South Australian Premier’s Nursing and Midwifery Scholarships 2014/2015

Improving patient care and innovation in neurosurgical nursing and education

Study Tour of the United States of America and Canada

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June 2015
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Introduction

The study tour to the USA and Canada provided the opportunity to benchmark practice and investigate operational strategies with international leaders in neurosurgical nursing and education. It enabled close observation and networking within nursing and medical realms, with a focus on consumer pathways through the patient journey. The tour provided invaluable experience and new knowledge aimed at the development of an improved neurosurgical department as we prepare and transition to the new RAH. This report will identify key learnings and findings as they relate to modified objectives of this tour and the implementation strategies that will be employed to operationalise some of these best practice strategies. As many findings throughout the various hospitals visited were similar within context to each other, this report will provide an amalgamation of findings as to reduce repetition. This report will also document findings reflecting the National Safety and Quality Health Service Standards (as opposed mapping directly to each objective, again to minimise repetition) as a mean to support implementation within the workplace, supporting compliance and quality improvement for the Central Adelaide Local Health Network, Royal Adelaide Hospital site.

Neurosurgical nursing is a very specialised and unique area of nursing practice with a variable and complex patient demographic. The neurosurgery ward (Ward R5) at the Royal Adelaide Hospital (RAH) is the leading provider of a state wide neurosurgical service incorporating the entire Northern Territory and sections of country Victoria and New South Wales. Currently the service has an allocation of 24 acute inpatient beds as well as accommodating approximately 5-10 patients at any one time within the general RAH Intensive Care Unit (ICU) and Step Down Unit (SDU).

The neurosurgical patient journey is complex, often combining high acuity with challenging behaviours. To meet the needs of this unique patient cohort a strong, proactive and collaborative multi-disciplinary approach is required. Nursing staff within the unit constantly strive to improve patient outcomes and to support families and carers. As the journey transitions from the highly acute phase to rehabilitation or community care, patients and family needs must be paramount and the care provided, founded on contemporary best practice principles.

Exploration and benchmarking of best practice principles was facilitated through a South Australian Premiere’s Nursing and Midwifery Scholarship undertaken in May 2015 by Elisa Gardiner, the Clinical Service Coordinator (CSC) of the neurosurgery unit and Scott King, the Nurse Education Facilitator (NEF) for Surgical and Specialities Service at the RAH. The scholarship facilitated an observational study tour through multiple neurosurgical units in six large medical centres in the USA and Canada. It enabled quality benchmarking, investigation and analysis of a number of key areas and provided insight into current neurosurgical models of care, daily nursing practices and the facilitators and inhibitors of patient flow processes. The tour supported effective future planning and contingency management to meet the demands and needs of neurosurgical patients as the transition to the new RAH in 2016 begins.

The aim of this report is to outline the purpose, objectives and outcome of the study
tour, detailing the benefits to clinical practice and actions generated. New concepts surrounding the autonomous role of the Nurse Practitioner in neurosurgery will be explored as will the processes surrounding neurosurgical care delivery within neuroscience departments, comprising of neuro specific critical care services. There is a strong emphasis on patient centred care within the USA and Canada, and many new initiatives from the tour will be guided by the principles of quality patient rounding, patient satisfaction, reducing length of stay and consumer support. It is envisaged that renewed focus on the patient experience will improve the care for neurosurgical patients whilst engaging and supporting families and caregivers.

**Purpose of the Study Tour**

Current practice at the RAH involves high risk neurosurgical patients being routinely cared for in the Intensive Care Unit (ICU) or Step Down Unit (SDU) depending on the patient’s needs. Treatment is planned and provided by a team of intensivist’s in collaboration with the neurosurgeons. Patient’s may be placed anywhere within the 42 bed unit and are cared for by nursing staff who may have critical care qualifications but with no neurosurgical specialty. The Neurology and Stroke units lie in a separate service within the medical directorate and remain distant from the neurosurgical team.

The neurosurgery ward consists of 24 acute beds that consistently care for a highly acute group of patients following emergency admission, post-surgery or recently transferred from a higher care area i.e. SDU. In April 2014, following the submission of a business plan, a four bed High Acuity Neurosurgical Unit (HANU) was pioneered within the ward to facilitate care of patients at risk of clinical deterioration, and post procedures that usually required non-invasive monitoring in the SDU.

In order to manage risk and meet skill practice gaps, a program of training was developed that prepared nursing staff for the implementation of the HANU. In collaboration with the Nurse Education Facilitator, specific skill sets to support safe practice were identified and developed. These aligned with the Australasian Neuroscience Nurses’ Association’s (ANNA) Professional Standards for Neuroscience Nurses and competencies for registration and enrolment, and the Competency Standards for Registered and Enrolled Nurses of the Nursing and Midwifery Board of Australia. A three day intensive neurosurgical education program was implemented for all neurosurgical nurses as a minimum standard of preparation for staff to work safely and confidently in the HANU. A global framework that provides governance and risk management was developed, supporting competent practice and based on a sequential pathway of skill development adapted from the work undertaken by Patricia Benner, nurse theorist (Benner, 1982).

