A Message from the Director

Welcome to our newsletter for 2013!

CANR has had yet another busy but successful year. Our transition into the Ingham Institute has required a great deal of planning and we are grateful for Janine’s support in making the journey as seamless as possible. We are delighted to join other researchers across SWSLHD and beyond on collaborative research ventures potentiated by our location within this unique world-class facility.

We continue to concentrate on our two major programs of research in Patient Safety and Women’s and Children’s Health. Many years of research relating to clinical management errors has resulted in the development and implementation of structured content, a minimum data set for nursing handover for medical-surgical areas, an electronic tool within CERNER, and supportive teaching materials for bedside handover. The implementation of changes to handover across all hospitals has been a major achievement for CANR (with the assistance of many other services) and has delivered very promising results (see inside story).

Although we have focussed for some years on falls prevention and continue working in the area of clinical management errors, we are pleased to now turn our attention to Medication Safety. We expect to be working in this area for several years. Two major studies are already planned (see inside story) with one funded, so expect to hear more about that in the coming years.

We have continued our Writing Circles which have been well received by nurses and midwives across the District, and are hoping to extend our workshop program to include Project Management and Proposal Development in 2014.

We extend our thanks to Kung Lim, Director of Nursing & Midwifery Services for SWSLHD for her support and to all the hospital Directors of Nursing & Midwifery Services throughout SWSLHD and all the District nurses and midwives and UWS academics. They continue to welcome our project suggestions and to collaborate with the Centre and its staff to support research that transforms practice across the District.

My best wishes to you all for a happy and safe holiday season.

Best regards
CANR has a new home & a new look!

As many of you are aware, CANR moved into the Ingham Institute for Applied Medical Research in August 2012. These brand new state-of-the-art premises bring together many research centres from a range of disciplines within South Western Sydney Local Health District. The Institute was formally opened on 23 October 2012 by former Prime Minister Julia Gillard. Please feel free to drop in for a visit!

CANR also has a new logo!

What better way to celebrate a new chapter in CANR’s life than to launch a new logo! The simple design is still based around our motto “Bridging the gap between knowledge & practice”, however the design now reflects both nursing (blue) and midwifery (red).
Identifying and Managing Unstable Adults in the ED

An essential role of nurses working in the Emergency Department (ED) is the early identification and management of an unstable / deteriorating patient. Many patients present to the ED with some form of instability and their clinical condition can become compromised quickly.

This project aimed to look at identifying and managing deteriorating adult patients in the ED. This was done through the introduction of a modified observation chart where clinicians could easily track changes in specific vital signs, quickly identify abnormalities, and commence treatment in a timely manner. The modified chart incorporated triggers, using colour as an additional visual alert. The modified chart is called the Adult Emergency Department Flow Chart.

This introduction of the modified observation chart enabled a greater level of sensitivity in identifying abnormal vital signs, and also drew clinicians’ attention to specific vital signs which were previously not well documented, such as pain. Also, medical officers were more likely to be notified of these abnormal vital signs, and patients were more likely to receive medication to help manage the identified deterioration. The modified observation chart facilitates the role of nurses in the early identification and management of the deteriorating patient in the ED.

Project Team:
Paul Hudson (CEC),
Jodie Eckholm (SWSLHD)
Maree Johnson,
Rachel Langdon,

Conducted at Royal Prince Alfred,
Liverpool & Bowral Hospitals
Transferring critical patient information at handover

Failures in the transfer of patient information are related to adverse outcomes making handover a critical aspect of patient safety. There were some areas for improvement identified by nurses: variation in the scope of information conveyed at handover, often no visualisation of the patient; limited patient engagement; there was no written/printed handover that was retained and there was no system of accountability related to the transfer of patient information.

CANR together with clinicians, managers, IM&T and CEWD staff developed an approach to change the way handover was conducted throughout the SWSLHD.

Changes included structured content using ICCCO, minimum data set for medical/surgical patients, electronic tool and modelling of handover at the bedside (video).

