Joanna Briggs Foundation
Clinical Fellows Project Reports: December 2016
The Joanna Briggs Institute (JBI) is an international independent, research and development centre within the Faculty of Health and Medical Sciences at the University of Adelaide, South Australia. The Joanna Briggs Institute collaborates with groups in developing or low resourced countries where language, technology, geography and finance present significant challenges to the provision of healthcare. We are working with these groups to create an appropriate knowledge base to support health decisions and to make this knowledge readily available at the point of care.

The JBI Approach

The JBI approach to evidence-based healthcare is unique. The JBI considers evidence-based healthcare to be reliant on the research evidence, the context in which care is delivered, individual client preference and the professional judgment of the health professional.

JBI regards evidence-based healthcare as a cyclical process. Global healthcare needs, as identified by health professionals or patients/consumers, are addressed through the generation of research evidence that is effective, but also appropriate, feasible and meaningful to specific populations, cultures and settings.

This evidence is collated and the results are appraised, synthesised and transferred to service delivery settings and health professionals who utilise it and evaluate its impact on health outcomes, health systems and professional practice.

Therefore, in order to provide those who work in and use health systems globally with world class information and resources, JBI:

- Considers international evidence related to feasibility, appropriateness, meaningfulness as well as effectiveness (evidence generation)
- Includes these different forms of evidence in a formal assessment called a systematic review (evidence synthesis)
- Globally disseminates information in appropriate, relevant formats to inform health systems, health professionals and citizens (evidence transfer)
- Has designed programs to enable the effective implementation of evidence and the evaluation of its impact on healthcare practice (evidence utilisation).
In 2016 the fundraising and advocacy arm of JBI, the Joanna Briggs Foundation (JBF), successfully raised funds to support ten medical practitioners to travel to Adelaide to undertake the JBI Evidence-based Clinical Fellowship Program. They came from various low and lower middle income countries (LMIC) such as Myanmar, Nepal, Kenya and Tanzania.

The Evidence-based Clinical Fellowship Program is tailored for each participant, depending on the prevailing health issues and needs of their local community. The program provides the framework for key medical staff from low and lower middle income countries to use JBI methodologies and approaches to implement evidence in practice.

Within Australia, the JBF also supports participants of the JBI Evidence-based Clinical Fellowship Program from Australia’s Aboriginal and Torres Strait Islander communities. The JBF raises funds that enable indigenous health professionals to undertake training in order to address critical areas of need, and to subsequently transfer that knowledge to their communities.

The Foundation would like to thank the very generous support from their donors and sponsors throughout 2016.

The professionals taking part in the JBI Evidence-based Clinical Fellowship Program have the opportunity to learn about evidence-based healthcare and how to implement a relevant project in their own work environment.
Funding from the Joanna Briggs Foundation has enabled JBI to offer scholarships for health professionals of exceptional merit from various low and lower middle income countries. These professionals participate in the JBI Evidence-based Clinical Fellowship Program to learn about evidence-based healthcare and to support a project for implementing evidence in their own setting.

These participants have had the opportunity to learn how to:

- Develop and engage in processes to further develop their leadership skills and strengths.
- Discuss and describe the effectiveness of current approaches to the implementation of evidence based practice.
- Conduct clinical audits and develop and execute strategies to implement evidence-based practice.

Since its inception The Joanna Briggs Institute's Evidence-based Clinical Fellowship Program has schooled 240 participants which includes 30 students from developing countries funded through the JBF.
The LMIC Evidence-based Clinical Fellowship Program includes two visits to Adelaide to study with JBI staff and present their work and findings to an invited audience of colleagues and fellow professionals.
Dr Lillian Kebaya is a pediatrician from Kenya who works at Maragua District Hospital which is located 89km from Nairobi.