The neurosurgical patient journey at the RAH has been under scrutiny in recent times as the trajectory from trauma/acute care to rehabilitation or community care is time intensive, cumbersome and convoluted. The length of stay for this patient group does
not match national benchmarks and work is being done to improve and streamline the process to provide better patient outcomes. Engagement with consumers, the utilisation of Allied Health resources and referral process to rehabilitation, community care and Disability SA services need attention and a new approach to improve outcomes and experiences for patients and their families.

**Background**

As we move towards transition to the new RAH it is essential to have a clear plan and direction for the South Australian state wide neurosurgical service and to establish us as an internationally recognised unit of excellence. This requires developing and implementing best practice, pursuing nursing research, improving nursing education and refining models of care to ensure we are providing effective and efficient patient centred care that meets the needs of this highly specialised patient group.

In order to benchmark, investigate and analyse key areas to support this future vision, this scholarship allowed us the opportunity to visit, network and immerse ourselves in rich experiential environments. This provided us the ability, to gain an understanding of the inner workings of highly successful neurosurgical units.

Our initial plans were modified due to budgetary constraints as one facility was charging a substantial fee to facilitate international guests. The constraints of the scholarship meant a visit to the John Hopkins Hospital was not viable. Fortuitously a significant contact was made via an affiliation with the neurosurgery department in the RAH and the Toronto Western Hospital opening up new options and plans.

It was decided that locating a variety of organisations with major neurosurgery specialities that offered differing services and perspectives would enrich our experience and add value to our benchmarking and learning journey.

Plans were made to visit the following six prestigious organisations in five major cities in North America.

- The Ben Taub Hospital in the Texas Medical Center, Houston
- The George Washington University Hospital, Washington DC
- Massachusetts General Hospital, Boston
- Toronto Western, Toronto
- Mt Sinai, New York City
- Weill and Cornell Brain and Spine Center, New York City

It is also critical at this point to provide some background on the operation and utilisation of the American and Canadian Health Care System. Within the United States of America, Health Care is accessed through a market based health insurance system. It is widely acknowledged that within this system social determinants, such as race,
income and environment, strongly influence who becomes ill and who receives access to quality care. The health care system disproportionately affects disadvantaged groups and under-resourced communities, such as people living in poverty, people of colour, and immigrants. Yet barriers to accessing care, the burden of medical debt and the shortage of primary care providers affect all people, including those with employer-sponsored insurance. Many employers purchase additional health insurance in addition to what they are awarded by their employer to better meet their health care needs. Overall, the system is privatised and commercially competitive, which reflects market imperatives and profit. Medical staff advertise aggressively and competitively, advertising in magazines such as ‘Health’ where articles are often printed on ‘the Best Doctors in New York’. This competitive commercial environment clearly provides a positive income stream as hospitals such as the Weill Cornell Brain and Spin Center of New York, reported anecdotally a $7.5 billion profit in 2011.

In an attempt to more effectively balance access to health care for disadvantaged individuals, the Obama administration introduced an Affordable Care Act 2010 which holds key imperatives such as:

- Access to emergency health outside of a health plans network
- Enables consumers a choice of doctor and to receive preventative health care with no co payment
- Bans lifetime limits on all new health insurance plans (cost initiative)
- Consumers now have a right of appeal if an existing health plan denies payment

(US Department of Health and Human Services, 2015)

In Houston, the CEO of Ben Taub explained the Affordable Care Act is also a political platform and Texas has chosen not to accept this Bill within their Constitution at this stage. Ben Taub, have and will continue to see uninsured patients through emergency centres. Despite the positive intent, many hospitals shared that there is a lack of access to preventative health care and primary health care providers. This has seen significant increase in activity within their emergency room. To counteract this, some facilities are trialling a fee of up to $200 USD to be assessed to discourage the use of the emergency room and encourage uptake of review of non-urgent cases to a primary health care provider.

In contrast, hospitals within Canada work within a very similar model to Australia, with more liberal access to health care. The system is still based on what is referred to as ‘socialised health insurance plans’, providing citizens access to preventative care, hospital access and treatment, dental surgery and additional medical services with very few exceptions regardless of medical history, personal income or standard of living. Canadian citizens are also able to purchase additional private health insurance to cover gaps in service provision such as optometrists and prescription medications. Many of these insurance plans are offered as part of employment packages in many companies (Canadian Health Care, 2007). Accountability for health care expenditure however is
very highly moderated and it was reported by one Nurse Practitioner, that to her knowledge, 17 hospitals in Canada had closed in the past 10 years due to over expenditure and the inability to reduce cost deficits.

