

## 2001 Dissertation Summaries

### **Linda Aun Supervisors: Sandi Pirozzo, Helen Longbottom Evaluation of Diabetic Management Strategies in a Primary Health Care Centre**

#### Abstract

Type 2 diabetes is a major health problem in Australia because of the associated complications and long-term management problems. Strategies to reduce the burden of disease involve early detection and management of risk factors. This study was conducted to assess the adherence to diabetes management guidelines in a general practice in Brisbane. The medical records of 112 type 2 diabetic patients were reviewed. The outcome indicators measured were number of visits, frequency of blood pressure measurements, specific lipid and HbA1c tests requested, and their control status, annual assessment referrals, diabetes treatment prescribed and documentation of diabetes care. The findings indicate that for the majority of the outcome indicators the general practitioners adhered to their current practice guidelines but adherence was less for specific lipid tests. Recommendations made by the researcher include the use of uniform definitions for documenting variables such as exercise and reference range of pathology results and she emphasized the importance of documentation in diabetes care.

### **Robyn Brown Supervisor: Adele Green Naevus Prevalence and Associated Factors in Young Brisbane Children**

#### Abstract

Queensland's population suffers the highest incidence rates of malignant melanoma in the world. The major non-environmental risk factor for melanoma is the development of multiple melanocytic naevi, and childhood exposure to sunlight is thought to be associated with naevus development. This study was conducted to examine the relationship between the number and size of melanocytic naevi and factors such as phenotype, sunlight exposure, and levels of solar protection. One hundred and ninety children aged from 1 to 3 years were selected from nine Brisbane childcare centres for the purpose of this study. Data were collected on child's phenotype and naevus prevalence by clinical examination, and on sunlight exposure and protection measures whilst at childcare. The results suggest that the development of naevi on the skin of very young Caucasian children is, like other age groups, influenced by phenotypic characteristics and modified by exposure to sunlight.

### **Sithara Chuchotesakulwong, Supervisors: Rod McClure, Peter O'Rourke The Incidence and Distribution of Serious Motor Vehicle-Related Injury in Brisbane**

#### Abstract

The information available on the incidence of hospitalised injuries and the spectrum of injuries that are sustained by the various road user groups are fairly limited. This study aims at describing the nature and extent of the car and motor cycle-related injury in Brisbane. Four sources of data were used: the Queensland Trauma Registry (QTR), the Australian Transport and Safety Bureau, Queensland Transport and 1996 Population Census Data from ABS. Results showed that, in 1998, in Greater Brisbane, 978 people were hospitalised with car and motor cycle-related injuries. Motor cycle-related injuries constituted a disproportionately major component of the problem. This information may be used as a basis for planning and provision of emergency medical services and acute care of patients. The author emphasized on the need for further exploration of the strategies to prevent and more effectively manage motor vehicle-related injury in Australia. Extrapolation of these findings may encourage such preventive activity in other countries (for example Thailand) where motor cycle use is proportionately much higher than in Brisbane.

**Diane Cowley Supervisor: Elizabeth Parker**

**A Public Health Care Approach to Hypertension: 24 Hour and Home Blood Pressure Monitoring in the Community.**

Abstract

A survey was mailed to three groups; patients, general practitioner (GP) and local medical officers (LMO), to determine whether community 24 hour ambulatory blood pressure monitoring (ABPM), home blood pressure monitoring and education in non-pharmacological treatments for hypertension would be considered a useful addition in the management of hypertension in the community by patients and General Practitioners. The survey questions attempted to determine the potential utilisation of community ambulatory blood pressure monitoring, home blood pressure and non-pharmacological education services. Most GP's and more than half of the LMO's were aware of the current hospital ABPM service and nearly all would use a community service if the service was available. Both patients and GP's would prefer to maintain a Primary Health Care approach. It is recommended that the Queensland Health Department develop and implement a community Hypertension Primary Health Care Model.

