokines were higher (Eotaxin, Macrophage Inflammatory protein-1a) and others lower (Monocyte chemotactic protein-1, IL-8). Predictive modelling combining four cytokines provided a theoretical predictive test for SGA with a sensitivity of 60 per cent, a specificity of 90 per cent, and a negative predictive value of 95 per cent.

This study provides evidence that the immune system may be involved in pathogenic mechanisms occurring as early as 7-10 weeks of gestation causing up to half of all cases of low birthweight. (Paper submitted for publication.)

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Professor Michael Permezel



### ***Gestational diabetes follow up project***

*Harry Georgiou BSc (Hons) PhD; Connie Louizos BBioMed (Sexual Health); Michael Permezel MD MRCP FRANZCOG*

The Gestational Diabetes Follow Up Project was established in 2003 as an adjunct to the well known Gestational Diabetes Follow Up Program, which is Australia's longest running clinical service and epidemiological study into the development of Type 2 diabetes among women with a history of gestational diabetes mellitus (GDM). The program acknowledges the previous efforts of Emeritus Professor Norman Beischer, Dr Peter Wein and Ms Mary Sheedy in making outstanding contributions to our knowledge of gestational diabetes and its later consequences.

Our research has demonstrated that women who experience diabetes during pregnancy are almost 10 times more likely to develop Type 2 diabetes later in life, with over one quarter of participants developing the condition within 15 years of the index pregnancy.

Since the 1970s, women who had experienced GDM during pregnancy have been returning to Mercy Hospital for Women for glucose tolerance testing every 12-24 months and, at the same time, providing important clinical data for research purposes. At each appointment, women are provided with information about how to maintain a healthy lifestyle in order to reduce their risk of developing Type 2 diabetes. Results are communicated to general practitioners for interim care. The Gestational Diabetes Follow Up Project led by Dr Harry Georgiou adds a scientific dimension to the research by collecting blood samples that will be used in protein analysis.

Previous studies have shown that certain proteins in the blood are altered during pregnancy, which precedes the development of GDM (Georgiou et al, 2008). The current project aims to determine which blood proteins are involved in the development of Type 2 diabetes in order to establish an early detection method. Early detection would allow the commencement of interventions that would help delay or prevent the onset of Type 2 diabetes and its complications.

**Associate Professor Sue Walker and the Mercy Perinatal Unit**

*Sue Walker MD DDU CMFM FRANZCOG; Alexis Shub MB BS PhD DDU CMFM FRANZCOG; Elizabeth McCarthy MD DDU CMFM FRANZCOG; Alison Fung MB BS MRANZCOG*

**Maternal sleep apnoea and pregnancy outcomes**

*Fung A, Esdale E, Barnes M, Wilson D, Walker S*

The global obesity crisis has many important implications for pregnant women and their carers. Women who are obese, and their babies, suffer from serious pregnancy complications such as stillbirth and high blood pressure. Obesity is also a risk factor for obstructive sleep apnoea. In this study, we are hoping to determine whether sleep apnoea might partly explain the observed increase in obstetric complications seen in obese pregnant women.

This project is being undertaken by Dr Alison Fung, in collaboration with the Department of Respiratory Medicine, Austin Hospital. Dr Helen Esdale is recruiting a cohort of antenatal patients and administering a snoring

questionnaire to correlate sleep disordered breathing with important pregnancy outcomes such as pre-eclampsia and growth restriction. From this screening questionnaire, a number of women have been selected for a formal sleep study to determine whether they have sleep apnoea.

Fetal monitoring is being performed during this sleep study to assess whether there are any short term effects on the fetal heart rate of maternal oxygen desaturation. Fetal welfare is also being monitored in these patients with serial measurements of fetal growth using ultrasound in the third trimester. Maternal and neonatal blood samples will be taken to determine if there are important metabolic changes that may accompany sleep disordered breathing in pregnancy.

**Fetal bone growth trajectory and later adult bone health**

*Bjornerem A, Walker S, Seeman E*

In collaboration with the Department of Endocrinology at Austin Hospital, mid-trimester fetal long bone estimations using 3D ultrasound are being examined as predictors of later bone size and long term bone health.

Bone structure, particularly bone size, is a major determinant of bone strength. This trait tracks during childhood and adolescence. Whether tracking of bone size occurs during intrauterine life and/or during the first years of life is not known. If changes in percentile occur, we would like to identify maternal risk or protective factors that produce deviation in tracking. Maternal health and nutrition, as well as the infant's intake of vitamin D and calcium, may have a long lasting effect on the offspring's health.

As rapidly growing fetuses and neonates are vulnerable to suboptimal nutrition or other environmental factors, changes of fetal development within the normal range can have lasting effects on bone structure and long term consequences for the risk of disease.

***First trimester serum markers as predictors of impaired customised fetal growth***

*Walker S, Sheffield L, Permezel M*

In collaboration with Murdoch Children's Research Institute, markers of placental health detected in the maternal serum in early pregnancy may enable us to better predict women destined to experience adverse pregnancy outcomes. In particular, we are interested in determining whether these markers may better identify small for gestational age fetuses after customising fetal size for maternal characteristics such as height and weight. Small for gestational age fetuses contribute disproportionately to perinatal mortality and morbidity. If a serum marker in early pregnancy could more reliably detect which fetuses are at risk, then intensive surveillance and timely delivery may further improve outcomes.

**Associate Professor Sonia Grover and AMS Students**

***Bleeding disorders in menorrhagia and endometriosis***

Associate Professor Sonia Grover completed supervision of her two Advanced Medical Science students, Emma Johnson and Sarah Heynemann, to completion in 2009. They were able to demonstrate relationships between inherent bleeding disorders in women and the presence of menorrhagia and endometriosis. We wish both Emma and Sarah well in their medical careers.

**Publications**

Walker S, Berkovic S, Permezel M. The management of epilepsy in pregnancy. *BJOG* 2009; 116(6):758-67.

Lappas M, Rice G. Transcriptional regulation of the processes of human labour and delivery. *Placenta, Trophoblast Research* 2009; 30(Suppl A): S90-S95.

Holdsworth-Carson S, Permezel M, Riley C, Rice G, Lappas M. Peroxisome proliferators activated receptors and retinoid X receptor-alpha in term human gestational tissues: Tissue specific and labour associated changes. *Placenta* 2009; 30(2):176-186.

Lappas M, Lim R, Riley C, Rice G, Permezel M. Localisation and expression of FoxO1 proteins in human gestational tissues. *Placenta* 2009; 30(3):256-262.

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Jeffries K, Shub A, Walker S, Hiscock R, Permezel M. Reducing excessive weight gain in pregnancy: A randomised controlled trial. *Med J Aust* 2009; Oct 19;191(8):429-33.

Crosbie D, Sugumar H, Simpson M, Walker S, Dewey H, Reade M. Late onset ornithine transcarbamylase deficiency: A potentially fatal yet treatable cause of coma. *Crit Care Resusc* 2009; Sep; 11(3):222-7.

Forster D, McEgan K, Ford R, Moorhead A, Opie G, Walker S, McNamara C. Diabetes and antenatal milk expressing: A pilot project to inform the development of a randomised controlled trial. *Midwifery* 2009; Jul 15.

Said J, Higgins J, Moses E, Walker S, Borg A, Monagle P, Brennecke S. Inherited thrombophilia polymorphisms and pregnancy outcomes: A prospective cohort study in an asymptomatic antenatal population. *Obstet Gynecol*; Jan; 115(1):5-13; 2010.

### Book Chapters

Lappas M. Prostaglandins as mediators of adipose inflammation. In AB Awad & PG Bradford (Eds), *Adipose Tissue and Inflammation* 2009; (Chapter 9) Boca Raton, FL: CRC Press. Boca Raton, Florida, USA.

### Publications in Press

Gan H, Lappas M, Johns T. Targeting a unique EGFR epitope with monoclonal antibody 806 activates NF- $\kappa$ B and initiates tumor vascular normalisation. *Journal of Cellular and Molecular Medicine*. (Accepted 2009)

Lappas M, Mitton A, Permezel M. In response to oxidative stress, the expression of inflammatory cytokines and antioxidant enzymes are impaired in placenta, but not

adipose tissue, of women with gestational diabetes. *Journal of Endocrinology*. (Accepted 2009)

Colomiere M, Permezel M, Lappas M. Gestational diabetes mellitus and obesity alter insulin signalling and glucose metabolism in skeletal muscle and adipose tissue. *Journal of Molecular Endocrinology*. (Accepted 2009)

Holdsworth-Carson S, Lim R, Mitton A, Whitehead C, Rice GE, Permezel M, Lappas M. Peroxisome proliferators activated receptors are altered in pathologies of the human placenta: Gestational diabetes mellitus, intrauterine growth restriction and pre-eclampsia. *Placenta*. (Accepted 2009)

Galbally M, Snellen M, Walker S, Permezel M. Management of antipsychotic and mood stabilising medication in pregnancy: Recommendations for antenatal care.

Hewagama S, Walker S, Stuart R, Gordon C, Johnson P, Friedman D, O'Reilly M, Cheng A. Swine influenza A/H1N1/2009 and pregnancy outcomes in Victoria, Australia. *Clinical Infectious Diseases*.

Said J, Ignjatovic V, Monagle P, Walker S, Higgins J, Brennecke S. Altered reference ranges for Protein C and Protein S during early pregnancy: Implications for the diagnosis of Protein S and Protein C deficiency during pregnancy. *Thrombosis and Haemostasis*.

