HARC REPORT

Improving Teamwork and Communication in Healthcare Teams to Improve the Healthcare System

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July 2014

Acknowledgements

I would like to acknowledge and thank the following institutions and individuals for their time to explain their approach in improving teamwork and communication for healthcare teams in their settings and for the opportunity to share ideas and collaborate in this area.

From Northwestern Memorial Hospital, Chicago, Illinois, USA:

- Dr Kevin O'Leary, Chief, Division of Medicine – Hospital Medicine
- Ms Patricia O'Sullivan, Director, Medicine Nursing, Patient Care Administration
- The staff of 13 East
- The staff of 16 West

From Emory Healthcare:

- Dr Jason Stein, Hospitalist
- Dr David Watson, Hospitalist
- Dr Paul Durick, Hospitalist
- Professor Susan Shapiro, Assistant Dean for Strategic Clinical Initiatives, Corporate Director for Nursing Research
- Mr Bryan Castle, Project Director, ACU/SIBR Grant
- Mr Howard Chiou, PhD Candidate, Medical Anthropologist
- The staff of 6G, Emory University Hospital

I would especially like to thank the following individuals for their support and advice for my study tour:

- Professor Clifford Hughes, Chief Executive Officer, Clinical Excellence Commission
- Dr Peter Kennedy, Deputy Chief Executive Officer, Clinical Excellence Commission

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1. Executive Summary

Through the Hospital Alliance for Research Collaboration (HARC) scholarship, a study tour was conducted focused on strategies to improve teamwork and communication for healthcare teams. By improving teamwork and communication, it is expected that performance, culture and patient safety of the healthcare team would improve.

The key question asked throughout the study tour is how the improvement of teamwork and communication for healthcare teams can improve the wider healthcare system. The rationale behind this question originates in the concept of the clinical microsystem (being the healthcare team) which assumes that the performance of any large system is dependent on the performance of its constitute parts or units[i].

This study tour was undertaken in the United States of America (USA) on 10 June to 20 June 2014. The study tour included the following:

- Attendance at the TeamSTEPPS (Team Strategies to Enhance Performance and Patient Safety) National Conference, Minneapolis, Minnesota
- Visit to Northwestern Memorial Hospital, Chicago, Illinois
- Visit to Emory Healthcare, Atlanta, Georgia

TeamSTEPPS is an evidence-based set of teamwork tools, aimed at optimizing patient outcomes by improving communication and teamwork skills among health care professionals. It includes a comprehensive set of ready-to-use materials and a training curriculum to successfully integrate teamwork principles into any health care system

The TeamSTEPPS National Conference focused on providing an opportunity for participants to learn about strategies for successful TeamSTEPPS implementation, engaging teams, and leveraging TeamSTEPPS tools across the continuum.

To improve teamwork and communication within their healthcare teams, Northwestern Memorial Hospital has implemented Structured Interdisciplinary Rounds (SIDR) and coinciding with the visit a number of units had just begun rounding with patients.

At Emory Healthcare, Accountable Care Units (ACUs) are being developed which have four core design features:

1. Unit based teams
2. Structured Interdisciplinary Bedside Rounds (SIBR)
3. Unit performance data
4. Unit management by nurse and physician partners

ACUs aim to bring the team together to improve teamwork and communication so that they can deliver the best care possible for their patients.

This report will outline the key activities undertaken and the lessons learnt and how they can be transferred into the NSW Health context.

In NSW, the Clinical Excellence Commission (CEC) has already initiated a program which focuses on improving teamwork and communication for healthcare teams with the aim of improving the system. This program is called In Safe Hands where many of the tools and strategies originating from TeamSTEPPS, Northwestern Memorial Hospital and Emory Healthcare are utilised. The study tour allowed for the strengthening of the relationship between the CEC and the above mentioned organisations which will allow for further future collaboration in this area of work.

2. Introduction

Hospital units today are not designed to maximise teamwork and communication. This can lead to poor care coordination and have a negative effect on patient safety. A fundamental flaw in healthcare systems around the world is that hospital units are not designed at all[ii].

In addition to this poor design, clinicians caring for the same patients in many clinical units, typically operate in silos or isolation to each other. As a result, teamwork is not cohesive and causes deficiencies in communication and information sharing between clinicians. This may lead to delays in the provision of care, an uncoordinated approach to care planning, a poor patient experience, inefficiencies in patient flow and an adverse impact on patient safety.

The CEC introduced the In Safe Hands program in 2011, to provide a platform for building and sustaining efficient and effective health care teams within a complex health care environment. It is supported by 10 Functions that enable teams to become a cohesive unit, placing patients at the centre of care. These 10 Functions are:

1) Leadership and Governance
2) Team Structure and Dynamics
3) Care Planning, Coordination and Delivery
4) Standard Protocols and Procedures
5) Patient Safety and Quality Systems
6) Patient Experience
7) Education, Training and Supervision
8) Workplace Management
9) Support Services and Equipment
10) Information Management

The rationale behind In Safe Hands originates in the concept of the clinical microsystem, which assumes that the performance of any larger system is dependent on the performance of its constituent parts of units. Improving collaboration and workflow within these microsystems is thought to increase the reliability of the overall care delivery of the healthcare system. One solution to improve the microsystem is to improve teamwork and communication for these microsystems through interdisciplinary ward rounds whereby medical, nursing and allied health staff attend ward rounds at the same time, have been found to improve patient outcomes.