**Elizabeth Craig Supervisor: Chris Bain**

**Growing to Term: The Determinants of Low Birth Weight Among Indigenous Babies in an Urban Queensland Community**

Abstract

This hospital records based study examined risk factors for low birth weight (<2500g), preterm birth (<37 weeks gestation) and intrauterine growth retardation (< 10th percentile for gestational age) among 672 infants born to Aboriginal and Torres Strait Islander mothers at Brisbane's two largest obstetric units in mid-1999. For this population the rate of low birth weight was 9.6% and while there was no difference in rates of preterm birth, rates of low birth weight were 10% below and rates of IUGR 20% below national Indigenous averages. While the major determinants of IUGR were socioeconomic (eg. employment, education), the major determinants of prematurity were obstetric (eg. premature membrane-rupture, pregnancy induced hypertension). Maternal education was the single most important predictor of smoking, alcohol consumption and recreational drug use, with rates declining dramatically as educational attainment rose. Thus the author concludes that socioeconomic factors and maternal smoking are the most important factors contributing to birth outcome in Brisbane's Indigenous community.

**Margaret Hogan Supervisor: Nick Lennox**

**The Health of Children Attending Special Schools in the Gold Coast District, as Perceived by their Parents and Teachers**

Abstract

Children attending special schools have been identified as having unrecognised health problems and unmet health needs. This study was undertaken in 1999 to identify the health needs of the 262 children attending three special schools on the Gold Coast. The instrument used to collect data was the Child Health Questionnaire, PF50, a parent/proxy report that was developed in the United States and recently adapted for Australian use. Results showed that in all but one of the CHQ PF50 scales, parents/carers perceived their children's health status to be lower than that of the Australian normative data. Teaching staff expressed confidence in dealing with students with a wide range of conditions but expressed concern about basic health issues such as hygiene and nutrition. They identified access to a nurse and written material as the resources that would assist in the management of children in their care. The author suggests that the findings of this study can be used as a basis for planning more appropriate preventive and support programmes for the students, teachers and parents/carers.

**Stephen Lambert Supervisors: John Hay, Ken Clare**

**An Evaluation of the Prescribers' Course in HIV Medicine Offered by the HIV/AIDS Education Program of the Queensland Medical Education Centre**

Abstract

The Prescribers' Course in HIV Medicine provides training to medical practitioners who wish to become accredited to prescribe HIV antiretroviral therapies in Queensland. The course was developed in 1998 and till November 2000 seventy-five medical practitioners completed the course and 30 of them had successfully passed the assessment. This study evaluated the effects of participation in, and successful completion of the course on the management and treatment of HIV. Three evaluation tools were used: a survey of the medical practitioners who had completed the course; a peer review of the course; and an analysis of the existing evaluation data. The results showed that the content of the course was of an acceptable standard but areas for improvement included detailed pharmacology and renewing outdated information. The results further showed that, overall, the assessment was rigorous and at an appropriate level for the purpose of the course. The author concludes that although improvements are warranted, the course offers a strong and a solid foundation from which a course can be developed that is of the highest standard.

**Shareen Lata Supervisor: Helen Longbottom**

**Reproductive Health Needs Assessment for Adolescent Women in Samoa**

Abstract

Reproductive health of adolescent women has an impact upon their health outcomes. Unplanned pregnancy may impede education and have emotional, social, and financial implications. Unprotected sex exposes women to the risk of sexually transmitted infections. This study aimed at describing the reproductive health information and service needs of adolescent women in Samoa. Both qualitative and quantitative research methods were used to collect data. Results showed that adolescent women did not have adequate or appropriate reproductive health education. Their understanding of sexually transmitted diseases, their mode of transmission and symptoms was fairly limited and only about one-third of the sexually active adolescent women were condom users. The author identified access to information and sex education as being the primary needs for the adolescent women in Samoa. She recommends that increasing knowledge through education may require inclusion of biological and psychological aspects of reproductive health in the school curricula.