It was also observed at the hospitals visited, that medical officers both in the United States and in Canada, are employed either by the hospital or by the State. Within the USA, this is part of their business model where they are still encouraged to actively seek new business to increase profit margins. This was demonstrated by proactive discharge rounds and support to work and manage patients within commissioned activity.

Within the US there are different levels of nurses with different levels of educational preparation. There are also additional roles that we do not use at the Royal Adelaide, if not anywhere in Australia, and roles which are more evolved and advanced in their operation. The table below aims to identify these differences:

<table>
<thead>
<tr>
<th>Role in the US and Canada and educational preparation</th>
<th>Like role in Australia</th>
<th>Summary of duties</th>
<th>Employment uptake within North America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensed Practice Nurse Vocational</td>
<td>Enrolled Nurse</td>
<td>Primary direct care, limits in regard to educational preparation (e.g. medications)</td>
<td>Very poor</td>
</tr>
<tr>
<td>Registered Nurse Hospital Certificate Associate degree Bachelor</td>
<td>Registered Nurse</td>
<td>Assessment, medications, primary care</td>
<td>High</td>
</tr>
<tr>
<td>Nurse Practitioner Master Degree</td>
<td>Nurse Practitioner This role within the USA has evolved</td>
<td>Autonomous role dependent on specialisation i.e. performing lumbar punctures, pulling EVD's and prescribing</td>
<td>High</td>
</tr>
<tr>
<td>Patient technicians Hospital or vocational training certificate</td>
<td>None</td>
<td>Primary care – ADL’s, patient handling, cannulation, venepuncture, dependant on specialty (i.e. respiratory technicians – suction, ventilation)</td>
<td>High</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>None</td>
<td>Intern type duties, prescribing, writing drug charts, very technical skills i.e. pulling EVD’s, closing in theatre</td>
<td>High</td>
</tr>
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<td>----------------------</td>
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<td>--------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>PA school (College)</td>
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<tr>
<th>Attending Physician</th>
<th>Consultant</th>
<th>Dependant on specialisation</th>
<th>High</th>
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<th>Resident</th>
<th>Medical school and in hospital based training programs i.e. 7 years for neurosurgery</th>
<th>RMO-Registrar-Fellow Progression through training program</th>
<th>Dependent on specialisation</th>
<th>High</th>
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On a typical ward (floor), staffing ratios of RN's to patients is on average 1:8. This would include a shared patient technician who would provide fundamental care, with the RN over seeing and undertaking clinical assessments and the administration of medications. In specialised areas such as Intensive Care Units (ICU) where units are specialised into neuro intensive, surgical or medical ICU’s, staffing was generally 1:2-3 (including ventilated patients) with the support of respiratory and patient technicians. Hospitals and staff have the option of becoming unionised or not, which dramatically alters staffing levels, seeing lower nursing to patient ratios.

The role and title of a Clinical Services Coordinator (CSC) equivalent, were wide and varied. This role attracted titles ranging from Nurse Unit Manager, Nursing Director – Neurosurgery to Director of Nursing. The role however was very similar to the CSC. A floor based manager on average would manage approximately 28 – 34 beds with an average of up to 40 – 50 staff. Charge Nurses supported the manager role in the same capacity that an Associate Clinical Services Coordinator (ACSC) supports the CSC role. All ward managers wore white coats, which were often issued on graduation day, embroidered with their name an designation of RN.

**Objectives of the Study Tour**

The USA and Canadian study tour promoted the investigation of a number of key areas to support strategic future planning to meet the demands and needs of neurosurgical patients. As the Royal Adelaide transitions to the ‘new RAH’ in 2016, the findings from this study tour will significantly and strategically support the development of the unit and the role of the RAH in supporting neurosurgical patients throughout Australia. Due
to budget constraints and fee’s being asked by some facilities, the initial learning objectives have changed significantly. In order to add value and provide more targeted investigations it was decided that the knowledge/policy/practice gaps that had been identified in the initial proposal be used to guide the outcomes of this tour. These have been reiterated below:

- Investigate workforce redesign and responsive working arrangements (including issues such as rostering, allocation etc) in both general and high acuity environments (Elisa Gardiner)
- Investigate the complexity and specific type of patient cohort who are supported in generalised and specialised nursing areas including criteria for allocation/selection and patient flow (Elisa Gardiner)
- Investigate models of nursing care used to support the neurosurgical unit in its day to day operation and strategic planning, including staffing methodologies and skill mix in both neurosurgical general and specialised areas (Elisa Gardiner)
- Investigate the use of validated assessment tools that support evidenced based assessment and care that guide and direct practice (Elisa Gardiner and Scott King)
- Review risk management within acute neurosurgical environments in relation to:
  - staff education/practice development in the area of specialised neurosurgical nursing including the existence of core skill sets to support competent practice and the operationalization of such risk management tools (Scott King)
  - frameworks of staff education including strategic links with universities, articulation pathways, in service programs, orientation packages and general education strategies (Scott King)
  - support mechanisms within medical and allied health to ensure positive and timely health outcomes in both general and specialised areas (Elisa Gardiner)
  - recruitment and retention strategies in relation to workforce capacity and development (Elisa Gardiner)
  - managing patient safety i.e. risk of falls, pressure injuries and clinical deterioration (Elisa Gardiner and Scott King)
- Investigate governance surrounding the day to day operation and the involvement of consumers and families with care arrangements (policy and procedures etc) (Scott King and Elisa Gardiner)
- Observe the physical set up and daily operation and management of clinical areas, particularly those with private rooms – particular interest as we move towards the new RAH (Elisa Gardiner)
- Investigate integration and support by community and/or rehabilitation resources to facilitate timely and appropriate discharge (Elisa Gardiner and Scott King)
• Investigate the integration and collaboration with outpatient departments and the link with continuity of care (Elisa Gardiner and Scott King)
• Investigate Post Graduate qualifications and transitions with a specific focus on neurosurgical nursing (Scott King)
• Investigation of professional affiliations that support neurosurgical nursing within the United States and the role they have in support, practice development and governance (Elisa Gardiner and Scott King)

Outcomes of the Study Tour

To achieve the objectives of the study tour, 6 key facilities were identified throughout the United States and Canada. These sites were chosen primarily based on the recommendation by neurosurgeons at the RAH, facility awards and status (ie Magnet) and marketing from internet based reviews. Once these facilities were identified, contact was made with key stakeholders at each site to arrange observational tours. Different States were visited in the attempt to draw out any disparities or differences in practice/approach/methodology due to local cultural influences and/or socioeconomic factors. What was learnt however, was that there were no discernible differences between States.

Significant outcomes relating to the provision of health care to neurosurgical patients, consumer engagement and the role and development of nursing in neurosurgery became pivotal in the learning journey. What was discovered was that identifying outcomes attached to each objective, become very laborious and repetitive, as the outcomes and learnings from the tour are multifactorial and influence numerous objectives. To facilitate a smoother and more beneficial report, outcomes will be reflected by identifying the National Safety and Quality Health Service Standards (Australian Commission on Safety and Quality in Health Care, 2011) in which they most suitably sit. This will also better facilitate workplace action.

Standard 1- Governance for Safety and Quality in Health Service Organisations

Length of Stay

In 2016 the RAH neurosurgical state wide service will move to the new RAH site adopting a new model of care based on interstate high performance benchmarks. To meet the framework of this new model and to manage an efficient surgical unit, streamlining care and working with clinical pathways aimed at reduced length of stay (LOS) are essential.
The USA and Canadian study tour enabled benchmarking of LOS at an international level. Exploration of various processes indicated that many successful systems revolved around the evolution and adoption of a Nurse Practitioner (NP) role, specific to neurosurgery. The NP’s were instrumental in providing support for patients as they transitioned into subacute areas, community based settings or outlying regional health care centres. The NP works closely with the neurosurgeon and is fully engaged with the process of moving patients through the system in a timely manner. Whether it is outpatient follow up (utilising nurse led clinics), teleconferencing with other organisations (for educational support) or acting as a central point of referral and communication, the NP, facilitates flow through the acute care system and gives support to patients and families. Many NP’s were able to facilitate more timely transfers back to regional areas through teleconferencing to provide upskilling and ‘lectures’ to support post-operative care of neurosurgical patients. This ranged from identifying alterations in ICP to tracheostomy support. The outcome was that the hospitals utilising this technology were able to reduce the LOS of a patient and expedite them back into their own community, closer to the families and relatives, which would have unquantifiable positive effects on recovery.

The American health care system is based very much on funding provided by insurance companies. This in turn creates a great deal of commercial interest and accountability in expenditure. The Weill and Cornell Brain and Spine Centre of New York for example track allocated funds including surgical costs, costs of bed days and medication usage and very proactively prepare for discharge when funds are becoming low. They also benchmark internally, whether based on best practice if available or not, the expected trajectory of a post-operative recovery phase and work very closely with the interdisciplinary team to ensure that patients are discharged according to this care trajectory.

Interdisciplinary proactive discharge rounds daily, heavily influenced patient flow activities throughout all the hospitals sites visited. Physician Assistants, Nurse Practitioners or Junior Residents led these rounds daily. Medical staff were very proactive in assisting ward managers in balancing admissions and discharges demonstrating true collaboration and dedication to the unit and unique needs of this patient cohort.

Other examples of innovation that have seen a reduction in LOS, include:

- In Canada, the NP provides brain tumour patient’s with their histopathology and arranges relevant Oncology referrals in outpatient settings. This means post craniotomy patients have a reduced length of stay (discharge day two), and valuable time at home with family and loved ones.