Hodges R, Salvador L, D'Antona D, Georgiou HM, Wallace EM. Activin A as a marker of intrauterine infection in women with preterm prelabour rupture of membranes. *J Perinatol*. (Accepted 2009)

Heng YJ, Di Quinzio M, Permezel M, Ayhan M, Rice G, Georgiou H. Temporal proteomic analysis of human cervicovaginal fluid with impending labour. *J Proteome Res.* (Accepted 2009)

### Presentations

- Walker S. "Women have the right to request an elective caesarean section at term." FIGO, Cape Town, South Africa 2009
- Walker S. "Balancing obstetric intervention and fetal risk: A survey of patient and clinician thresholds for caesarean delivery." The Fetus As a Patient, Sydney, New South Wales 2009
- Lappas M, Holdsworth-Carson S, Permezel M, Rice G. "Proteomic analysis of term human gestational tissues: Establishment of 2D electrophoretic maps for placenta, amnion and choriondecidua." 56th Annual Meeting of the Society for Gynecologic Investigation, Glasgow, UK 2009
- Permezel M. "Pathophysiology of gestational diabetes." The Fetus As a Patient, Sydney, New South Wales 2009
- Holdsworth-Carson S, Permezel M, Rice G, Lappas M. "Pro-inflammatory cytokine release and matrix metalloproteinase activity in response to PPAR gamma-activation in LPS-stimulated human gestational tissues." ESA-SRB Annual Scientific Meeting, Adelaide, South Australia 2009
- Tong S, Sucintri Thio Y, Bryant V, Permezel M, Russell C, Georgiou H. "Altered maternal serum cytokine profiles across very early pregnancy in association with low birthweight." 56th Annual Meeting of the Society for Gynecologic Investigation, Glasgow, UK 2009
- Tong S, Sucintri Thio Y, Permezel M, Russell C, Georgiou H. "Low birthweight is preceded by altered immune cytokine profiles across very early pregnancy." Annual Meeting of the International Federation of Placental Associations, Adelaide, South Australia 2009
- Colomiere M, Permezel M, Lappas M. "Human placental lactogen regulates pregnancy induced insulin resistance in human subcutaneous adipose tissue." ESA-SRB Annual Scientific Meeting, Adelaide, South Australia 2009
- Colomiere M, Lappas M, Permezel M, Desoye G, Hiden U. "Alterations in placental insulin signalling pathway in GDM and obesity." 41st Annual Meeting of the Diabetic Pregnancy Study Group (DPSG), Rome, Italy 2009
- Colomiere M, Permezel M, Lappas M. "Pregnancy secreted hormones disrupt insulin signalling in human placental JEG-3 cells." American Diabetes Association, 69th Scientific Sessions, New Orleans, USA 2009
- Georgiou H, Heng Y, Di Quinzio M, Permezel M, Rice G. Poster: "Decreased antioxidant status of human cervico-vaginal fluid with impending labour: Developing a predictive capacity." Annual Meeting of the International Federation of Placental Associations, Adelaide, South Australia 2009
- Georgiou H, Heng Y, Di Quinzio M, Permezel M. Poster: "Decreased antioxidant status of human cervico-vaginal fluid with impending labour: Developing a predictive capacity." Austin Hospital Research Week, Heidelberg, Victoria, October 2009
- Heng Y, Di Quinzio M, Permezel M, Rice G, Georgiou H. "Multiple novel predictors of human labour." Austin Hospital Research Week, Heidelberg, Victoria, October 2009



- Heng Y, Di Quinzio M, Permezel M, Rice G, Georgiou H. "Decreasing Cu, Zn superoxide dismutase in human cervicovaginal fluid with impending term labour." 56th Annual Meeting of the Society for Gynecologic Investigation, Glasgow, UK, March 2009
- Heng Y, Di Quinzio M, Permezel M, Rice G, Georgiou H. "Multiple novel predictors of human labour." 56th Annual Meeting of the Society for Gynecologic Investigation, Glasgow, UK, March 2009

### **Research Grants and Funding**

*Year:* 2007-11

*Sponsor:* NHMRC RD Wright Career Development Award

*Project:* Understanding the mechanisms that regulate the onset of human labour and delivery  
*Amount:* \$445,000

*Year:* 2007-09

*Sponsor:* NHMRC Project Grant

*Project:* The insulin signalling pathway in normal and gestationally diabetic pregnancies  
*Principal Investigators:* Dr Martha Lappas, Ms Gernot Desoye, Professor Michael Permezel  
*Amount:* \$306,938

*Year:* 2009

*Sponsor:* Keith Fitzmaurice Bursary

*Project:* Maternal sleep apnoea and pregnancy outcomes

*Principal Investigators:* Associate Professor Sue Walker, Dr Alison Fung

*Amount:* \$25,000

*Year:* 2009

*Sponsor:* Stillbirth Association

*Project:* Maternal sleep apnoea and pregnancy outcomes

*Principal Investigators:* Associate Professor Sue Walker, Dr Alison Fung

*Amount:* \$22,000

*Year:* 2009-11

*Sponsor:* NHMRC Project Grant

*Project:* Understanding what triggers birth

*Principal Investigators:* Professor Greg Rice, Dr Martha Lappas, Professor Michael Permezel

*Amount:* \$426,600

*Year:* 2009

*Sponsor:* Diabetes Australia Research Trust

*Project:* The role of fatty acids in the pathophysiology of diabetes in pregnancy

*Principal Investigator:* Dr Martha Lappas

*Amount:* \$60,000

*Year:* 2009

*Sponsor:* Melbourne Research Grant Scheme

*Project:* The physiology of fetal membrane rupture

*Principal Investigator:* Dr Martha Lappas

*Amount:* \$35,600

*Year:* 2008-10

*Sponsor:* NHMRC Project Grant

*Project:* Investigating the link between early pregnancy and obstetric diseases

*Principal Investigators:* Professor Greg Rice, Dr Stephen Tong, Dr Harry Georgiou

*Amount:* \$461,625

*Year:* 2007-10

*Sponsor:* NHMRC Project Grant

*Project:* Development of a multiplex assay for the identification of women at risk of preterm labour

*Principal Investigators:* Dr Harry Georgiou, Dr Megan Di Quinzio, Mr Ian Young, Professor Greg Rice

*Amount:* \$198,375

*Year:* 2009

*Sponsor:* Medical Research Foundation for Women and Babies

*Project:* Identification of novel biomarkers to predict impending labour

*Principal Investigators:* Dr Harry Georgiou, Dr Megan Di Quinzio, Professor Michael Permezel, Professor Greg Rice

*Amount:* \$30,000

*Year:* 2009

*Sponsor:* Medical Research Foundation for Women and Babies

*Project:* First trimester prediction of low birthweight

*Principal Investigators:* Dr Harry Georgiou, Dr Stephen Tong

*Amount:* \$30,000



### **Scholarships**

- Ms Michelle Colomiere: Felix Meyer Scholarship in Obstetrics and Gynaecology
- Ms Mahalia Chai: Felix Meyer Scholarship in Obstetrics and Gynaecology

## Midwifery Professorial Unit, Mercy Hospital for Women, La Trobe University

The Midwifery Professorial Unit enjoyed significant growth in 2009 with many team members engaged in higher degree studies, research projects and presenting at national conferences. It is very encouraging to see the enthusiasm growing for midwives and nurses to initiate their own research projects and we intend to expand the research base in 2010.

Our objectives are to:

- Facilitate the education and professional development of nurses and midwives
- Encourage nurses and midwives to partake in research activities and projects and to initiate and lead their own research projects
- Establish an organisational framework for the development, implementation and evaluation of educational and professional development activities
- Develop and maintain high quality, clinically relevant programs that support clinical practice development
- Engage in higher degree studies that focus on relevant areas of clinical practice and development
- Ensure that all programs adhere to the principles of adult learning and are research based
- Foster understanding between the various areas of nursing/midwifery education practice
- Provide accessible and flexible learning opportunities
- Be proactive in the development of new programs within the multidisciplinary team that support consumer, organisational and professional development needs
- Foster and maintain relevant internal and external links with allied health, medical and professional organisations



### Academic Achievement and Research Activity

A number of the midwifery team at Mercy Hospital for Women were successful in completing the Master of Midwifery or Master of Nursing degrees in 2009, including Ms Sarah Hay, Ms Caroline Carr, Ms Jennifer Fielding, Ms Alison Wagstaffe, Ms Sherryn Elworthy and Ms Kerri McEgan.

Various publications are in preparation or have been submitted as a result of the study undertaken.

There was a very strong representation at the Perinatal Society of Australia and New Zealand (PSANZ) conference held in Darwin, April 2009 with eight presentations from the team. One of the poster presentations was awarded "Best Poster in the area of Midwifery" (Mazzarino, McDonald, Forster, Newton, Bowditch).

There was also significant input from nurses and midwives – either in organising, presenting or attendance – in the "Twilight" seminars. This new initiative at Mercy Hospital for Women provides a forum in which to disseminate

current research and raise topical issues. The interest within and outside the organisation resulted in every seminar being filled to capacity. A new program of seminars is being held in 2010.

Rosetta Moors, LTU Research Assistant provided valuable assistance to staff throughout the year. Rosetta resigned her position at the end of 2009 to pursue her interest in human rights.

### Publications

McDonald S, Henderson J, Faulkner S, Evans S, Hagan R. Effect of an extended midwifery postnatal support program on the duration of breastfeeding: A randomised controlled trial. *Midwifery* 2010; 26:88-100.

Wang S, McDonald S, Oats J. Evaluation of the menopausal self-care behaviours questionnaire among middle aged women in Taiwan. *Nursing Methods* 2009. (Submitted)

McDonald S. Chapter 29: Physiology and management of the third stage of labour. *Myles Textbook for Midwives* 2009; 15E pp 531-554. Fraser and Cooper (Eds). Published by Elsevier Science.