Preliminary results from the pilot study show:

- Successful implementation of the integrated system for nursing handover
- Increased transfer of critical information
- Increased patient engagement during nursing handover nurse acceptance
- Improved nurses satisfaction with handover
- Use of the system by other health professionals

*Project Team: Professor Maree Johnson, Paula Sanchez, Catherine Zheng
Conducted at Liverpool & Campbelltown Hospitals*

Medication Safety

Nurses have a key role to play in the global efforts to improve patient safety through reducing medication errors. Although all health professionals and patients have the duty to ensure safe and effective medication outcomes, the legal responsibility for applying and ensuring the ‘five rights’ of drug administration: right patient, right drug, right dosage, right time and right route at the moment of administration is predominately within nursing’s scope of practice. Studies of nurses work practices report that nurses may administer up to 50 medications per shift with some patients receiving up to 18 medications per day.

*Estimates suggest that nurses spend up to 40% of their time administering medications.*

In addition to the actual administration, nurses are also involved in other pharmacotherapeutic activities, such as patient education, promoting therapy adherence, and monitoring the effectiveness of interventions. We are developing several initiatives related to medication safety.
Umbrella systematic review conducting with SWSLHD nurses and midwives

Sam Lapkin and Professor Maree Johnson worked with 12 clinicians from SSWLD to identify nursing practices that are effective in reducing errors during administration.

Participants developed skills required to synthesise results from multiple systematic reviews using validated tools so as to minimise bias and establish validity of the findings.

Evidence from nine systematic reviews that were identified from the search of 10 major electronic databases suggest that interventions such as double checking, checklists, protocols, safety committees, staff education and training may reduce medication administration errors.

The results of the review were presented at the Liverpool Hospital Clinical Practice Committee meeting in August 2013.

Comment from participant: “Excellent, engaging and interactive...”

Managing interruptions

Interruptions occur in over half (53%) of medication administrations, doubling the risk of medication errors.

Medication related incidents remain the second most common type of adverse events reported in Australian hospitals.

Studies have found that interruptions (externally initiated events e.g., questions from patients or staff, telephone calls, infusion pump alarms) during medication administration increase the risk and severity of medication errors by up to 60%.

Emerging evidence indicates that having the behavioural strategies to effectively manage interruptions may reduce the likelihood of clinical incidents.

Because the wards are very busy and complex areas to develop strategies, we are proposing to work with nurses in simulation laboratory and then apply developed strategies in the ward setting.

Work is underway to pilot the intervention at the recently opened Ingham Institute Clinical Skills and Simulation Centre at Liverpool Hospital in 2014.

Project Team: Sam Lapkin & Prof Maree Johnson are collaborating with Professor Tracy Levett-Jones (simulation expert, University of Newcastle), Dr Gabrielle Weidemann (Cognitive Psychologist, MARCS Institute, UWS) and Anna Thornton (Director of Nursing & Midwifery Liverpool Hospital)

Conducted at Ingham Institute Clinical Skills & Simulation Centre, Liverpool Hospital
The brave new world of speech recognition in nursing

This collaborative project (CANR, UWS, SWSLHD, SLHD, Cerner, Telehealth Research and Innovation Laboratory, NICTA, UWS, CEC, University of Melbourne, University of Wollongong), led by Professor Maree Johnson, seeks to revolutionise the way end-of-shift handover information and nursing documentation are completed. Although in its third year, laboratory experiments are encouraging.

Interviews with nurses have confirmed that nurses are interested in embracing new technologies if it improves patient safety, however, the accuracy of the technology and its ability to reduce duplication are keys to the likely acceptance by nurses and midwives.

Studies using Dragon Medical are being undertaken with encouraging levels of accuracy when noise models are introduced.

Nurses are interested in using a range of recording devices: smart phones (preferred), tablets digital voice recorder, and MP3 player.

This pilot builds on five years of research by members of this team. Through a systematic review and looking at a 2012 trial of speech recognition technology in the Manly Hospital Emergency Department, speech recognition reduced turnaround times when used by doctors. Unfortunately, nurses played a minor role in this trial and personal communication did not convince the team of its successful uptake by nursing staff.

CANR is proposing a clinical study shortly using speech recognition technology to generate nursing notes. We are currently progressing restructuring of text using machine learning and textual analysis procedures.