- Following a transsphenoidal resections of a pituitary tumour the patients who have no indication of Diabetes Insipidus are also discharged on day two, with nasal packs and follow up blood tests performed in an outpatient environment. It
is common practice to liaise with other acute and subacute facilities to ensure patients are moved out of acute neurosurgical units appropriately and are closer to home.

Each neurosurgical team included case managers, social workers and strong allied health support. Access to rehabilitation in the USA was problematic for those without the necessary insurance cover. Admission to rehabilitation units required adherence to strict criteria and timelines i.e. engagement with a minimum of three hours of therapy per day and a maximum stay of six-eight weeks. Of note, however was a significant increase in the capacity for patients to receive subacute care (not necessarily rehabilitation beds) for long term care. This is a significant issue for patients of the RAH who have limited access to subacute beds where optimal recovery or semi-independent care is likely to be restored.

Nurse education frameworks

Education had a strong influence in all the hospitals which were visited. The methodology or delivery varied slightly, however the principles were very similar. The primary roles responsible for education delivery ranged from staff working within an education centre, staff employed within clinical directorates or by Clinical Nurse Specialists (CNS’S). CNS’s had protected titles under legislation in Massachusetts, who had dual responsibilities as clinical specialists, lead policy development and review facilitators as well as the provision of clinical education. For most roles, delivery of education was very silonated with limited collegial support offered through dedicated education centres. Most areas had a dedicated nurse educator per clinical area (i.e. one educator per ward). Of particular note, was that due to shift lengths being 12 hours, there was no double staffing time to deliver regular in service sessions. If sessions were scheduled, staff prioritised attendance according to their workloads and patient safety. Most educational activities were at the bed side. This approach was also identified as being very time and resource intensive, but the ‘best match’ for the practice environment and constraints regarding staff access.

One of the most considerable bodies of work educators undertook for staff was the facilitation of a three (3) month supernumerary orientation program (called onboarding) to prepare them to meet the roles and clinical requirements of their workplace. Unlike Australia, who offer Graduate Certificates and Graduate Diplomas to promote the attainment of knowledge and skill for clinical specialisation, the USA and Canada support ‘Certification’ programs, endorsed by the American (and Canadian) Nurses Association. The three month orientation program prepares nurses with structured theory and practice opportunities to undertake the certification examination for their clinical speciality. Within Mount Sinai for example, and as a positive consequence of this hospital funded and supported initiative (which is estimated to cost approximately $23 000 per staff member), 85% of staff working within the
neurosurgical intensive care unit had attained certification as neuroscience nurses. It would appear that retention rates were extremely high, mirroring the return on investment into these staff. Experienced staff, still enjoy this extensive orientation period, however, may have reduced time frames of up to 8 weeks instead of 12.

Transition to Professional Practice Programs also operated but many only for a 6 month duration with speciality rotations. Ben Taub in Houston, utilised this time to proactively engage graduates in research or information gathering, where they were expected to create best practice guidelines and present these to their current work teams. According to Glen Gilbert, Director of Nursing at Ben Taub, the aim of this initiative is to create communities of practice within the hospital to promote positive patient outcomes. It was inferred that undergraduate programs (certainly in Houston) did not provide a solid underpinning in nursing research and nursing theorists. This degree of knowledge was often attained at a Masters level through coursework. This is a direct contrast to undergraduate preparation within Australian nursing programs. There was however a greater emphasis on complete physical assessments being undertaken on a shift by shift basis by the Registered Nurse including performing chest auscultation, auscultating bowel sounds and skin assessments etc.

During part of the collegial sharing process, work was shared on identifying core skill sets for the safe practice of nurses working in the neurosurgical unit at the RAH. It was discovered that no hospitals visited in the USA, had such a sophisticated framework (user defined novice to expert framework) for identifying what staff need to know and do to work effectively and safely within these environments. Most hospitals still used ‘work books’ which were often not version controlled, with some having structured and many having unstructured review processes. It was acknowledged that all hospitals that were visited did propose a novice to expert framework, however this was purely based upon length of time within a unit. There were no demonstrated sensitive indicators suggesting frequency of exposure, operational utilisation of this framework past orientation, or even how this may be used to identify gaps in service provision leading to the provision of new training solutions.

Another objective of this study tour, was determining which mandatory and annual updates were required for each hospital and how these were identified. These accreditations are very similar to those used across Central Adelaide, however every hospital shared the addition of a module on restraint. From a delivery perspective, multi modal delivery of content is utilised through a learning management system, the same that is utilised within Central Adelaide. Most hospitals were unable to articulate an origin or identifying reason leading to the requirement of each accreditation (apart from a risk minimisation strategy and those driven by the Joint Commission Standards). Other indicators that led to the development of an accreditation package were those established as nurse sensitive indicators (line associated blood stream infections,
catheter associated urinary tract infections and pressure injury prevention and minimisation etc). Many shared that the list was becoming longer and nearly unmanageable from a record keeping perspective. Like Central Adelaide, record keeping is an issue with many different and complex models ranging from a central database to a decentralised attendance list which is kept in paper format by the floor based educator in a filing cabinet. Magnet hospitals such as Massachusetts General Hospital had a more robust centralised recording system, as this supported their accreditation as a magnet hospital.