Lam C, McDonald S. Comparison of two pushing techniques used in the second stage of labour for their effect on maternal perception of fatigue in the early postpartum period among Chinese women: A randomised controlled trial. *Hong Kong Journal of Obstetrics & Midwifery* 2009. (Accepted 2009)

Eeles S, McDonald S, Sheehan P. Victorian women's knowledge of folic acid consumption preconceptually and during pregnancy. 13th Annual Congress of The Perinatal Society of

Australia and New Zealand, 19-22 April 2009, Darwin, Northern Territory. Published in the *Journal Paediatric and Child Health*; Vol 45; Issue S1.

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McDonald S, Mitchell S, Walker S. What is the impact of emergency antenatal transfer of women from regional areas to a tertiary hospital? Does their perception of their situation change over time? 13th Annual Congress of The Perinatal Society of Australia and New Zealand, 19-22 April 2009, Darwin, Northern Territory. Published in the *Journal Paediatric and Child Health*; Vol 45; Issue S1.

Faulks F, McDonald S, Kenny A. Midwives attributes and behaviours: What makes the difference? 13th Annual Congress of The Perinatal Society of Australia and New Zealand, 19-22 April 2009, Darwin, Northern Territory. Published in the *Journal Paediatric and Child Health*; Vol 45; Issue S1.

Ramudu L, McDonald S. Transfer from Level 3 NICU to a SCN closer to home: Parent and staff perceptions. 13th Annual Congress of The Perinatal Society of Australia and New Zealand, 19-22 April 2009, Darwin, Northern Territory. Published in the *Journal Paediatric and Child Health*; Vol 45; Issue S1.

Ramudu L, McDonald S. The transition from Level 3 NICU to Level 2 SCN in Victoria: A pilot study. 13th Annual Congress of The Perinatal

Society of Australia and New Zealand, 19-22 April 2009, Darwin, Northern Territory. Published in the *Journal Paediatric and Child Health*; Vol 45; Issue S1.

Mazzarino M, McDonald S, Forster D, Newton M, Bowditch T, Albers L. Provision of fluids and food to low risk women in labour: Views, knowledge and practice of midwives working in a tertiary birth suite. 13th Annual Congress of The Perinatal Society of Australia and New Zealand, 19-22 April 2009, Darwin, Northern Territory. Published in the *Journal Paediatric and Child Health*; Vol 45; Issue S1.

#### Visitors to the Unit

Dr Helen Scholefield and Ms Clare Fitzpatrick were supported to visit Australia from the United Kingdom to provide a number of presentations including a full day workshop in Obstetric Critical Care in 2010. This included a presentation on the setting up of a Midwifery High Dependency Unit in Liverpool, England. As a result of that visit, Professor Susan McDonald has been invited to spend time in the unit in Liverpool in 2010. Such collaborations are extremely important to the organisation and to meeting the future education needs of staff.

#### Professor Susan McDonald:

##### External Committees

- NHMRC National Antenatal Care Guidelines, Co-Chair Clinical Working Party, monthly
- NHMRC National Antenatal Care Guidelines Acting, Co-Chair, Executive Committee, July 2009 to February 2010
- Supervision of Lyn Tuttle Scholarship Awardee 2010, monthly meeting
- International Confederation of Midwives Research Standing Committee Member

- International Confederation of Midwives Education Standing Committee, Co-Chair
- NBV, university course curriculum review
- NBV, Nurse Practitioner (Midwifery) panel member and mentor to candidates
- NSW Health Practitioners Board, Midwife Practitioner, panel member as required
- Invited consultation ECU Reference Group Meeting
- Invited speaker for MPCOP Twilight Forum
- Board member, Tweddle Child and Family Service
- NHMRC GRP 5 membership



Professor Susan McDonald

#### Professional Development & Research Unit (Nursing and Midwifery)

The Professional Development & Research Unit (Nursing and Midwifery) aims to facilitate and support the education and professional development opportunities for nurses and midwives, encouraging a commitment to lifelong learning and fostering the development of evidence based practice within an environment of consumer focused care. The unit is also responsible for co-ordinating a Graduate Nurse



and Graduate Midwife Program, Employment Model of Midwifery Program, Neonatal Intensive Care Master Course, Graduate Certificate/Diploma in Perioperative Care Course, Employment of Bachelor of Nursing/Bachelor of Midwifery Double Degree 4th year students as Division 2 Nurses in ante/postnatal/SCN areas and Re-Entry Midwifery clinical placement programs.

Ms Jackie Keane



### Research Activity

- “Investing in our future – Employment of Bachelor of Nursing/Bachelor of Midwifery Double Degree students as Division 2 Nurses” at Mercy Hospital for Women in conjunction with La Trobe University. Ms Jackie Keane, Professor Susan McDonald, Ms Theresa Bowditch

The aim of this study was to evaluate the Bachelor of Nursing/Bachelor of Midwifery Division 2 Nurse pilot employment program to encourage midwifery graduates to make their career in midwifery.

Specifically, the objectives were to evaluate:

- Whether this new model increased opportunities for learning for final year Bachelor of Nursing/Bachelor of Midwifery students while being employed as Division 2 Nurses within their profession of choice
- The feasibility and appropriateness of this employment model for recruitment of our future midwives within the hospital setting, providing safe care under the supervision of a midwife while assisting with current workforce issues

### Oral and Poster Presentations

- “Investing in our future – Employment of Bachelor of Nursing/Bachelor of Midwifery Double Degree students as Division 2 Nurses” pilot program at Mercy Hospital for Women in conjunction with La Trobe University, Jackie Keane, National Midwifery Conference, Adelaide, South Australia 2009

### Research Grants and Funding

- Nurses Board of Victoria, “Elective caesarean sections – continuity of care – a streamlined approach for women booked for elective caesarean sections in a tertiary facility”, Jackie Keane, \$2,000
- Department of Human Services, “Investing in our future – Employment of Bachelor of Nursing/Bachelor of Midwifery Double Degree students as Division 2 Nurses” pilot program at Mercy Hospital for Women in conjunction with La Trobe University, Mercy Hospital for Women, \$30,000

### Academic Achievements

- Master of Midwifery: Ms Sherryn Elworthy, Ms Jennifer Fielding

## Department of Gynaecological Oncology, Mercy Hospital for Women

The Department of Gynaecological Oncology was involved in the treatment planning and delivery of care to 420 women with newly diagnosed cancer in 2009. The follow up care of these women and the management of recurrent cancer adds further to the clinical load. The number of chemotherapy treatments increased by 75 per cent in 2009 and the demand on the colposcopy/dysplasia service remains high.

Despite these clinical commitments the members of the Gynaecological Oncology Unit continue to be involved in many academic and research pursuits, some of which are listed below.

The department has three certified gynaecological oncologists: Associate Professor Peter Grant (Head), Associate Professor David Allen (Deputy Head) and Dr Simon Hyde (Training Supervisor). Ms Bernadette Murray is the Clinical Nurse Consultant of Oncology and Well Women's Clinic, Ms Christine Smith is the department Data Manager, Ms Margaret Lowden is the Clinical Nurse Consultant Manager of the chemotherapy area assisted by Ms Catherine Morell and Ms Suzanne Stokes.

The gynaecological oncologists are co-investigators on international and national multicentre trials, mostly relating to chemotherapy agents.

### Open Trials

- TRIPOD (ANZGOG). A single arm Phase II trial of intra-peritoneal chemotherapy with paclitaxel and cisplatin after optimal debulking surgery for ovarian and related cancers.
- AZD2281 (Astrazeneca/Parexel). Phase II randomised, double blind, multicentre study to assess the efficacy of AZD2281 in the

Ms Margaret Lowden



treatment of patients with platinum sensitive serous ovarian cancer following treatment with two or more platinum containing regimens.

- AGO-OVAR16/VEG110655 (ANZGOG/ GSK). A Phase III study to evaluate the efficacy and safety of pazopanib monotherapy versus placebo in women who have not progressed after first line chemotherapy for epithelial ovarian, fallopian tube or primary peritoneal cancer.
- MORAb-003-003PR (Morphotek/Novotech). A randomised, double blind, placebo controlled study of the efficacy and safety of MORAb-003 (farletuzumab) in combination with paclitaxel therapy in subjects with platinum resistant or refractory relapsed ovarian cancer.
- PORTEC 3 (An intergroup trial of the Dutch Cooperative Gynecologic Oncology Group and the UK National Cancer Research Institute). Randomised Phase III trial

comparing concurrent chemo-radiation and adjuvant chemotherapy with pelvic radiation alone in high risk and advanced stage endometrial carcinoma: PORTEC-3.

### **Trials Closed in 2009**

- Protocol: GOG # 0182 (Follow up still in progress) 2001-2009. Protocol Title: A Phase III randomised trial of paclitaxel and carboplatin versus triplet or sequential doublet combinations in patients with epithelial ovarian or primary peritoneal carcinoma.
- Protocol: ICON 7 (Follow up still in progress) 2007-2009. Protocol Title: A randomised, two arm, multicentre gynaecologic cancer intergroup trial of adding bevacizumab to standard chemotherapy (carboplatin and paclitaxel) in patients with epithelial ovarian cancer.
- Protocol: High-Risk Trial PMCC (Follow up still in progress) 2004-2009. Protocol Title: A Phase II trial of adjuvant chemo-radiation followed by chemotherapy for patients with newly diagnosed endometrial carcinoma at high risk of relapse.
- Protocol: VEGF Trap (ARD6122) 2006-2009. Protocol Title: A multicentre, randomised, double blind, parallel arm, two stage study of the efficacy and safety of AVE0005 (VEGF Trap) administered intravenously every two weeks in patients with platinum resistant and topotecan and/or liposomal doxorubicin resistant advanced ovarian cancer.
- Protocol: GOG # 0199 2005-2009. Prospective study of risk reducing salpingo-oophorectomy and longitudinal CA125 screening among women at increased risk of ovarian cancer.
- Protocol: VEG104450 2007-2009. Protocol Title: A Phase II, open label study evaluating

the effect of GW786034 in subjects with ovarian cancer.