The focus of Lillian’s implementation project was on birth asphyxia and neonatal resuscitation. In many developing countries, newborn resuscitation skills are available in theory, but not in practice. Lack of functional equipment and poor preparation for resuscitation of a newborn baby were cited as a barrier to achieving effective newborn resuscitation in Kenyan hospitals. Provision of effective newborn resuscitation is dependent on a skilled health provider, however, it was also noted that some of these lacked the skills or used outdated practices. Lillian’s evidence-based implementation project aimed to standardize formal neonatal resuscitation training for all health workers attending births, and to decrease variation in practice. She also wanted to assess the availability of functional equipment and supplies for newborn resuscitation in the maternity unit of her hospital.

This project was successful in improving awareness on basic newborn resuscitation. Lillian successfully trained all the health care providers attending to deliveries in basic newborn resuscitation. Improved compliance for education increased from 16% in the baseline audit, to 100% in the follow-up audit. This project has boosted teamwork amongst the health care providers, and improved the quality of equipment in our facility as the audit was able to highlight the availability or absence of some of these equipment.

An evidence-based resuscitation protocol has also been developed for use within the hospital to standardize practice. Future directions for promoting best practice highlighted by this project as priorities include:

- Conducting a follow up audit after 6 months;
- Providing training to all newly joined medical staff on basic newborn resuscitation;
- Sharing results in other meetings such as the annual Kenya Pediatric Association in April 2017, so as to disseminate this information and hopefully, encourage clinicians in similar settings to do the same;
- Planning to train all health care providers in the nearby referral hospitals and health centers, who are attending to births regarding this basic skill;
- Looking forward to carrying out other implementation projects in the near future, but on different topics in relation to other conditions affecting children under five.

The highlight of Lillian’s project was improving the training and education of the health workers (maternity nurses and doctors) who attend to births, from 16% to 100%! This improvement will assist in maintaining competencies in relation to newborn resuscitation.
Dr Patrick Mbah Okwen is a medical doctor working at the Bali District Hospital in the North West Region of Cameroon. Patrick’s implementation project focused on Artemisinin-based combination therapy for uncomplicated malaria in children under 5 years of age. Malaria in endemic countries has been identified as an important cause of morbidity and mortality in children. The World Health Organization (WHO) recommends the use of artemisinin-based combination therapies (ACT) for treatment of malaria, which have been proven to be effective and well tolerated, in addition to significantly reducing morbidity and mortality.

Even when clinicians know ‘what works’ it does not always translate into practice, and there are cases of missed diagnosis, and mismanaged cases (wrong medications, or wrong doses of correct medications).

Patrick was able to engage with a group of key stakeholders, and carried out this audit in three different health settings (one District Hospital, one private hospital and one integrated health centre). The project team analysed the baseline audit, and determined which strategies would have the greatest impact. Training was provided to clinicians, and access to best practice evidence summaries provided based on WHO/MoH guidelines using text messages and WhatsApp. He also focused on reducing stock outs of first line ACTs, which was a problem within this health district. He identified which strategies to implement based on impact and cost effectiveness.

The main successes of the project were:

- Improvement in the overall management of the care of children under five with uncomplicated malaria.
- Reduction in irrational use of medicines.
- Reduction in drug stock outs.
- More patient centred care.
- Reduction in the number of admitted (complicated) cases in children under five (16 and 18 per month in October 2015 and January 2016 compared with 11 per month in October 2016 at both medicalized health units).
- Improvement in patient medical records keeping by clinicians (from 118 missing records to 58 missing).

Patrick is keen to undertake further audits with a focus on malnutrition in children with malaria.

The main success of Patrick’s project was the improvement in the overall management of the care of children under five with uncomplicated malaria. Antimalarial treatment was prescribed to patients on confirmation by positive microscopy or Rapid Diagnostic Tests, improving from 40% in the baseline audit, to 84% over the audit time-frame.
Dr Fadhlun Alwy is an obstetrician from Tanzania, and her focus is on the administration of antenatal corticosteroids for women at risk of pre-term birth in Muhimbili National Hospital. Fadhlun works at the oldest and largest medical university in Dar es Salaam, Tanzania. Muhimbili hospital is a national referral hospital as well as a regional hospital. There are 20-30 deliveries per day, with an estimate of 800 deliveries per month. The prevalence of pre-term babies born at the hospital is between 12 and 15%. Some of these are from women referred due to spontaneous premature labour from lower facilities while others are women electively delivered due to maternal conditions such as pre-eclampsia/eclampsia, infections, premature membrane rupture.