**Sharni Lavell Supervisor: Michael Dunn**

**A descriptive-exploratory study of client satisfaction with the pregnancy counselling service at the Brisbane clinic of Family Planning Queensland (FPQ)**

Abstract

A descriptive -exploratory research project was undertaken to identify the satisfaction levels of clients who are accessing the pregnancy counselling service offered by the Brisbane Clinic of Family Planning Queensland (FPQ). A convenience sample of 39 women attending the Brisbane Clinic of FPQ was recruited for the study over a period of three months. Participants provided data through a self-administered anonymous and confidential questionnaire following their clinic visit. Data were analysed at two levels with the presentation of descriptive statistics and the analyses of bivariate associations. Results indicate that in general the majority of participants are satisfied with the pregnancy counselling service provided by the Brisbane clinic of FPQ and are receiving the services and information they require.

**Lance Le Ray Supervisor : Don Stewart**

**Economic Analysis of the "Lung Health" Program**

Abstract

A Comparative Costing analysis was conducted, comparing the cost of managing a cohort of patients with Chronic Obstructive Pulmonary Disease in 1999 with that of a similar cohort in 2000, after the

implementation of the "Lung Health" program, a comprehensive pulmonary outreach and rehabilitation program at Ipswich Hospital. Comparison was made between the two cohorts on the basis of the cost of providing symptomatic management to each cohort during the study period. Given the costs that were measured in this study, the total cost of the cohort managed via the "Lung Health" program was lower than the traditional management from the Ipswich Hospital perspective.

**Elaine Lynch Supervisor: Chris Bain**

### **Risk Factors Associated with Vancomycin-Resistant Enterococcus Colonisation**

Abstract

In Australia, emergent strains of Methicillin resistant Staphylococcus aureus (MRSA) resulted in increased usage of vancomycin. Since the discovery of vancomycin resistant Enterococci (VRE) the threat of nosocomial infections, resistant to most antibiotic therapy, in the compromised patients has become a problem. This study examined the two VRE outbreaks in a Brisbane adult hospital in order to identify risk factors associated with the outbreaks. The method employed was review of charts of the known VRE colonised patients. Results showed that the risk factors for VRE colonisation were: old age with longer periods of hospitalisation, serious acute illness with serious underlying illness, proximity to another VRE case and antibiotic therapy.

**Allison Mackie Supervisor: Peter O' Rourke**

### **Factors Associated with Adherence of People Living with HIV/AIDS (PLWHA) to Combination Antiretroviral Therapy**

Abstract

Non-adherence to combination antiretroviral therapy (CAT) among people living with HIV/AIDS presents a significant public health problem. This study measured the extent of adherence to CAT and identified factors associated with adherence in a sample of people living with HIV/AIDS at the Royal Brisbane Hospital (RBH) and AIDS Medical Unit (AMU). A sample of 73 patients from RBH & AMU participated in the study and self-administered questionnaires were used to collect data. Results showed that only 55% of participants were 100% adherent and 92% were >95% adherent to their prescribed antiretroviral therapy in the past month. Participants taking antiretroviral therapy for >2 years, who used a pill box to store their medication or were a patient of the RBH were more likely to be non-adherent. The author proposes a multidisciplinary model of care to promote adherence to CAT. Negotiation of a case manager, treatment goals and treatment plan have also been recommended to support the patient throughout the treatment experience.

**Damhnat McCann Supervisors: Helen Longbottom, Michael Nissen**

### **A Description of the Home Based Treatment and Characteristics of Children Presenting to Hospital with Acute Gastroenteritis**

Abstract

Acute gastroenteritis causes significant morbidity in Australian children aged less than five years causing a large number of hospital admissions. The majority of these hospital admissions can be avoided through appropriate home care. This cross-sectional survey conducted at the Royal Children's Hospital aimed at describing the home based treatment received by the children who presented at the hospital with acute gastroenteritis.

Results showed that ORS was poorly utilised in the home based management. Inadequate and at times inaccurate information regarding fluid rehydration was given to caregivers, particularly by general practitioners. Education programs for both general practitioners and caregivers with the aim of increasing ORS usage have been recommended. Improved infection control is one of the means of reducing the spread of infection among children attending childcare centres. The author concludes stating that children at child care centres may be an appropriate target group for rotavirus vaccination when it becomes available.