### **Publications**

Dawson S, Hicks R, Johnston V, Allen D, Jobling T, Quinn M, Rischin D. Intraperitoneal distribution imaging in ovarian cancer patients. *Intern Med J* 2009.

Mulvany N, Mitchell G, Allen D. Adenocarcinoma cells in Pap smears. *Pathology* 2009; August 41(5); pp.411-418.

Narayan K, Rejeki V, Herschtal A, Bernshaw D, Quinn M, Jobling T, Allen D. Prognostic significance of several histological features in intermediate and high risk endometrial cancer patients treated with curative intent using surgery and adjuvant radiotherapy. *J Med Imaging Radiat Oncol* 2009; Feb; 53(1):107-13.

Collaborators in the Australian Ovarian Cancer Study Group 2009 which resulted in the following publications in 2009: Grant P, Allen D, Hyde S. Validating genetic risk associations for ovarian cancer through the international Ovarian Cancer Association Consortium. Australian Cancer Study; Australian Ovarian Cancer Study Group. *Br J Cancer* 2009; Jan 27; 100(2):412-20. [Epub]

The BARD1 Cys557Ser polymorphism and breast cancer risk: An Australian case control and family analysis. *Breast Cancer Res Treat*; 115; 145-150.

Newly discovered breast cancer susceptibility loci on 3p24 and 17q23.2. *Nat Genet* 41; 585-590.

Integrated genome-wide DNA copy number and expression analysis identifies distinct

mechanisms of primary chemo-resistance in ovarian carcinomas. *Clin Cancer Res* 2009; 15:1417-1427.

Single nucleotide polymorphisms in the TP53 region and susceptibility to invasive epithelial ovarian cancer. *Cancer Res* 2009; Mar 15; 69(6):2349-57.

Five polymorphisms and breast cancer risk: Results from the Breast Cancer Association Consortium. *Cancer Epidemiol Biomarkers Prev* 18; 1610-1616.

Polymorphisms in the FGF2 gene and risk of serous ovarian cancer: Results from the ovarian cancer association consortium. *Twin Res Hum Genet* 12; 269-275.

The common variant rs13387042 on chromosome 2q35 confers susceptibility to both estrogen receptor positive and estrogen receptor negative breast cancer. *J Natl Cancer Inst* [In press]

Validating genetic risk associations for ovarian cancer through the international Ovarian Cancer Association Consortium. *Br J Cancer* 100, 412-420.

Beyond Parity: Association of Ovarian Cancer With Length of Gestation and Offspring Characteristics. *Am J Epidemiol*.

Incomplete pregnancy and risk of ovarian cancer: results from two Australian case-control studies and systematic review. *Cancer Causes Control*, 7 July 2009

Prevalence and predictors of insomnia in women with invasive ovarian cancer: Anxiety a major factor. *Eur J Ca* 2009; 45:3262-70.

Association between invasive ovarian cancer susceptibility and 11 best candidate SNPs from breast cancer genome-wide association study. *Hum Mol Genet* 2009; Jun 15;18(12):2297-304.

A genome-wide association study identifies a new ovarian cancer susceptibility locus on 9p22.2. *Nature Genetics*. [In press]

Reproducibility of food and nutrient intake estimates using a semi-quantitative FFQ in Australian adults. *Public Health Nutr*, 1-7.

Prevalence and predictors of anxiety and depression in women with invasive ovarian cancer and their carers. *MJA*. [Submitted November 2009]

### Conference Speakers

- Associate Professor David Allen. Invited speaker. HPV Vaccine Symposium, Frankfurt, Germany 2009
- Associate Professor David Allen. Conference organiser, speaker and chair of sessions. ASCCP Scientific meeting. Darwin, Northern Territory 2009
- Associate Professor David Allen. Invited speaker. HPV Vaccine Symposium, Brussels, Belgium 2009
- Associate Professor David Allen. Invited speaker. Mercy Ethos Pilgrimage, Dublin, Ireland 2009.
- Associate Professor Peter Grant, DRANZCOG and MRANZCOG Revision Courses, 2009
- Associate Professor Peter Grant, 3rd Annual Women's Health Conference for General Practitioners – Assessing patients for symptoms of important gynaecological cancers. Melbourne, Victoria 2009
- Associate Professor Peter Grant, Sydney Cancer Centre. Advances in Gynaecological



Oncology. Surgery/chemotherapy vs neoadjuvant chemotherapy/surgery for ovarian disease, Sydney, New South Wales 2009

- Associate Professor Peter Grant, Obstetric Critical Care 2010 – State of the Art in Caring for Unwell Women and Their Babies. “Major obstetric haemorrhage – Who do you go to when all else fails?” Mercy Hospital for Women, Heidelberg, Victoria 2009
- Associate Professor Peter Grant, RANZCOG Provincial Fellows Teleconference Program, 2009
- Associate Professor David Allen, KConFab Scientific meeting. New South Wales 2009
- Associate Professor David Allen, International Papillomavirus Conference. Malmö, Sweden 2009
- Dr Simon Hyde, Dr Raimond Smolders, Ms Margaret Lowden, Ms Christine Smith, Australian New Zealand Gynaecological Oncology Group (ANZGOG)/Australian Surgical Oncology Group (ASGO) inaugural joint conference, Noosa, Queensland 2009
- Associate Professor Peter Grant, The 25th International Papillomavirus Conference, Malmö, Sweden 2009
- Associate Professor Peter Grant, Pfizer Cancer Research Oncology Forum. Sydney, New South Wales 2009

### Conference Poster

- Associate Professor Peter Grant, “Risk factors for early onset cervical carcinoma and high grade dysplasia.” Y Jayasinghe, V Sasongko, E Moore, S Grover, Sn Tabrizi, M Quinn, P Grant, S Garland. 25th International Papillomavirus Conference, Malmö, Sweden 2009

### Research Supervision

- Associate Professor David Allen, Supervisor of Research Internship for visiting student from University Medical Centre St Radboud, Netherlands. Roos M Smits, Paget’s disease of the vulva: Case presentations and literature review, 2009



Associate Professor Peter Grant



## Mercy Mental Health

Mercy Mental Health is a psychiatric hospital and community service that provides a range of mental health services to adults in western Melbourne, predominately in Wyndham, Hobsons Bay and Maribyrnong. Some specialist services are also provided to mothers throughout western Victoria.

Mercy Mental Health provides high quality care and treatment of mental illness, with services delivered via specialist teams and particular attention paid to the differing cultural groups within the community.

Mercy Mental Health has an ongoing commitment to research that is focused on improving treatment management of clients.

### Research Unit

Our Research Unit is based at Wyndham and has been part of Mercy Mental Health since 2003. Dr Anita Govindan, Senior Clinical Psychologist, is Head of the Research Unit; Ms Kelly Gray is the Research Assistant. The primary focus of the Research Unit is psychosocial research.

In 2009 much time was spent assisting the Consultation and Partnerships team with gathering information and investigating the needs of the local Horn of Africa community. The proposed research plan changed over time in accordance with the information gathered. A paper will be written by the Research Unit in 2010.

The Research Unit was also involved in guiding the clinicians from the Consultation and Partnerships team with the development of evidence based high and low prevalence groups, ensuring an evaluation component was included.



Mr Mario Blandin de Chalain

Mercy Mental Health is currently reviewing its case management practice and the Research Unit has been involved in the conduct of file audits and a number of focus groups with community treatment program staff. A paper is currently being written for submission in 2010 regarding the file audits and focus group findings to date.

The Werribee Mercy Psychiatric Inpatient Unit has developed a High Dependency Unit engagement program, which is supported by the Research Unit. The Research Unit is also assisting HealthWorks (Saltwater Clinic) with the evaluation of their Hepatitis C program, which provides treatment via either Intereferon or Ribavirin, with potential for future research collaboration.

A number of meetings have been held with academic staff from Victoria University to investigate potential research collaborations in 2010, with particular interest shown from the School of Psychology. Ongoing promotion of research within the mental health program and provision of support to clinicians is ongoing.

### **Research Projects**

#### ***Mother-Baby Unit – Former patient follow-up study*** Janson H.

The aim of this project was to make contact with former inpatients of the Mother-Baby Unit approximately six months after discharge to assess whether clinical gains during admission have been maintained. Specific indicators evaluated are depression, anxiety and self esteem. On admission to the Mother-Baby Unit patients fill out self reports on standardised questionnaires which measure the level of these indicators. These self reports are completed again upon discharge to facilitate a measure of the degree of improvement achieved during the inpatient stay. Further evaluation was conducted six months post discharge, comparing the self reports with those that were completed at admission and upon discharge. Data has been collected for 104 clients and is now complete. Data analysis to be completed in 2010 with a future paper and presentation.

#### ***Evaluation of psycho-educational group, “Reflections”***

Kite L, Huggins C, Sarkar K, Hill R, Govindan A, Gray K.

This project involves the development and evaluation of a six week psycho-educational group for clients presenting with symptoms of anxiety and depression. The group content is

based on a combination of psycho-education, cognitive behavioural therapy and acceptance and commitment therapy techniques. The group will be evaluated in terms of benefits and satisfaction and to ascertain barriers to access. This information will be used to influence future phases of group planning and facilitation. The first group successfully ran October to December 2009, with recruitment currently underway for the 2010 groups.

#### ***Evaluation of psycho-educational group, “Rediscover”***

Gant D, Needham M, Okedara A, Govindan A, Hill R, Gray K.