Through this implementation project, Fadhlun hopes to implement a standardized approach of care for premature deliveries, where the indications, dosage, reason, additional presumed risk or benefit of giving dexamethasone and neonatal outcome is clearly assessed and used to improve our care based on the data collected.

**Project team:**
3 obstetricians including head of department, neonatologist, midwives, and 2 senior residents.

**Baseline audit:**
- Sample of 20-30 patient case notes per criterion.
- Patient selection: from the labour ward registry and maternity high dependency unit registry, all pre-term, low birth weight babies identified, followed to the wards.
- Case notes collected for 2 weeks.
- Analyse baseline cases and give feedback to team.
- Questionnaires to 60-70% clinicians.

**Anticipated barriers:**
Availability of antenatal corticosteroids in the antenatal ward, unavailability of hospital funds, clinicians’ knowledge, unavailability of written clinical protocol on antenatal corticosteroids, time constraints for clinicians, and attitudes to change of practice.

Fadhlun is currently continuing her implementation project, and will conclude in 2017. She has performed baseline data collection with over 50 participants, and will be implementing strategies to improve the care for pregnant women who are at risk of pre-term birth.
Dr Isaya Jelly is a medical doctor from Tanzania, and his topic is community based management of multi-drug resistant tuberculosis (MDR-TB) at Kibong’oto National Infectious Disease Hospital, Tanzania.

The World Health Organization (WHO) has prioritized collaboration with communities in its 2016 ‘End TB’ implementation strategy. Acknowledging the difficulties that some communities face in gaining access to health facilities due to barriers such as stigma, discrimination, healthcare expenditure, transport, and income loss, partnering with communities in the roll-out of community based TB activities is vital.

The aim of Isaya’s implementation project was to make a contribution to promoting evidence-based practice with regards to the community based management of MDR-TB at Kibong’oto National Infectious Disease Hospital, Tanzania, and thereby improve patient outcomes and resource utilisation. Interventions included strategies such as engaging a multidisciplinary team to improve knowledge about best practice by provision of education and information among relevant health care workers on community based drug resistant tuberculosis activities.

The project also sought to provide education and information among patient’s and family members on community based drug resistant tuberculosis activities, and to improve patient’s outcomes by conducting an assessment of the patient’s clinical suitability and their preferences to receive community-based care for drug-resistant tuberculosis.

This project has ultimately demonstrated how important education of health care workers, as well as patients and their caregivers, is to the improvement of the management and monitoring of MDR-TB patients. This project has also highlighted the need for contextual and consistent community-focused assessment tools for MDR-TB patients.

There was marked improvement regarding the assessment of the patient’s suitability and preference to receive community-based care for drug resistant tuberculosis and documentation by the admitting clinician, with a 30% increase increment in this criterion. It was evident that the strategy of targeted mandatory patient assessment and documentation in the patient’s medical records during weekly major ward rounds yielded profound improvement in this aspect.

30%
Jonathan Bayuo is a senior nurse from Ghana, and his implementation project focused on the assessment and management of burn pain at the Komfo Anokye Teaching Hospital.

Burns are the fourth most common type of trauma worldwide following traffic accidents, falls and interpersonal violence. In Ghana, almost every national disaster is marked by burns. However, the country lacks a national burn repository. Jonathan’s objectives included to assess and implement evidence-based best practices in the management of burns pain. Through his project, Jonathan was able to establish a project team who also identified this as a huge problem within their setting. Interventions included the development of pain management training modules, introduction of pain assessment tools and pain management protocols, effective collaboration with external groups and the alteration of previous protocols to enable nurses’ use of ketamine when undertaking burns procedures.

Even with many challenges (such as a pharmacy industrial strike), positive strides in assessing and managing burn pain were achieved. Plans to continue implementing this program, and further follow-up audits will be important in sustaining this clinical care, and feedback from the injured burns clients increased satisfaction with their care is a fantastic result.