**Informatics**

Like Central Adelaide and more specifically the Royal Adelaide, all hospitals that were visited utilised an electronic patient management system. Many hospitals had only just recently introduced such systems and were operating as a ‘paper light’ workplace. The two main software packages were purchased commercially and were able to be modified to meet need and demand. The two systems that were encountered were EPIC and CENSAR. Training in using these systems was a mammoth undertaking, identifying key stakeholders, floor based champions and the incorporation of training as part of the orientation program. Utilisation has been positive, with many floor staff stating that they enjoy working with the computerised systems and they find documentation much quicker and more effective. The other interesting observation, was the computerised systems also created ‘tasks’ or ‘workflow’ sheets, much the same as the intention of EPAS, which supported the observed models of care in all the hospitals that were visited. It was also observed that medical rounds (at Mt Sinai at least) incorporated Computers On Wheels (COW’s) to directly input information and review test results at the bedside, with the capacity to show and explain to patients recent imaging and progress. It was also observed that some clinicians utilised this more effectively with patients and families, whilst some discussed patient needs amongst the team, but not with the patient. This was, however, a positive step in promoting consumer engagement and supporting well informed communication pathways.

All the hospitals visited also utilised electronic patient flow boards. The intricacy of these flow boards also tracked progress of patient’s movements throughout the hospital. The capacity of these boards may also have the opportunity to identify lengths of stay in colours (i.e. blue or black for projected trajectories of care, then red to identify that the projected LOS has been extended and/or available DRG/Casemix funding has exceeded). As a visual prompt this may support more proactive engagement in discharge planning.

It was observed that nursing care in both the USA and Canada was very task and staff specific (i.e. care was separated into tasks and different staff attended to these separate tasks). This is a direct contrast to the current model of care practiced at the Royal Adelaide, which although task centric, is much more holistic in nature.
Standard 2- Partnering with Consumers

Consumer service

In the USA the patient experience is paramount to quality patient care and is monitored closely as it aligns with financial reimbursement for the organisation. External providers are employed to distribute, collate and distribute data gathered from a twenty one question survey referred to as the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHP). The purpose of this standardised tool is to measure patient perspective on hospital care enabling objective comparisons that support improvements in quality care and customer service from food service to nursing and medical staff interaction and engagement to discharge support. The public reporting of the results enhances accountability, encourages transparency and promotes the business model of health care provision (The Hospital consumer assessment of Health care providers and systems, 2015). As a reward of high satisfaction scores, Medicare in the US provide additional funding to recognise excellence in customer service. This in fact echoes the culture and focus on customer service within the US which is clearly evident beyond the healthcare sector. What was observed in all the hospitals that were visited, was a clear commitment from all staff to promote a positive customer service and experience for any and all consumers.

What mirrored this commitment was the extent of training and education that was provided to staff on the importance of promoting a positive patient interface. Hospital budgets appeared to factor in, the bonus dollars from positive H-Cap results and viewed any negative variance in income stream as a loss rather than not budgeting for it and seeing it as a beneficial addition.

Patient and family support

The strong focus on customer service within all the health care facilities across the USA is evident as soon as you enter the building. Engagement with the public, open communication, positive body language and genuine offers of assistance make a significant impact to those using services or visiting as members of the public. All the organisations provided specific patient and family libraries where information is accessible both online and hardcopy. Several institutions staff the libraries to assist with searching and understanding the plethora of information available.

Establishing close connections to support neurosurgical patients and families through protracted lengths of stay requires strong therapeutic relationships based on trust and good communication. An inspiring poster presentation on display at the Mt Sinai Hospital titled “Enculturating Relationship Centred Care through Fortifying “Tree of Life” in a Community Hospital” (Buzianz, Kwon, Kim, Rolston and Auditore, 2015) outlined the establishment of human connections by listening to patients and families and promoting mutual participation in health care planning. A pictorial representation of the patient’s social network promotes an understanding of the individual and
enhances therapeutic relationships with family. This approach would be particularly meaningful for the Traumatic Brain Injured (TBI) group, whose families often struggle to cope with grief and anguish following the injury.

**Patient rounding**

Discussions with nursing staff in all organisations, including managers and clinicians, demonstrated the commitment to patient rounding and the importance of the patient experience. Structured, quality rounds focussed purely on meeting the patient’s needs are undertaken every hour as nursing staff offer care and promote a truly patient centred approach. Intentional or proactive rounding is a well established practice in the USA and was formulated as an evidence based system to improve patient outcomes such as falls prevention, reducing pressure injuries and increasing patient satisfaction (Forde-Johnston, 2014). Manager rounding is also integral component of intentional rounding and demonstrates engagement in the process highlighting a proactive culture of offering care (Hutching, Ward and Bloodworth, 2013). It enables the unit managers to remain in touch with all aspects of the patient experience and the patient’s perceptions of the care provided.