This project involves the development and evaluation of an eight week psychosocial group aimed at clients with low prevalence disorders such as schizophrenia spectrum disorders. The aims of the group are to promote a person's understanding of their illness and assist participants develop adaptive coping strategies to improve social skills and to evaluate the effectiveness of a group in a primary care setting. The first group ran successfully October to December 2009, with planning underway for 2010 groups.

#### ***Barriers of assessing the effectiveness of community treatment orders: Experience at Mercy Mental Health***

Okedara A, Govindan A, Gray K.

The researcher decided to conduct a retrospective review to explore whether community treatment orders (CTO) had any impact on patients' outcomes and quality of care at Mercy Mental Health. The cohort was to comprise of patients that had been on CTO for at least one year, but that had been voluntary patients for at least a year prior. The



Dr Anita Govindan, Ms Cheri Huggins,  
Ms Kelly Gray

plan was to compare patient outcomes and the quality of care received during the 12 month period while on CTO versus the 12 month period as voluntary patients. Several barriers were encountered at the start of the review. It was difficult to get a large sample size of patients that satisfied the 12 month criteria pre/post CTO. In order to increase the sample size, the time period of focus was decreased to six months pre/post CTO. Twenty patients then met the criteria.

On review of the 20 files several barriers were encountered which led to only four patients whose data met the criteria. The researcher will write a paper regarding the barriers encountered for publication in a relevant psychiatric journal.

***Compliance to depot antipsychotic medication and the factors associated with compliance among patients with***

***schizophrenia attending the depot clinics of Community Treatment Program A and Community Treatment Program B at Saltwater Clinic, Mercy Mental Health***  
Jayathilake I, Kumar M.

The objectives of the research were to (1) describe the compliance to depot antipsychotic medication for a period of one year in patients with schizophrenia, (2) to determine the proportion of patients who relapsed during that year, (3) to compare relapse rates among patients who complied and did not comply, (4) to determine the factors related to poor compliance and satisfactory compliance, and (5) to determine the proportion of people on a depot injection with a CTO.

A cross section of patients attending the depot clinic of Community Treatment Program A and Community Treatment Program B were recruited. The research involved two phases:

- Phase I – Patients were followed up retrospectively by going through the depot data base and by file review to assess compliance to depot and the relapse rate for the period of one year
- Phase II – An interviewer administered questionnaire was used to collect the data regarding factors related to poor compliance and satisfactory compliance during the period of one year

Thirty-five clients consented to participate in the research. The main finding was that CTO assist in maintaining compliance. A paper is to be written by the researchers for submission to an appropriate journal and an abstract will be submitted to the RANZCP congress.

***Suicide prevention in the emergency department (SPED): Management of***

***deliberate self harm through an assertive engagement, brief psychotherapy and community linkage model***

*Joubert L, Harvey C, Jespersen S, Cementon E, Hawthorne G, Kelly A, Govindan A, Hill N.*

SPED is focused on the contribution of psychosocial factors to deliberate self harm and the prevention of suicide in an identified at risk vulnerable population of people who present to the emergency departments of Western Hospital, Sunshine Hospital and Werribee Mercy Hospital.

The purpose of this project is to determine the effectiveness of a psychosocial intervention consisting of psychosocial assessment, assertive engagement, brief client centred psychotherapy and community linkage. The project commenced in the Werribee Mercy Hospital emergency department in September 2008 and is ongoing.

***A randomised control trial of CONSTA compared to CONSTA and collaborative therapy in a naturalistic setting***

*Gilbert M, Castle D, Chamberlain J, Pawsey B, Holdsworth C, Bunton C, Carroll G.*

The aims of this study are to (1) compare the effectiveness of a psychosocial intervention plus medication, to medication alone, to improve the engagement of people who have been started on CONSTA and (2) to understand reasons why consumers who have started on CONSTA choose to terminate treatment. This project began in August 2008 and is ongoing.

***A case control study to identify risk factors for myocarditis with clozapine***

*McNeil J, Fitzgerald P, Taylor D, Ronaldson K, Stevenson D.*

The purpose of the study is to identify patient intrinsic (sex, age, features developing early in treatment, genetic markers) and patient extrinsic (specifically rate of dose escalation) risk factors for the development of myocarditis with clozapine. This project began in June 2007; expected completion date is December 2011.

**Publications**

Jespersen S, Chong T, Gray K, Carrin D, Morton L, Robinson T, Inglis S. Clinical characteristics and patterns of referral to a primary mental health team: A retrospective study. *Asia Pacific Psychiatry* 2009; 1:81-87.

Jespersen S, Chong T, Donegan T, Gray K, Kudinoff T, McGain L, Gant D. Reflections on facilitated discharge from a mental health service. *Australasian Psychiatry* 2009; 17:195-201.

Jayathilake I, Singh A. Clozapine rechallenge after myocarditis. *Australasian Psychiatry* 2009; 17:421-422.

**Oral and Poster Presentations**

- Ms Jane Williamson, Manager, Mother Baby Service. "Keeping infants in mind." 19th Annual MHS Conference. Perth, Western Australia 2009
- Ms Arhet Geberat, Bi-Lingual Case Manager, Community Treatment Program. "Level of access to mental health services among African populations in Victoria – Access to Mercy Mental Health Services by African communities." 1st Australian Refugee Health Conference. Perth, Western Australia 2009



## Department of Endosurgery, Mercy Hospital for Women

Established in 1994 the Department of Endosurgery offers minimally invasive techniques to surgically treat gynaecological disease. It has had a fellowship program since 1995 and all but two of those doctors to complete the fellowship are now visiting medical officers at Mercy Hospital for Women.

The department has a special interest in the treatment of severe endometriosis and works in a close relationship with colo-rectal surgeons from Austin Hospital and St Vincent's Hospital.

This past year has seen the completion of an exciting research project looking at the place of MRI in the pre-operative assessment of the degree of invasion of endometriosis and the predictability of the necessity of CR surgical involvement. The results will be analysed and reported in the literature in the next 12 months.

The department also has a long history of involvement in the evaluation of endometrial ablation techniques and outpatient hysteroscopy. The latter technique is readily available for assessment and treatment of diseases associated with uterine bleeding abnormalities.

Members of the department are actively involved in clinical research, publications and presentations at national and international meetings. As well as these extra-curricula activities members continue to provide a first class surgical service to those patients attending Mercy Hospital for Women.

Associate Professor Peter Maher



### Research Activity

Key researchers and research groups:

*Maher P, Readman E, Cameron M, Manwaring J, McIlwaine K.*

### Research Projects

***Use of heated humidified CO<sub>2</sub> in laparoscopy effect on post operative pain and recovery times in patients having laparoscopic surgery lasting more than 90 minutes: A randomised control trial.***

*Principal Investigator:* Dr Melissa Cameron

*Progress:* This project is now being prepared for publication.

The study was conceived after a preliminary study investigating the effects of heated humidified CO<sub>2</sub> on post operative pain after laparoscopy showed a trend towards reduced pain with increasing length of procedure. Also, there did not appear to be any adverse events as a result. This study further explored the



effects of heated, humidified CO<sub>2</sub> on lengthy operative laparoscopies at Mercy Hospital for Women. The hypothesis was that the humidified gas would reduce post operative pain and analgesia requirements.

***The use of timed MRI during the menstrual cycle in patients with severe recto-vaginal endometriosis in determining rectal wall involvement***

*Principal Investigator:* Dr Melissa Cameron

*Supported by:* Mercy Health Foundation

*Progress:* Recruitment is progressing satisfactorily.

This project aims to determine if MRI imaging is more accurate at predicting the extent of severe endometriosis if performed during menstruation. Patients with severe endometriosis who are scheduled to undergo further surgery are invited to undergo two MRI scans. Correlations with radiological findings will be made with subsequent surgical findings.

***The effect of BMI on surgical difficulty and safety in laparoscopic gynaecological surgery***

*Principal Investigator:* Dr Kate McIlwaine

*Progress:* This project is progressing well. It is hopeful the required number of patients will be recruited and data analysed by mid-2010.

Gynaecologists are now faced with the problem of an increasing proportion of their patients requiring surgery who are either overweight or obese. There is little data about this to guide gynaecologists. This prospective audit aims to assess and quantify in overweight and obese patients against non obese patients the planned surgery involving laparoscopy for benign conditions. The surgical outcomes at the conclusion of the procedure will be documented

together with a post operative review six weeks after surgery.

***Endometrial nerve fibres in endometriosis and their response to surgical and hormonal therapy: A prospective RCT***

*Principal Investigator:* Dr Emma Readman

*Supported by:* Mercy Health Foundation

The purpose of this study is to try to develop a test of cure for endometriosis that is outpatient based. One hundred women presenting with pelvic pain will be considered for a randomised controlled trial at Mercy Hospital for Women over an 18 month period. The patients will all have a hysteroscopy, laparoscopy and endometrial sample at the index visit, with endometriosis noted or excluded, then treated if present. At that time pain scores (VAS) will be recorded. There will be two arms in the trial determined after the laparoscopy: those with pelvic pain and no endometriosis and those with pelvic pain and endometriosis. Those with endometriosis will then be randomised to three months of combined oral contraceptive pill (COC) or no hormonal therapy and a repeat endometrial sample will be taken. Those without endometriosis will have COC. All will record another pain score (VAS). Those endometrial samples will be examined microscopically to count nerve bundle numbers.

***Publications and Book Chapters***

Cameron M, Maher P. Barrier solutions or solid barriers in prevention of post operative adhesions. *The Fallopian Tube*. Eds Allahbadia G, Saridogan E, Djahanbakhch O, Ansham Ltd, India 2009.