Project Team: Prof Maree Johnson, Paula Sanchez, Dr Jim Basilakis (UWS) Dr Hanna Suominen (NICTA), Dr Leif Hanlen (NICTA, Prof Linda Dawson (UoW), Dr Barbara Kelly (UOM), Dr. Wei Xuan (Ingham Institute)

Funded by University of Western Sydney, Ingham Institute of Applied Medical Research.

Conducted at UWS Clinical Laboratories

Recall & Check project addressing medication omissions

A further exciting trial by CANR aims to reduce incidents of medication omission errors for acute inpatients. The development of this project was informed by data obtained from the Incident Information Monitoring System indicating that omissions constitute the biggest category of medication administration errors. This is an important finding, considering that omitting or delaying the administration of certain classes of medications such as resuscitation drugs, first doses of injected antibiotics, anticoagulants, thrombolytics, anticonvulsants and stat doses (medication given immediately as a single dose) can cause adverse outcomes. Most medication omissions are related to the patient being out of the ward. The proposed intervention involves alerting the patient that they have missed their medications and to contact the nurse.

Project Team: Sam Lapkin, Maree Johnson, Barbara Chapman, Carol Farmer

Funded by Chief Nursing & Midwifery Office (NSW), Nursing & Midwifery Innovation Scholarship, 2103

Conducted at Bankstown & Fairfield Hospitals
Midwifery Initiated Oral Health – Dental Study Update!

CANR and its partners commenced the NHMRC funded MIOH-DS multicentre trial in July 2012. The trial is being conducted across three metropolitan hospitals in Sydney and aims to test the effectiveness of a midwifery initiated oral health intervention in improving the oral health status, knowledge and quality of life of disadvantaged pregnant women in Sydney. To date 503 participants have been recruited and preliminary results will be available by mid 2014. We anticipate that the study results will have significant policy implications for midwifery and dental services in NSW Health.

Project Team: Ajesh George, Maree Johnson, Shilpi Ajwani, Sameer Bhole, Anthony Blinkhorn, Hannah Dahlen, Sharon Ellis, Anthony Yeo

Funded by NHMRC
Conducted at Campbelltown, Fairfield, Nepean Hospitals

Dental Health Services Victoria take a Shining to MIOH Pilot Study

Late in 2012, CANR and its MIOH partners (UWS & S&SWLHD) had embarked on a new initiative to pilot the Midwifery Initiated Oral Health (MIOH) education program in Melbourne in collaboration with Dental Health Services Victoria (DHSV).

The main objective was to pilot the MIOH education program with 40 midwives and assess its feasibility, acceptability and effectiveness in Victoria. The pilot program was incorporated into the “Healthy Families, Health Smiles” project of DHSV http://www.dhsv.org.au/hfhs/.

Thirty three midwives successfully completed the education program and were awarded the 16 CPD point certificates.

The evaluation results have been very encouraging with all midwives showing significant improvement in knowledge and confidence in promoting oral health as part of antenatal care. The success of the MIOH VIC pilot was highlighted at the launch of the Health Families, Healthy Smiles project in Melbourne on 22 February by the Victorian Government Minister for Children & Early Childhood Development, Wendy Lovell. At the launch, the Minister handed out the CPD certificates to midwives who had completed the MIOH education program.

Due to the success of the pilot, Dental Health Services Victoria have incorporated the MIOH education program in their State’s Oral Health Promotion Strategic plan and are expanding the program to other midwives across the state.

Pictured: Dr Ajesh George with Minister for Children & Early Childhood Development, Wendy Lovell & Victorian Midwives.

Funded by DHSV and CANR
Conducted at antenatal services across Victoria

Congratulations to Ajesh who has taken out for the second time the 2013 NSW Quality Awards and NSW Health Innovation Finalists Awards for his MIOH-DS (Midwifery Initiated Oral Health – Dental Service) project. The MIOH-DS program involves midwives and dentists working together to raise awareness and improve oral health among disadvantaged pregnant women in South-western Sydney. Disadvantaged pregnant women have high rates of dental problems yet few seek dental care or receive oral health advice during antenatal care. The MIOH-DS project addresses this issue by training midwives for the first time to provide oral health education, assessment and referrals to accessible public dental services. The project has shown an improvement in dental consultations, oral hygiene, knowledge and quality of life among pregnant women as well as increased knowledge and confidence among midwives in promoting oral health in the area.