**Annette Neill Supervisors: Penny Webb, Brad McCall**

**A Study of the Epidemiology of and Potential Risk Factors for Meningococcal Disease in the Southern Public Health Unit Network, Queensland, 1998**

Abstract

Meningococcal disease is a serious infection and industrialised countries are experiencing an increase in both sporadic disease and outbreaks. This study aimed at describing the epidemiology of, and potential risk factors for invasive meningococcal disease in the Southern Public Health Unit Network (SPHUN) of Queensland. Questionnaires were used to collect data for the study. Results showed that the Southern Public Health Unit Network experienced a higher notification rate of meningococcal disease than the rest of Queensland in 1998. The burden of disease in SPHUN continues to demand considerable time and resources by public health professionals. Increased awareness is needed by general practitioners on the importance of administering intravenous antibiotics as soon as a case is suspected. The public health measures to warn of the risk to children exposed to tobacco smoke, and continuing efforts to improve socioeconomic status in the community, may assist in the control of this disease.

**Riana Nugrahani Supervisors: Rod McClure, Peter O' Rourke**

**Falls Injury in Children Aged 0-14 Years**

Abstract

Among Australian children 0-14 years of age, injury is responsible for more deaths than any other condition, with falls being second to motor vehicles in the ranking of contributory causes. The study aimed at describing the frequency, distribution and determinants of falls-related injury in children aged 0-14 years and quantifying the characteristics of falls events which increase a child's chance of sustaining a severe injury. Data for this study were collected from the Queensland Injury Surveillance Unit. Analysis of the data demonstrated the large burden of falls injury in children, and provided considerable insight into the nature of the injury events responsible for the problem. The author suggests that the prevention of childhood falls injuries in the community could be encouraged by sustaining an evidence-based public policy. This would entail improving the provision of data at local levels to community intervention programs and establishing centralized data interpretation to support the government to decision making capacity.

**S Petrony Supervisors: Chris Bain, J Shelley**

**Management of First Trimester Pregnancy Loss in Victorian Public Hospitals**

Abstract

This survey was carried out at the public hospitals in Victoria in order to explore the comparative safety and efficacy of surgical and other methods in the management of first trimester pregnancy loss. Data were collected from the women who had experienced first trimester pregnancy loss in 1997 and attended one of the public hospitals in the State. Results showed that all the hospitals surveyed had the facilities for surgical evacuation and the majority of women attending these hospitals were treated surgically. Medical evacuation was available in 15% of the hospitals and only a small proportion of women were treated with this method. Expectant management was an option available to women in 70% of the hospitals, but was only used to treat a minority of women. As acute hospitals have policies that encourage short-stay and day surgery, the author raised question about their suitability as providers of expectant management or medical evacuation. She concludes making some recommendations which include adequate training facilities for health workers; clear protocols; and adequate information and support for the women.

**Victoria Plows Supervisor: Don Stewart**

**A study on the Health and Social Support for Filipino Migrants with Teenage Children in South East Queensland**

Abstract

The study is about determining whether the health and social support given by the government is appropriate to the culture of Filipino migrants with teenage children. To achieve the goals a review and analysis of literature was done. A qualitative approach involving indepth interviews on a non-random sample of fifteen Filipino families having teenage children in Brisbane was conducted. The data was analysed, then conclusion drawn after verification. The study found that families who have relatives in Australia did not have problems accessing support services and stressed the importance of Filipino values compared to those without relatives. Also, Filipino teenage migrants who arrived in Australia after they were 12 years old, with a mixed family environment, encounter more problems than those arriving before 12 years old.

**Hilda Polume Supervisor: Marie Louise Dick**

**Haemophilus Influenzae Type B Meningitis in Greater Brisbane Area: 1988-1998**

Abstract

Invasive Haemophilus influenzae type b (Hib) is an important public health issue resulting in about 250,000 deaths each year. The disease is preventable through vaccination. In Australia, Haemophilus influenzae conjugate vaccines (HCV) were introduced into the immunisation program in 1993. This study reviewed the admissions due to Hib meningitis at the Royal and Mater Children's Hospital from July 1988 to June 1998 to assess the impact of the vaccines. Results showed that the vaccines not only reduced the incidence of Hib meningitis but also markedly decreased the rate of the sequelae of the disease as well as antibiotic resistance to amoxycillin. The vaccines had an efficacy rate of about 80%. The author concludes that other countries may also benefit from introduction of Haemophilus influenzae conjugate vaccines (HCV) into their immunisation programs.