McIlwaine K, Readman E, Cameron M, Maher P. Outpatient hysteroscopy: Factors influencing post procedure acceptability in patients

attending a tertiary centre. *Aust NZJ Obstets Gynaecol* 2009; 49:650-652.

### Oral and Poster Presentations

- 2009 International Society for Gynecological Endoscopy ASM Bangkok, Thailand
- Keynote lecture: "Has gynaecological endoscopy been a positive for women's health?"
- AGES XIX ASM & AAGL 3rd International Congress for Minimally Invasive Surgery. Invited speaker. Debate "Sex is for the young".
- Beijing Obstetric and Gynecology Hospital. Beijing China Training in Gynecological Endosurgery Guest of Honour and Honorary Chair.
- 4th New Zealand-China-Asia Pacific Forum for Minimally Invasive Gynecology. Invited speaker. Cul de Sac Endometriosis.
- Fisher & Paykel Healthcare Travelling Fellow Mumbai, Delhi, Hyderabad, Bangalore, India, July 2009
- AGES Focus Meeting "Surgical techniques based on fact or fiction?" Invited speaker. Staging laparoscopy. Coolum, Queensland 2009
- 38th Global Congress of Minimally Invasive Gynecology (AAGL). "Faculty member pre-congress course: Minimally invasive procedures for vaginal and laparoscopic hysterectomy and prophylactic vault suspension." Orlando, USA 2009
  1. Laparoscopic look immediately after vaginal hysterectomy.
  2. Laparoscopic/supra-cervical hysterectomy for the large fibroid uterus.
- Manwaring J, Readman E, Maher P. The effects of heated humidified CO<sub>2</sub> on post operative pain, core temperature and recovery times in patients having laparoscopic surgery.

- McIlwaine K, Readman E, Cameron M, Dimovski E, Maher P. "Outpatient hysteroscopy: Factors influencing post procedural acceptability in patients attending a tertiary referral centre." 2nd Forum for teaching MIS, Beijing, China-Beijing Obstetrical & Gynaecology Hospital, Honorary Chair

### Collaborations

Visits by staff to overseas or interstate facilities:

- Maher P. Beijing Obstetric and Gynecological Hospital, Chinese Medical University



## Division of Clinical Support, Mercy Hospital for Women



### **Social Work/Aboriginal Women and Family Support Unit**

The Social Work Department works very closely with nursing, medical, other allied health professionals and the Aboriginal Women and Family Support Unit to offer a holistic approach to patient care. Particular social workers are allocated to specific areas within the hospital and work as part of an integrated team of health professionals.

There are designated social workers attached to the Oncology Department, to the Department of Paediatrics, to the Transitions Clinic and particular obstetric units. Social workers are available to see patients from other units on referral.

The Aboriginal Women & Family Support Unit offers support to Indigenous patients and their families and, in particular, to the patients of the Transitions Clinic. This is an innovative obstetric clinic offering specialist care to Indigenous women, chemically dependent women and very young women.

In line with Mercy Hospital for Women's long term plan, the Social Work Department and

Aboriginal Women & Family Support Unit are working continuously to establish and maintain robust partnerships with key local community agencies that provide ongoing support to vulnerable families whose babies are born at the hospital.

### **Research Projects**

#### ***Needs of families in intensive care settings: A comparative social work study***

*Principal Investigator: Ms Lily Obradovic*

The purpose of undertaking this topic is to identify needs of families during hospitalisation of their newborn to NICU and those of relatives of patients admitted to ICU.

Key themes are related to assurance, proximity and accurate information. Cleveland's (2008) comprehensive review identified six needs of parents who had an infant in NICU, categorising them as: accurate information provision and inclusion in care, vigilant watching over and protecting infant, contact with infant, individualised care, therapeutic relationship with nursing staff and being positively perceived by staff (Cleveland 2008).

Some needs between fathers and mothers differed (Ward, 2001). Ninety-three per cent of mothers ranked receiving accurate information as a priority and good communication important (Bialoskurski et al. 2002). Inadequate information was a source of stress for both (Lam et al. 2007) so too was the inability to hold, help, care and protect the newborn from pain (Shaw et al. 2006).

Mothers yearned to hold their infants, however due to the fragility and critical state of the premature infant, this was not often possible initially (Cleveland 2008). Parents reported

“negative” information hindered attachment with their infant (Cox et al. 2001). Information was viewed as a means of engaging in the care of their infant (De Rouck and Leys 2009). Overall parents expressed in the literature as wanting effective information and communication, participation in decision making, proximity and emotional support (Cleveland 2008; Ward 2001; Bialoskurski et al. 2002).



Admission to intensive care is often unplanned and creates a crisis in family functioning (Al-Hassan 2004). Research published and reviewed across both settings found provision of information on a daily basis in understandable language important. Families sought knowledge about the condition, progress and prognosis. Information provided by health professionals or by sitting and being with the patient provided families with reassurance about the care. Other significant needs included the feeling of hope, reassurance and support and to be near the patient (Leske 1986; Damboise 2003; Delva 2002; Bijttebier 2001; Cleveland 2008).

Ms Lily Obradovic



***I'm a Mum support program (in partnership with Children's Protection Society and RMIT School of Social Work) and from colonisation to conciliation: A collaborative examination of social work practice with Indigenous populations***

*Principal Investigator: Ms Jane Middleton*

I'm a Mum is an innovative collaboration between Mercy Hospital for Women and local family welfare agency Children's Protection Society (CPS) to co-ordinate and provide support for socially vulnerable women who may struggle to provide safe and secure environments for their children. It aims to reduce rates of reporting to the child protection

system, to foster parenting competence and to enhance the child's developmental outcomes.

I'm a Mum has a number of aspects that have been developed after earlier consultations with women.

These include:

- Direct access to CPS family support services, including during pregnancy
- Mentoring Mums, a program matching trained volunteers to support interested vulnerable women
- A brokerage program providing targeted financial support not otherwise accessible to women

The second phase of I'm a Mum has involved joining with the RMIT School of Social Work to comprehensively map community support services available to local, vulnerable new mothers and to identify gaps in available services.

An abstract of the I'm a Mum program has been accepted for presentation at the International Social Work Conference on Health and Mental Health, to be held in Dublin, Ireland, June 2010.

***From colonisation to conciliation (c2c)***

This Australian Research Council project seeks to identify ways in which social work practice can enhance Indigenous wellbeing and how social work education can be reframed so as to engender such practice.

This three year project is now in its final report writing phase. The research group has been asked to consult with the Australian Association of Social Workers regarding national Indigenous curriculum standards for all Schools of Social Work within Australian universities.

"From colonisation to conciliation" will also be presented at the International Social Work Conference on Health and Mental Health in Dublin, Ireland 2010.



## Mercy Health Lymphoedema Clinic

Mercy Health Lymphoedema Clinic is a multidisciplinary clinic that provides assessment, education, treatment and management for people with lymphoedema or who are at risk of developing lymphoedema.

The clinic also administers the statewide Aids and Equipment Service, the Lymphoedema Compression Garment Program, which provides people on pensions or low income with financial assistance to purchase compression garments. The outpatient service is provided at the East Melbourne clinic five days a week and at the Heidelberg clinic two days a week.

The clinic endeavours to respond to an increasing number of referrals for both primary and secondary lymphoedema. Currently the clinic has a waiting list for new patient assessments; however, a priority system developed over the past year has resulted in better management of those on the list.

### Key Researchers

- Sally James, RN and Lymphoedema Practitioner: Research project as part completion for Master of Wound Care

### Research Projects

***What are the perceived barriers that prevent patients with lymphoedema from continuing optimal skin care?***

*Principal Investigator:* Ms Sally James RN1

The aim is to identify any barriers perceived by patients attending the clinic that prevent them continuing optimal skin care despite having received education regarding the importance of skin care in the management of lymphoedema.

Ms Penelope Sanderson (right)  
and client (left)



The project will consist of semi-structured face-to-face interviews with eight patients who attend the clinic.

It is hoped this study will provide insight into the difficulties patients have with achieving appropriate skin care and this may assist health care practitioners providing skin care education in tailoring programs appropriately.

### **Self management for chronic conditions**

*Principal Investigator:* Ms Jane Philips

Development of a self management model for lymphoedema based on the Flinders Model of Self Management for Chronic Conditions. Considering the opportunities for change to incorporate the chronic health self management model within the treatment offered at the clinics.

Fiorella Alberico, Jane Philips and Penelope Sanderson.

- Collaborative study with Royal Brisbane and Women's Hospital on the current practice by lymphoedema therapists in Australia in their prescription of compression garments for lymphoedema, Jane Philips and Penelope Sanderson.

### **Oral and Poster Presentations**

Gillian Buckley. "Adoption of self management improves leg lymphoedema." 22nd International Congress of Lymphology, Sydney, New South Wales 2009

### **Research Grants and Funding**

*Source:* North Eastern Integrated Cancer Services

*Project:* Attendance at the International Lymphoedema Framework Conference in Ascot, England

*Recipient:* Ms Penelope Sanderson

*Amount:* \$500

### **Visiting Speakers and Researchers**

- In collaboration with the Lymphoedema Practitioners Education Group of Victoria (LPEGV) the Mercy Lymphoedema Clinic conducted for the first time a six day Level 1 training course for lymphoedema practitioners, August 2009
- Judy Purbrick co-ordinated the training project and 18 participants successfully completed the course. Sessions presented by invited speakers were open for staff to attend.