Patient rounding was introduced to the RAH three years ago as a method of meeting and improving the fundamental care needs of patients, however unfortunately it has not been embedded into daily practice. To see the rounding process in action, knowing it forms the foundation for care provision was inspiring and humbling. It seemed a logical way to remain focussed on patient centred care and to improve communication with patients and families.

In the context of neurosurgery with the challenges faced by patients and families who are dealing with trauma, cancer or long term deficits related to cognitive decline, patient rounding seems a vital link between the patient and the complicated and at times perplexing health care system. It is very clear that a positive way forward in the neurosurgical patient journey is through quality, intentional nursing and manager rounding.

To support sleep, comfort and rest, many hospitals we visited has posters advertising quiet time to facilitate rest for patients. Many indicated no visitors between 1330 – 1530 and after 2100.
Standard 9- Recognising and Responding to Clinical Deterioration in Acute Health Care

Clinical Deterioration
One of the study tour objectives was to explore specific escalation pathways for neurological deterioration. As expected, the neurosurgical areas all used the Glasgow Coma Scale (GCS) as a standard measure of neurological assessment. The Stroke units in the US and Canada also incorporate the National Institutes of Health Stroke Scale (NIHSS) assessment system, a validated tool that is incorporated into the Australian framework for stroke management.

Within the organisations in the USA, there were no clear escalation pathways for neurological deterioration. Emergency response teams in the hospital are managed through the Intensive Care Units and escalation of clinical deterioration is managed via a two tiered system involving a Rapid response or a Code Blue, similar to the RAH. The Code Stroke teams, known as the “Brain Attack” team in the George Washington University Hospital, are generally managed through the stroke wards with charge nurses taking on the key nursing role. Of particular note within the George Washington University Hospital was the development of an ICU outreach nurse. This role provided patients and staff with access to a Critical Care trained Registered Nurse to assess patients hourly who perhaps should have been within an ICU environment to best manage deterioration, however no bed is available. This would see interventions such as inotrope management being managed on a ward short term, until an ICU bed became available.

There was no evidence of any specific neurological deterioration escalation pathways within any of the organisations in the USA. Any decline in consciousness identified through a reduced GCS would be escalated through a rapid response/code blue team or directly to the intensivist or neurosurgeon in the ICU setting. The endovascular NP in Canada has put together a process that outlines specific assessment criteria related to the onset of new neurological deterioration. Her “STAMP” protocol incorporates:

- **S**: Stimulate
- **A**: Airway
- **M**: Motor
- **P**: Pupils

The “STAMP” protocol enables the assessor to identify level of arousal, airway compromise, motor response and lastly pupillary response. It focusses on the assessment of significant neurological deterioration rather than early recognition and timely response pathways. It was interesting to share our current work on escalating neurological deterioration and inspiring to note we were leaders in this area.
**Standard 10 - Preventing Falls and Harm from Falls**

**Falls prevention**

There are numerous nurse sensitive indicators used within all the hospitals visited within the US, such as evidence of line associated blood stream infections, pressure injury prevention and catheter associated urinary tract infections. Of note, was one indicator, supported by a Joint Commission Standard, on falls prevention and minimisation of harm. It was reassuring to observe that all the hospitals visited experience the same issue regarding falls risk screening and prevention, validating the complexity of this issue even within the Royal Adelaide. For the neurosurgical patient group impulsive behaviours secondary to surgical intervention, tumour location or cerebral irritation, falls prevention is a significant risk. Some innovative strategies to help minimise and better manage risk used in some hospitals was the use of coloured blankets, coloured gowns and door signs (nearly all had single rooms) to identify that this person was at particular risk of falls. The use of coloured blankets on beds, matching coloured gowns was a visual prompt for staff to provide further assistance and monitoring for a particular patient. Massachusetts General use yellow blankets and yellow patient gowns as a subtle identifier to flag patients at risk of falls. This is a nondescript, low cost and acceptable solution that could easily be implemented at local level. In all neurosurgical units the use of bed sensors was pronounced as was the adoption of post fall huddles, which focussed on a root cause analysis, critical thinking and troubleshooting to promote lateral thinking to better manage falls on an individual level. Anecdotally, the completion of falls risk intervention plans were not well taken up and there was a much greater emphasis on a team approach to critical thinking and the development of individualised plans.