The major improvement in Jonathan’s burns project was the 80% increase in healthcare staff who had received training regarding pain assessment for patients with burn injuries – from 20% to 100%!
Dr Bhawana Dangol specialises in ENT and her implementation project was clinical and imaging diagnosis of Chronic Rhinosinusitis in adults at Patan Hospital, in Kathmandu, Nepal.

The aim of this project was to make a contribution to promoting evidence-based practice with regards to the clinical and imaging diagnosis of chronic rhinosinusitis in adults at Patan Hospital, Nepal, and thereby improve patient outcomes and resource utilization. Chronic rhinosinusitis is the inflammation of nose and paranasal sinuses persisting for more than 12 weeks, which contributes to significant morbidity, affecting 5 to 13% of the population (data from Europe, China, US). There are many reported co-morbidities associated with CRS such as bronchial asthma, chronic obstructive pulmonary disease, and allergic rhinitis, among others.

There are ongoing debates regarding diagnostic parameters, including symptoms, head light nasal examination, endoscopy, and CT scan, which impacts on approaches to management.

Bhawana’s objective was to increase compliance with evidence-based best practice and identify areas and strategies to sustain and enhance care in delivery of best diagnostic practice of chronic rhinosinusitis in her clinical setting in Nepal.

Through this implementation project, there was a significant increase in the compliance of using nasal endoscopy as a diagnostic tool (97% vs. 53%).

Diagnosis of CRS cases with nasal polyp (14 cases vs. 3 cases) increased, there was improvement in the accurate and early diagnosis of chronic rhinosinusitis, and the severity of assessment and prescription of appropriate treatment, with a reduction in over treatment and overuse of antibiotics reported.

Bhawana’s project was successful in attaining a significant improvement in using nasal endoscopy as a diagnostic tool for chronic rhinosinusitis in adults, improving by 44%. Strategies for the sustainability of evidence-based best practice will be implemented, with additional educational sessions and continuity of additional workforce mobilization.
Mandira Baniya is the nursing supervisor at the Spinal Injury Rehabilitation Center in Kathmandu, Nepal. The aim of Mandira’s implementation project was to improve nursing clinical practice related to the assessment, treatment and follow-up of spinal cord injury patients with bladder dysfunction. She utilised the JBI Practical Application of Clinical Evidence System audit tool and Getting Research into Practice framework to facilitate the project.

Interventions such as education and training sessions for nurses and patients and development of evidence-based resources were implemented. Significant improvements in structure and processes were observed including improved access to evidence-based resources, development of a structured system for patient education, improved nursing documentation, and increased patient participation in bladder management.

Improvements in nurses’ knowledge related to assessment and treatment of bladder management were also observed.

Mandira plans to undertake regular audits to determine sustainability of practice changes and also assess patient satisfaction.

The major improvements in Mandira’s project included a 75% increase in the number of staff who attended education programs which included access to evidence-based resources that provide clear pathways for treatment for people with spinal cord injury.
Professor Myint-Htay from the nursing department of Yangon University is undertaking an implementation project around enhancing health teaching practice of nurses for self-care management among diabetic patients in New Yangon General Hospital, Myanmar.

Patient education is one of the roles of nurses in health care organisations. Health promotion by nurses can lead to many positive health outcomes. Diabetes is not a curable disease but requires lifelong management. The success of long-term maintenance therapy for diabetes depends largely on patients’ good understanding of their self-care and adherence with self-care practices. Myint-Htay’s aim for this project was to enhance health teaching practice of nurses caring for diabetic patients in targeted medical wards in compliance with evidence-based criteria.

Results from the baseline audit reported non-compliance with the current evidence because prior to this project there was no formalised patient teaching practice among clinical nurses especially from this general hospital.

Following implementation of evidence-based strategies, there were marked improvements with compliance for each of the criteria. They were able to introduce a structured education plan with supporting materials to facilitate effective education, and staff members who were involved in patient education had received appropriate training, and were assessed as competent to deliver diabetes self-management education.