*Source:* North Eastern Integrated Cancer Services

*Project:* Attendance at the International Congress of Lymphology

*Recipient:* Ms Judy Purbrick

*Amount:* \$500

### **Visits by Staff to Other Facilities**

- Penelope Sanderson and Gillian Buckley attended the 1st International Lymphoedema Framework Conference in Ascot, England 2009

*Source:* Mercy Health Foundation

*Project:* Scholarship towards Master of Wound Care

*Recipient:* Ms Sally James

*Amount:* \$3,000

### **Other Research Collaborations**

- A collaboration with The Royal Children's Hospital Vascular Anomalies Clinic during 2009 resulted in the first paediatric lymphoedema joint clinic in August 2009 consisting of a paediatrician from The Royal Children's Hospital and three staff from Mercy Health Lymphoedema Clinic; Dr

### Academic Achievements

- Ms Sally James, Registered Nurse is completing the final year of Master of Wound Care
- Ms Jane Phillips (PT) is completing the final year of Graduate Certificate in Health (Chronic Disease Self Management)

### Additional Presentations

- Working with Breacan (project of Women's Health Victoria) to deliver an annual education session in the community setting. Judy Purbrick 2009.
- Presentation to Royal District Nursing Service on Treatment and Management of Lymphoedema. Judy Purbrick 2009.
- Compression Garment Practice of Lymphoedema Therapists Across Australia. Robyn Scheer, Penelope Sanderson, Jane Philips. 22nd International Congress of Lymphology, Sydney, New South Wales 2009.



## Mercy Palliative Care

Ms Carol Quayle and Ms Colleen Kannegiesser



### Key Researchers

Lucy Forrest, staff music therapist undertaking her PhD at University of Melbourne, has participated peripherally with three external research projects through beyondblue, Monash University and Queensland University of Technology.

### Publications

Reflections of volunteers in palliative care, published in *The Australian Journal on Volunteering* 2009; Volume 14, No.1; pages 1-4.

### Oral and Poster Presentations

- Poster: "Innovations in care planning: A community palliative care perspective." Deanne Layton, Perth, Western Australia 2009.
- Pre-conference workshop. Carol Quayle. "Cultural diversity project at Mercy Palliative Care."
- Deanne Layton. "Strengthening the workforce: The next generation graduate nurse program in palliative care."

- Loretta Williams, Frances Gore. "Partnerships in palliative care: Development of hospital outreach program."
- Carol Quayle. Poster: "The challenges of the multidisciplinary team: A reflection of the Mercy experience in western Melbourne."
- Alex Loh. Poster: "Addressing cultural competency for CALD service baseline."

### Collaborations

- Monash University: Barbary Clarke PhD candidate, "What is best practice healthcare for lesbians and heterosexual women with life-threatening illness?"
- Queensland University of Technology: Patricia Shuter, PhD candidate, "Family caregiver research – Predictors of complicated grief and health outcomes in family caregivers of people with dementia"

### Research Grants and Funding

Source: William Buckland Foundation

Project: Palliative care access for all

Recipient: Mercy Hospice Inc (2007)

Project Completed: December 2009

Amount: \$107,720

### Academic Achievements

- Ms Jenny Grace: Post Graduate Certificate in Palliative Care

Ms Lucy Forrest





## Department of Paediatrics, Mercy Hospital for Women

The Department of Paediatrics is a very busy clinical service in which the key research priorities are clinically based research, centring on intensive care management of circulation, non invasive respiratory support, infection control, prevention of chronic lung disease and long term neurodevelopmental follow up.

### Key Researchers and Research Groups

- Biomarkers of chronic lung disease and pulmonary hypertension in newborn infants. König K, Cocks-Drew S, Barfield C, Casalaz D.
- Correlation between beta natriuretic peptide and cardiac output in newborn premature infants. König K, Collins C, Cocks-Drew S, Barfield C, Watkins A.
- Pharyngeal and oesophageal pressures in infants receiving humidified blended oxygen via high flow nasal cannula or conventional CPAP. König K, Holberton J.
- The effect of sildenafil in preterm infants with evolving chronic lung disease (SPICE trial). König K, Cocks-Drew S, Barfield C, Andersen C.
- Comparison of intra arterial and non invasive blood pressure monitoring in newborn infants. König K, Watkins A.
- Randomised controlled trial of use of heated humidified high flow nasal prongs in extubation of VLBW infants. Collins C, Holberton J.
- Victorian infant collaborative study: Neurodevelopmental outcome of ELBW infants. Opie G, Woods H, Watkins A.
- Controlled trial of music therapy in management of premature infants. Dearne T, Shoemark H.
- Outcome of infants born to mothers treated with psychotropic agents. Galbally M, Henschke P, Opie G.

Dr Charles Barfield



- Neurodevelopmental outcome of infants treated with caffeine for apnoea of prematurity. Opie G, Schmidt B.

### Research Projects

- Biomarkers of chronic lung disease and pulmonary hypertension in newborn infants. König K, Cocks-Drew S, Barfield C, Casalaz D.
- Correlation between beta natriuretic peptide and cardiac output in newborn premature infants. König K, Collins C, Cocks-Drew S, Barfield C, Watkins A.



- Pharyngeal and oesophageal pressures in infants receiving humidified blended oxygen via high flow nasal cannula or conventional CPAP. König K, Holberton J.
- The effect of sildenafil in preterm infants with evolving chronic lung disease (SPICE trial) König K, Cocks-Drew S, Barfield C, Andersen C.
- Comparison of intra arterial and non invasive blood pressure monitoring in newborn infants. König K, Watkins A.
- Randomised controlled trial of use of heated humidified high flow nasal prongs in extubation of VLBW infants. Collins C, Holberton J.
- This is an important initiative, testing a newer much less invasive way to deliver CPAP therapy to premature infants, a method in which Mercy Hospital for Women has considerable expertise. It has been a controversial method and a controlled trial is an important addition to the literature. Recruitment is now good and answers to important questions of safety and efficacy are likely.
- Victorian infant collaborative study: Neurodevelopmental outcome of ELBW infants. Opie G, Woods H, Watkins A.
- Controlled trial of music therapy in management of premature infants. Dearne T, Shoemark H.
- Outcome of infants born to mothers treated with psychotropic agents. Galbally M, Henschke P, Opie G.
- Neurodevelopmental outcome of infants treated with caffeine for apnoea of prematurity. Opie G, Schmidt B.
- Biomarkers of chronic lung disease and pulmonary hypertension in preterm infants. König K, Cocks-Drew S, Barfield C, Casalaz D.
- Correlation between plasma B-type natriuretic peptide and cardiac output in newborn infants. König K, Collins C, Cocks-Drew S, Barfield C, Watkins A.
- Pharyngeal and oesophageal pressure in infants receiving humidified blended oxygen via high flow nasal cannula or conventional CPAP. König K, Holberton J.
- The effect of sildenafil in preterm infants with evolving chronic lung disease (SPICE trial). König K, Cocks-Drew S, Barfield C, Andersen C.
- Comparison of intra-arterial and peripheral cuff blood pressure monitoring in preterm infants. König K, Watkins A.

## Publications

Gelbart B, Hiscock R, Barfield C. Assessment of neonatal resuscitation performance using video recording in a perinatal centre. *J Paed Child Health*. (Accepted 2010)

Crawford N, Yeo V, Hunt R, Barfield C, Gelbart B, Buttery J. Immunisation practices in infants born prematurely: Neonatologists' survey and clinical audit. *J Paediatr Child Health* 2009; Oct; 45(10):602-9; Sep 14. [Epub]

Wong F, Barfield C, Horne R, Walker A. Dopamine therapy promotes cerebral flow-metabolism coupling in preterm infants. *Intensive Care Med* 2009; Oct; 35(10):1777-82; Aug 1. [Epub]

Gelbart B, Barfield C, Watkins A. Ethical and legal considerations in video recording neonatal resuscitations. *J Med Ethics* 2009; Feb; 35(2):120-4.

König K, Henschke P. Successful weaning of nitric oxide facilitated by a single dose of sildenafil in a baby with persistent pulmonary

hypertension of the newborn (letter). *Pediatric Pulmonology* 2009; 44:837.

Squires K, Watkins A, König K. H1N1 influenza in an extremely premature baby with chronic lung disease (letter). *Pediatric Pulmonology*. [In press]

Ringe H, Varnholdt V, Zimmering M, Luck W, Gratopp A, König K, et al. Continuous veno-venous single pass albumin haemofiltration (SPAD) in children with acute liver failure. *Pediatric Critical Care Medicine*. [In press]

König K, Henschke P. Successful weaning of nitric oxide facilitated by a single dose of sildenafil in a baby with persistent pulmonary hypertension in the newborn (letter). *Pediatric Pulmonology* 2009; 44:837.

Squires K, Watkins A, König K. H1N1 influenza in an extremely premature baby with chronic lung disease (letter). *Pediatric Pulmonology*. [In press]

Ringe H, Varnholt V, Zimmering M, Luck W, Gratopp A, König K, Reich S, Bockenkamp B, Sauer I, Bertram H, Amthauer H, Gaedicke G, Querfeld U. Continuous veno-venous single pass albumin haemodiafiltration (SPAD) in children with acute liver failure. *Pediatric Critical Care Medicine*. [In press]

Gelbart B, Hiscock R, Barfield C. Assessment of neonatal resuscitation performance using video recording in a perinatal centre. *J Paed Child Health*. (Accepted 2010)

Crawford N, Yeo V, Hunt R, Barfield C, Gelbart B, Buttery J. Immunisation practices in infants born prematurely: Neonatologists' survey and

clinical audit. *J Paediatr Child Health* 2009; Oct; 45 (10):602-9. [Epub]

Wong F, Barfield C, Horne R, Walker A. Dopamine therapy promotes cerebral flow-metabolism coupling in preterm infants. *Intensive Care Med* 2009; Oct; 35(10):1777-82. [Epub]

Gelbart B, Barfield C, Watkins A. Ethical and legal considerations in video recording neonatal resuscitations. *J Med Ethics* 2009; Feb; 35(2):120-4.