The positive outcomes and future potential of the MIOH-DS program have received attention from the media (Channel 10) and key organisations. The Australian College of Midwives has promoted the education program to all midwives across Australia while the NHMRC has supported further evaluation of the MIOH-DS across other NSW hospitals. Interstate, Victoria Dental Services have successfully adopted the MIOH-DS approach and are expanding the program state-wide.

The program has also been expanded to the Aboriginal community through child and family health nurses to complement the early childhood oral health program.

Pictured from left: Amanda Larkin, CEO SWSLHD, Dr Ajesh George, Prof Maree Johnson accepting their award

Funding by NSW Centre for Oral Health Strategy, The Australian Dental Association (NSW)

Conducted at Campbelltown Hospital

Research team: Dr Ajesh George, Prof Maree Johnson, Assoc Prof Sameer Bhole & Dr Shilpi Ajwani (S&SWSLHD Oral Health Services/Sydney Dental Hospital), Prof Hannah Dahlen (UWS), Sharon Ellis (SWSLHD), Prof Anthony Blinkhorn (USyd)
Poor transfer of patient information between clinicians has been associated with adverse patient outcomes. A structured content handover approach with a minimum data set (MDS), developed from research and stakeholder input, was implemented. Electronic handover embedded the structure while educational tools demonstrated bedside handover. Using a pre-post test design, we recorded handovers, obtained information on handover location and process, and interviewed and surveyed nurses.

This project increased the transfer of critical patient information (clinical status/clinical alerts/medications) to all ward nurses, provided a handover summary for nurses and other health professionals, placed patients at the centre of communication, increased nurses' satisfaction with handover, while not increasing the time required to deliver handover. The system has been implemented in 10 hospitals.
Samuel Lapkin,
Research Fellow

Sam Lapkin has come to us after completing his PhD at University of Newcastle. Sam’s PhD thesis was exploring the effectiveness of interprofessional and behavioural approaches to enhance safe medication practices.

Sam’s research interests include patient safety, medication safety, quality use of medicines, interprofessional education and collaborative practice, health professional education, systematic reviews, evidence based practice and simulation.

Sam has published several peer-reviewed papers and has presented work at national international conferences. He is an active member of the Australasian Interprofessional Practice & Education Network, Research Centre for Professional Education (University of Newcastle and the University of Newcastle JBI Evidence Synthesis Group which is affiliated with the NSW Centre for Evidence Based Health Care, University of Western Sydney).

Sam was awarded the Best Research Higher Degree (RHD) Publication for the Faculty of Health and Medicine, University of Newcastle. Sam was one of five nominated for the Faculty Best RHD Publication nominations, which was awarded for a candidate with successful publication in a high impact journal or high number of citations during 2011.

Welcome Sam!!

Catherine Zheng
Research Assistant

Make a warm welcome to Catherine who joined our team in October 2012. Catherine brings with her a substantial background in mathematics and statistics which will strengthen the CANR team in the area of biostatistics.

Catherine has taught Statistics and Calculus at the senior secondary and first year tertiary levels in Auckland and Sydney.

She recently graduated with a Research Master of Science (Hons). Her research study has a focus on the analysis of multi-species type 2 diabetes from gene expression data.

Her research interest is in the area of statistical analysis of genomic data: high-throughput microarrays and next-generation DNA sequencing data.

Welcome Catherine!!
Danielle Tran receives PhD!

Congratulations to Danielle who received her PhD in April this year. Many staff will remember Danielle who worked with us at CANR for many years.

Vietnam-born Australians represent an important culturally and linguistically diverse population of Australia, many have a stressful migration and refugee history.

This research program investigated two interrelated aspects of health in Vietnam-born Australians, including the impact of acculturation of lifestyle behaviours and health status; and prevalence, risk factors, hospitalisation and mortality outcomes of type 2 diabetes.

The research findings have implications for education about healthy lifestyle and for proactive management of diabetes in this population.

Danielle attended the Graduation Ceremony in September where she was awarded her Doctorate.