Patients were involved in a learning needs assessment to evaluate health literacy and prior diabetes knowledge, and an individualised education plan was developed for each patient, regarding nutrition, physical activity, self-monitoring (e.g. self-monitoring of blood glucose), medications, prevention, detection and management of diabetes complications.

The status of self-management education is documented after each session to communicate with other health care professionals, and appropriate referrals or bookings are made to continue diabetes self-management education.

This project has led to the increased awareness amongst nurses regarding the importance of patients’ health teaching practices regarding diabetes self-management in New Yangon General Hospital. Prior to this implementation project, the nurses didn’t provide patients with any formalized education sessions regarding self-management of diabetes. This has improved by 100%!
Nan Kyi Pyar Si is a nursing lecturer from Yangon focusing on enhancing pain management practices among nurses at Palliative Hospital, U Hla Tun (Hospice) Cancer Foundation.

Pain management in cancer patients is a prevalent palliative care practice including pharmacological and non-pharmacological therapies to promote comfort. Nursing education is important to ensure best practice interventions are being followed for patients experiencing cancer pain. Nan Kyi’s main reason for conducting this implementation project was to promote evidence-based practices among nurses who care for cancer patients. Specific aims were to assess current pain assessment and management practices of nurses, implement best palliative care pain management practices and sustain best practices on management of pain in cancer patients in accordance with the available resources within this setting in Yangon.

Outcomes seen in this project included improvements with nurses undertaking pain assessment (and follow up assessment), which also involved documentation in the patient records.

After the project, every nurse was able to recognise the patients’ pain characteristics and the strategies for treating them by reviewing patient’s charts.

Patient satisfaction also increased because they were able to express their pain characteristics in detail, knowing that this would be actioned. Improvements in education for nurses, and in turn patients played a vital role in this project, and evidence based non-pharmacological pain management guidelines were introduced to all nursing staff.

The greatest improvement in outcomes for this project included improvements with nurses undertaking pain assessment (and follow up assessment), which also involved documentation in the patient records. This is a very important process within the palliative care setting, especially for this setting in Myanmar. This process improved by 95 – 100%.
Sugiharto is from the Department of Nursing, Muhammadiyah Pekajangan School of Health Sciences, Pekalongan in Indonesia, and his implementation project focused on diabetes self-management education training programs among nurses in Community Health Centers in Indonesia.

Diabetes complications can increase progressively, leading to morbidity and mortality among diabetes sufferers. To cope with this matter, diabetes self-management education is a strategy to increase patients’ knowledge and awareness in self-care. Hence, premature mortality may be prevented and quality of life improved. Some issues related to diabetes self-management education have emerged, such as health care providers’ limited knowledge, unavailability of education materials, lack of patients’ knowledge and awareness, and lack of social support. The aim of Sugiharto’s project was to improve nurses’ skill and confidence to deliver diabetes self-management education among type 2 diabetes patients, by promoting evidence-based practice in Community Health Centers, and thereby improve patients’ knowledge and skill to perform their self-care.

Diabetes self-management education is a standardised educational program, delivered by diabetes educators, but unfortunately in Indonesia, they are mostly only available in hospital settings. Consistent with a new policy of the Indonesian National Health Insurer, as Community Health Centers are the first line healthcare facility, then diabetes educators are needed to educate diabetes patients in the community setting.

Through this project, Sugiharto was able to form a collaboration with the Department of Health of Pekalongan Regency and the Indonesian National Health Insurer. The international curriculum for diabetes health professional education was culturally adopted as the intervention. He was able to include staff from 41 community health centers.

This project achieved dramatic improvements related to diabetes self-management education. After the accomplishment of the program, 41 Community Health Centers have certified diabetes educators formally appointed by the Department of Health. The diabetes educator competencies in providing diabetes self-management education were improved after joining the training program. These CHCs were equipped with standardised curriculum and media for diabetes self-management education. Following on from the project, every community health center in this region has a well-organised diabetes exercise program weekly and diabetes classes monthly.

This project achieved dramatic improvements related to diabetes self-management education in this region of Indonesia. After the completion of the program, 41 Community Health Centers have certified diabetes educators formally appointed by the Department of Health. This is an outstanding result!