### Oral and Poster Presentations

- "Where does the baby stand in all of this?" Charles Barfield. Critical Care Meeting Mercy Hospital for Women, Heidelberg, Victoria 2009.
- Oral presentation: "A comparison of pressures with two high flow nasal cannula devices." Poster: "An uncommon position of umbilical catheters in a preterm neonate." Kai König. PSANZ Annual Meeting, Darwin, Northern Territory 2009.

### Visits by Staff to Other Facilities

- Kai König. Invited speaker. "Pigs might fly – Experience with swine flu in an Australian perinatal centre." Charité University Hospital Berlin, Germany 2009.
- Phil Henschke. Invited speaker. Da Nang Vietnam. One week intensive teaching.
- Andrew Watkins. Invited speaker. Guangzhou regional paediatric and obstetric update, Guangzhou, China 2009.
- Andrew Watkins. Invited speaker. National Neonatal Association Annual Scientific meeting, Shenzhen, China 2009.
- Andrew Watkins. Invited speaker. Rainbow International Pediatric Update. Hyderabad, India 2009.

### **Other Research Collaborations**

- Neurodevelopmental outcome of infants treated with caffeine for apnoea of prematurity

### **Research Grants and Funding**

*Source:* Medical Research Foundation for Women and Babies

*Project:* Biomarkers of chronic lung disease and pulmonary hypertension in preterm infants

*Recipient:* König K, Cocks-Drew S, Barfield C, Casalaz D.

*Amount:* \$24,098

*Source:* Windermere Foundation

*Project:* Effects of music therapy in management of premature infants

*Recipient:* Dearne P, Casalaz D, Watkins A

*Amount:* \$15,000

*Source:* Medical Research Foundation for Mothers and Babies

*Project:* CHIPS trial: Randomised controlled trial of heated humidified high flow prongs v. conventional CPAP in extubation of premature infants

*Recipient:* Collins C, Holberton J

*Amount:* \$30,000

## Lactation Department, Mercy Hospital for Women

The Lactation Department is increasing its collaboration with similar tertiary facilities for auditing and research as an adjunct to maintaining a range of services to support mothers and babies with breastfeeding issues.

The establishment of the Mercy Health Breastmilk Bank is a major achievement for Mercy Hospital for Women and will be a first for the state of Victoria. Rigorous standards have been set in place to ensure this service meets local and international standards.

### Research

- Ms Kerri McEgan is currently involved in three research projects that are awaiting funding approval, two of which are with NHMRC.
- DAME (Diabetes and antenatal milk expressing): Exploring the safety of antenatal expressing for a high risk group
- MILC (Maternal infant lactation cohort): Exploring the impact on breastfeeding at key stages when mothers leave hospital not attaching their babies
- Manuka honey dressings for the treatment of damaged nipples. The main aim of this study is to determine whether the use of Manuka honey dressings for sore or cracked nipples in breastfeeding mothers can reduce soreness and trauma and lead to increased breastfeeding rates six months post discharge.

### Publications

Forster D, McEgan K, Ford R, Moorhead A, Opie G, Walker S, McNamara C. Diabetes and antenatal milk expressing: A pilot project to inform the development of a randomised controlled trial. *Midwifery* 2009.

Ms Kerri McEgan



### Oral and Poster Presentations

- "Which Bank? Mercy Health Breastmilk Bank." Kerri McEgan. Australian College of Midwives National Conference, "Midwives and women: A brilliant blend." Adelaide, South Australia 2009.
- "Diabetes and antenatal milk expressing (DAME): Results of a pilot project." Kerri McEgan. Australian Lactation Consultants Association National Conference, "Breastfeeding: A key public health issue." Canberra, Australian Capital Territory 2009

### Collaborations

- Dr Ben Hartmann, visiting speaker to the Lactation Department, Mercy Hospital for Women, is the Prem Bank Manager at King

Edward Memorial Hospital, Perth, Western Australia. He spoke on the establishment of a current functioning breastmilk bank in the Australian setting.

#### **Visits by Staff to Other Facilities**

- Ms Kerri McEgan and Dr Gillian Opie travelled to Perth's King Edward Memorial Hospital "Prem Bank" in 2009 to observe the practices involved in establishing and managing a milk bank. Professional partnerships were also established which will be advantageous in working towards national guidelines for milk banking in Australia and create opportunities for comparative research.

#### **Research Grants and Funding**

*Source:* Nurses Board of Victoria

*Project:* Introduction of the release of tongues in babies

*Recipient:* Ms Kerri McEgan

*Amount:* \$3,000

#### **Academic Achievements**

- Ms Kerri McEgan: Completion of Master of Midwifery

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Dr Gillian Opie





## Special Care Nursery, Werribee Mercy Hospital

Ms Louisa Ramudu



The Neonatal Unit team at Werribee Mercy Hospital adopts a family centred, holistic approach through our Mercy Health values of compassion, hospitality, respect, innovation, stewardship and respect.

Our aims, goals and purpose are focused on providing quality care through the application of evidence based practices for all our vulnerable infants and families. This continuum of care extends to our community service providers through extensive discharge preparation and communication to ensure that the growth and development of these infants and families with special needs are closely monitored and managed.

### Research Activity

- How parents cope and adjust with the transfer of their infants from Level 3 neonatal intensive care units (NICU) to Level 2 special care nurseries (SCN) in Victoria, Australia
- Doctor of Nursing Candidate: Louisa Ramudu, La Trobe University; Supervisor:

Professor Susan McDonald, La Trobe University/Mercy Hospital for Women; Co-Supervisor: Professor Shane Thomas, Monash University; Associate Researchers: Laura Bignell, Mercy Hospital for Women; Kathy Marshal, The Women's; Sheri Waldron, The Royal Children's Hospital; Fay Presbury, NETS; Helen Jenkin, The Northern Hospital; Lee Hopper, Sunshine Hospital; Alyson Smith, Geelong Hospital

- The transfer of infants from a Level 3 NICU to a Level 2 SCN at another hospital, is often an anxious and difficult period for parents. Once the infant is medically stable, transfer from NICU is imminent. This process supports effective and efficient utilisation of neonatal cots in Victoria. Literature review has identified four key factors that have a negative impact on the transfer experience for parents: parental stress; lack of communication; medical setbacks; and differing practices (NICU, SCN).
- This project aims to investigate how well parents of ill newborns, who have significantly recovered from their illness, and are ready to be moved, cope with and adjust to the transfer of their infant from NICU to a SCN; how the period from the NICU to a SCN (transition phase) affects parents adjusting to a new environment; how the responses and reactions of staff at the NICU and SCN influence parents' acceptance to the transfer; and how parents adopt/use (coping strategies) in their effort to relieve their stress while adjusting to the new environment.
- A mixed methodology using two validated tools will be applied with a minimum of 60 mothers and 60 fathers participating in the main study. Thirty-three mothers and 19 fathers have participated to date at the

three SCN sites. Staff focus groups (main study) using a taped interview schedule were held at three NICU and three SCN sites (completed and being transcribed). A pilot was conducted prior to test the tools within an Australian context. There was no statistical significance in the pilot due to the small sample size (14). Health professionals (SCN) in the pilot described issues that had an impact on staff/parent interactions and relationships following transfer. Winning parent confidence and trust was viewed as paramount in supporting families to cope and adjust in the new environment.

- The pilot report was presented at the Perinatal Society of Australia & New Zealand 13th Annual Congress and at the 4th Annual Australian College of Neonatal Nurses Conference in April 2009.

### Publications

Ramudu L, McDonald S, Thomas S. The transition from Level 3 NICU to a Level 2 SCN in Victoria: A pilot report. *Journal of Paediatrics and Child Health* 2009; 45(1) Abstract A129: A48. Perinatal Society of Australia and New Zealand 13th Annual Congress.

Ramudu L, Wharrie M, Hammett J, Chapman J, Ingram A. Vulnerable babies, children and young people at risk of harm: Best practice framework for acute health services in Victoria. *Journal of Paediatrics and Child Health* 2009; Abstract P119:107. Perinatal Society of Australia and New Zealand 13th Annual Congress.

### Oral and Poster Presentations

- Oral presentation "Transfer from Level 3 NICU to Level 2 SCN closer to home: Parent and staff perceptions." Louisa Ramudu. Australian College of Neonatal

Nurses 4th Annual Conference, Darwin, Northern Territory 2009.

- "Evaluating education and workforce for nurses and midwives: A survey of non tertiary special care nurseries in Victoria." Fay Presbury (NETS) joint authorship with Sheri Waldron (The Royal Children's Hospital) and Louisa Ramudu (Werribee Mercy Hospital). Australian College of Neonatal Nurses 4th Annual Conference, Darwin, Northern Territory 2009.
- Poster presentation, "Vulnerable babies, children and young people at risk of harm: Best practice framework for acute health services in Victoria." Louisa Ramudu. Perinatal Society of Australia and New Zealand 13th Annual Congress, Darwin, Northern Territory 2009.
- Oral presentation, "The Transition from Level 3 NICU to a Level 2 SCN in Victoria: A pilot report." Louisa Ramudu. Perinatal Society of Australia and New Zealand 13th Annual Congress, Darwin, Northern Territory 2009.

### Research Grants and Funding

*Source:* Ronald Hepburn Scholarship, Werribee Mercy Hospital, Mercy Health

*Purpose:* Conference fees, accommodation and costs for presentations at two conferences in Darwin, Northern Territory 2009

*Recipient:* Ms Louisa Ramudu

*Amount:* \$2,099



**Mercy Health**

*Care first*

Mercy Health  
678 Victoria Street, Richmond Victoria 3121  
Phone: (03) 8416 7777  
Fax: (03) 8416 7888  
[mercyhealth.com.au](http://mercyhealth.com.au)