Congratulations Danielle!

Are you interested in a postgraduate degree?

At the University of Western Sydney, postgraduate programs are developed in consultation with industry and professional organisations to meet real world needs. UWS place a strong emphasis on professional accreditation so you graduate with usable and marketable qualifications.

For further information go to:
http://uws.edu.au/future-students/postgraduate/postgraduate/postgraduate_courses

Muhammad our star PhD student!

CANR’S PhD student Muhammad Alquudah takes out the Best Presenter Award at the School of Nursing & Midwifery Research Forum held on 3-4 June 2013.

Muhammad’s Project is a randomised controlled trial of a health literacy modified fever management education for parents or carers.

This research was partially funded by Reckitt Benckiser Australia.

The education program is a fever management brochure and DVD to educate parents with varying levels of health literacy. Two papers have also been accepted for publication based on his study.

Also Muhammad’s education program is available as a resource for parents and health professionals.


Congratulations Muhammad!!
Finalist for Research Methods in Nursing & Research!

Congratulations to Professor Maree Johnson, Dr Sansnee Jirajwong (UWS) & Associate Professor Anthony Welch (with Research Methods in Nursing & Midwifery (RMNM) for being finalists in The Australian Educational Publishing Awards 2012 Category: Tertiary Education (Wholly Australian)

RMNM was published in 2011 and has received a wonderful response with it now being added to the nursing curricula at Charles Stuart University, University of Canberra and University of Western Sydney.

It is also now one of the preferred text for the new HETI Research Modules District HETI Education & Training – South Western

Oxford University Press are now working with the editors to release a new edition, due for release in 2014! Stay tuned!!!
A working lunch date with Professor Roger Watson

Once again Professor Roger Watson, University of Hull & Editor-in-Chief, Journal of Advanced Nursing presented to SWSLHD clinicians in an intimate working lunch. The title “Research Gate: Metrics or Madness” covered topics such as ERA/RAE and its impact on copy, citation rates and how to influence them, topic choice, journal selection and the issues of the “H” index.

Following the working lunch presentation, Professor Watson generously gave more of his time to conduct a presentation “How not to lose your job: publication ethics”. Using his vast research background and ethics experience, Professor Watson provided a clear understanding of complexities of ethics.

Writing Circle Workshop

CANR once again has been running Writing Circle Workshops. These intensive workshops are so popular, that we have had to put on three just this year! The morning session focussed on the writing process, formatting for scientific papers and IMRAD, Conference abstracts. The afternoon session saw groups break away into single or doubles for a hands-on session where Maree, Ajesh and Sam worked closely with individuals providing valuable information.

"A great workshop. The most value to me was the information provided and what processes you have to go through and considerations when submitting to journals, impact factors, etc"

Diana Wong, Acting Clinical Nurse Consultant, Emergency Department Liverpool Hospital

Conducted at Centre for Applied Nursing Research
Level 3, Ingham Institute

Presented by Maree Johnson, Ajesh George & Samuel Lapkin

Ethics Presentation

Rachel Gaele, Coordinator from the Research & Ethics Office gave her time to provide clinicians and researchers valuable insight into how the Research & Ethics office ticks. Many researchers find ethics submissions daunting, from the very beginning to the sometimes confusing issues. Rachel provided everyone with exactly what is the most successful and least stressful pathway of submitting Ethics Approval. From our feedback, the most consistent comment was based around learning how to navigate the intranet site, the actual step-by-step process and knowing that there are experts at the R&E Office that are available to assist. Thanks Rachel!
Publications


- Taylor, JA. & Johnson, M. (2013). The role of anxiety and other factors in predicting postnatal fatigue: from birth to 6 months Midwifery. 29, 526-534


• Alqudah, M., Johnson, M., Cowin, L., George, A. Measuring Health Literacy in Emergency Departments. Journal of Nurse Education and Practice. Accepted 5th July 2013.


• Lapkin, S., Levett-Jones, T., & Gilligan, C. (2012). A cross-sectional survey examining the extent to which interprofessional education is used to teach nursing, pharmacy and medical students in Australian and New Zealand Universities. Journal of Interprofessional Care, 26(5), 390-396.


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