**Kelly Shaw Supervisors: Peter O' Rourke, Geoff Mitchell, Natasha Posner**

**Diagnosis and Management of Attention-Deficit/Hyperactivity Disorder (ADHD): The General Practitioners' View**

Abstract

This study aimed at assessing the general practitioner's (GPs) understanding of, and their role in the management of Attention Deficit Hyperactivity Disorder (ADHD); their understanding of ADHD current practice, referral behaviour; and needs for information and training to enhance their role. Data were collected from 399 GPs practising in Queensland. Results showed that the GPs identified their role to be provisionally diagnosing ADHD, then referring to specialist to confirm the diagnosis and initiate management; assisting with monitoring progress; educating child and family regarding the disorder; and liaising with the school where necessary. Perceived barriers to increased GP involvement were: the time and resource constraints; concerns regarding abuse and addiction liability of prescription stimulants; the complex diagnostic issues involved in childhood behavioural problems; and, lack of training and education regarding ADHD. Given the rapidly increasing demand for ADHD services, the author suggests that, it is important to identify a service model that would facilitate effective GP involvement in ADHD care.

**Katrina Smith Supervisor: Eberhard Wenzel**

**The effects of economic globalisation on health**

Abstract

Economic globalisation is one of the most important phenomena to arise in recent decades. This dissertation examines the effects of economic globalisation's worldwide impact on health, by a broad analysis of the development of free markets, and the discourse of capitalism. The contribution of economic globalisation to current environmental health, economic and social problems is also assessed. The major findings of this

research include the results of an analysis of divergent writers' perspectives about economic globalisation, and implications for public health policy formation. Writer's perspectives ranged from beliefs that economic globalisation is positive, to perceptions that it contributes to major problems, even leading to the probable extinction of life on this planet. This analysis found that the latter beliefs are most likely to offer a blueprint for the future, but social, environmental and economic problems will have to become much worse before serious change is considered. Writer's suggested solutions for these problems are extremely divergent. Many, though, discussed inequities within societies as causing a number of social and public health problems. Accordingly, it is suggested that public health workers focus on inequities as 'common ground,' and that they gain skills in policy development. Other solutions, such as ecologically oriented taxation are also discussed.

**Mei Tang Supervisor: Shilu Tong**

### **Ross River Virus Infections in Queensland between 1984 and 1996**

Abstract

This study aims to investigate the features of notified Ross River Virus (RRV) infections in Queensland between 1984 and 1996, since Queensland is often described as having the greatest endemic activity of RRV in Australia. There were totally 23,438 notifications in Queensland from 1984 to 1996. Here, the distribution and incidence rates of the RRV infections by age and sex were investigated; the distribution of RRV infections among Coastal and Inland districts and the different regions of Queensland (Northern, Central & Southern) were also discussed; and the seasonal distribution of RRV infections was examined, too.

**Hiranthi Walpola Supervisor: Chris Bain**

### **Are Current Strategies of Tuberculosis Control Adequate to Meet the Challenge of Human Immunodeficiency Virus Coinfection?**

Abstract

This study is a systematic review of the published literature which aims at examining the effects of HIV infection on the epidemiology and control of tuberculosis (TB). Based on the findings of the review the author has made several recommendations for control of tuberculosis in this HIV era which include: enhanced partnerships for technical and financial assistance to low income countries with high HIV prevalence, augmentation of DOTS strategy with regard to case finding, management of smear negative disease and multi-drug resistant tuberculosis. In Australia, the author suggests, the most appropriate measures should include better surveillance of HIV and tuberculosis as well as co-infection; improved diagnostic practices and preventive therapy as well as improvement of migration screening strategies, risk group management and infection control.