**Expected Benefits of the Study Tour**

The study tour enabled the participants to benchmark practice in facilities with a strong focus on neurosurgery. It was an opportunity to benchmark:

- Ward management practices
- Length of stay
- Patient flow
- Neurological deterioration escalation (of which none were identified with facilities visited)
- Education and training provided to nursing staff including ‘onboarding’
- Practices in scheduling (rostering) and examination and comparison of staffing ratio’s
• Further activities to enhance compliance with the National Safety Quality Health Service Standards
  o Falls prevention
  o Management of deterioration
  o Consumer engagement and customer service
• Nurse sensitive indicators such as monitoring of pressure injuries, attainment and management of line associated blood stream infections and catheter associated urinary tract infections
• Roles of ward managers, nurse educators, education centres and other clinical specialists such as Nurse Practitioners
• Options for creating dynamic and useful electronic patient flow boards

The tour also provided an invaluable opportunity to intimately understand and see firsthand how the American and Canadian Health Care systems operate including the facilitators and inhibitors to access of care that the system affords their populations. Overall the study tour validated a number of clinical practice issues as mentioned above and highlighted to the participants that the standard of care and nursing practice at the Royal Adelaide Hospital is favourable in terms of operation, strategy and patient outcomes. Some practices would greatly enhance the overall operations at the Royal Adelaide, which will be addressed later.

Implementation in Practice and in the workplace

Areas of practice that would greatly enhance the patient experience and hence positive outcomes to care include:

<table>
<thead>
<tr>
<th>To implement</th>
<th>Action</th>
<th>By whom</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-establishment and integration of proactive patient rounding into daily practice</td>
<td>Discussion with DoN at the RAH to create and reinvigorate new approaches to embedding proactive patient rounding from an education to performance trajectory</td>
<td>Scott King, NEF</td>
<td>1st July 2015</td>
</tr>
<tr>
<td>Implementation of falls risk flags</td>
<td>To discussion options with the lead for Standard 10 and present findings</td>
<td>Elisa Gardiner, CSC</td>
<td>Next Standard 10 committee meeting. Emailed 23rd June 2015</td>
</tr>
<tr>
<td>A focus on customer service and positive patient engagement</td>
<td>Proactive role modelling, in service education</td>
<td>Scott King, NEF</td>
<td>Determine with SDD when there is a gap available to present at</td>
</tr>
<tr>
<td>Establishment of rest periods and quiet time back into clinical environments</td>
<td>Discussion at direct level with ND and other ward CSC to discuss the implications and benefits of taking a directorate approach to re-establish rest time. Possible creation of patient information sheet and/or signs for the front of wards as per, discussion with lead for Standard, active engagement with Consumer Advisory Manager Christine Morris.</td>
<td>To determine CALHN lead for Standard 2. Discuss with Christine Morris, Consumer Advisor Manager</td>
<td></td>
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<tr>
<td>Task Description</td>
<td>Progress</td>
<td>Responsible Parties</td>
<td>Timeline</td>
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<tr>
<td>Review and establishment of a Nurse Practitioner / Clinical Practice Consultant role specific to neurosurgery</td>
<td>Begun construction of business case; determine need and gap for NP/CPC for neurosurgery. Create business case, cost and extrapolate benefits for role, then present to DoN for consideration</td>
<td>Elisa Gardiner, CSC</td>
<td>For commencement 1st July 2015</td>
</tr>
<tr>
<td>Hospital wide review of the complexity and management of patient flow within the Royal Adelaide</td>
<td>This piece of work will be actioned as roles are redefined matching new models of care and the nRAH.</td>
<td>Elisa Gardiner CSC and Scott King NEF.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Discussions to re work a new and improved ‘onboarding’ process for new staff (considering budget constraints and risk minimisation strategies)</td>
<td>Create a business case using a risk management approach to highlight the importance of a robust onboarding process. Cost the case and present to the ND’s of the directorate for consideration</td>
<td>Scott King, NEF</td>
<td>By 31st July</td>
</tr>
<tr>
<td>Review of electronic patient flow boards for the new RAH which could include patient movement and location</td>
<td>For discussion with Lauren Wood, Commissioning Manager for Surgery for the new RAH. The capacity of these boards may also have the opportunity to identify lengths</td>
<td>Elisa Gardiner, CSC</td>
<td>At next Leadership group scheduled for 23rd July</td>
</tr>
</tbody>
</table>
of stay in colours (i.e. blue or black for projected trajectories of care, then red to identify that the projected LOS has been extended and/or available DRG/Casemix funding has exceeded). As a visual prompt this may support more proactive engagement in discharge planning

| Determine an organisational wide imperative for the creation and uptake of a restraint module | To discuss the need for a module on restraint using a risk minimisation strategy to the DoN RAH. Liaise with ND Learning and Development to create a team to provide a learning solution | Scott King, NEF | Meeting booked for 9<sup>th</sup> July with ND and DoN Surgery at the RAH |
| Authoring of a neuroscience text book within an Australian context | Initial thoughts and negotiations underway | Elisa Gardiner CSC and Scott King NEF | Ongoing |
References

Australian Commission on Safety and Quality in Health Care (ACSQHC), 2011, National Safety and Quality Health Service Standards, ACSQHC, Sydney, Australia.