The purpose and aim of this project is three tools which are focused on improving teamwork and communication for healthcare teams and how they have improved performance in both the microsystem and wider system level:

- Team Strategies to Enhance Performance and Patient Safety (TeamSTEPPS)
- Structured Inter-Disciplinary Rounds (SIDR)
- Structured Interdisciplinary Bedside Rounds (SIBR)

3. Literature Review

The literature review undertaken was focused on initiatives that have been implemented which have demonstrated improvements in teamwork and communication. In addition, literature focused on clinical microsystems was also undertaken which demonstrated the theory that the performance of any larger system is dependent on the performance of its constituent parts being the healthcare team.

Table 1 (below) identifies key literature in the area and findings that are relevant to this study.

PUBLICATION	OBJECTIVE	METHODS	RESULTS/CONCLUSION
AHRQ (2014). *TeamSTEPPS Instructors Guide*	To develop trainers through a train the trainer program.	Through a 2 day course develop trainers that can assist in implementing TeamSTEPPS.	Provides tools and resources that include team building activities.
Clapper, T. & Kong, M. (2012). *"TeamSTEPPS: The Patient Safety Tool That Needs To Be Implemented"*, Clinical Simulation in Nursing 8(8) e367-e373	Outlining the essential requirements for the successful implementation of TeamSTEPPS.	Utilising simulation as a means before the implementation to understand the barriers and difficulties that may hinder successful implementation.	The glue for teamwork is leadership. Without strong leadership, initiatives such as TeamSTEPPS would be difficult to implement. In addition, there is a strong correlation that the implementation of TeamSTEPPS has improved patient safety on units that have implemented it.
Haynes, J. & Strickler, J. (2014). "TeamSTEPPS makes strides for better	The article addresses how TeamSTEPPS can be used to	Implementation of TeamSTEPPS which	Effective communication, good teamwork skills, equalised

PUBLICATION	OBJECTIVE	METHODS	RESULTS/CONCLUSION
communication", Nursing 2014 January	improve communication and enhance patient safety.	facilitated the improvement of teamwork and communication.	hierarchies, and clear leadership are vital for improving patient care and limiting negative outcomes. TeamSTEPPS can play an integral role in establishing a culture of safety in the healthcare setting.
Henneman, E,. Kleppel, R, & Hinchey, K. (2013). *"Development of a Checklist for Documenting Team and Collaborative Behaviors During Multidisciplinary Bedside Rounds"*, The Journal of Nursing Administration 43(5) 280-285	The objective of the study was to develop a reliable and valid checklist for documenting team and collaborative behaviours occurring during multidisciplinary bedside rounds.	A checklist was developed and tested on 3 general medical units. Items on the checklist were derived from the literature and the medical centre's patient-family-centred values.	The use of a standardised checklist has been proven to be reliable, valid and easy to use in the clinical setting and allowed for multidisciplinary rounds to be standardised.
Mohr, J,. Batalden, P, & Barach, P. (2004). *"Integrating Patient Safety into the Clinical Microsystem"*, Quality Saf Health Care 13 (Suppl II)ii34-ii38	Provide an overview of the clinical microsystem and the relationship between the macrosystem and microsystem and to address how the microsystem concepts can enhance the quality and safety of care.	Providing an overview of the clinical microsystem and how improvements can be made at this level.	The microsystem unit allows organisational leaders to embed quality and safety into a microsystem's developmental journey. Leaders can set the stage of making safety a priority for the organisation while allowing individual microsystems to create innovative strategies for improvement.
O,Leary J,. Wayne, D,. Landler, M,. Kulkami, N,. Haviley, C,. Hahn, K,. Jeon,	To determine whether localising physicians to specific patient care	Use of structured interviews.	Although nurses and physicians were able to identify one another

PUBLICATION	OBJECTIVE	METHODS	RESULTS/CONCLUSION
J,. Englert. & Williams, M. (2009). *"Impact of Localizing Physicians to Hospital Units on Nurse – Physician Communication and Agreement on the Plan of Care"*, J Gen Intern Med 24(11) 1223-7	units improves nurse-physician communication and agreement on patients' plans of care.		and communicated more frequently after localising physicians to specific patient care units, there was little impact on nurse-physician agreement on the plan of care of patients.
O,Leary, K., Wayne, D., Haviley, C., Slade, M., Lee, J. and Williams, M. (2010) *"Improving teamwork: Impact of Structured Interdisciplinary Rounds on a Medical Teaching Unit"*, J Gen Intern Med 25(8) 826-32	The aim of the study was to assess the impact of SIDR on hospital care providers' ratings of collaboration and teamwork.	The study was a controlled trial comparing an intervention medical teaching unit with a similar control unit. SIDR combined a structured format for communication with a forum for regular interdisciplinary meetings. A survey was undertaken on each unit and asked providers to rate the quality of communication and collaboration they had experienced with other disciplines. Teamwork and safety climate was also assessed.	SIDR had a positive effect on ratings of collaboration and teamwork on the medical unit which had the intervention implemented.
O'Leary K., Buck, R., Fligiel., H.,	The objective of this study was to	The study was a controlled	The rate of adverse events was

PUBLICATION	OBJECTIVE	METHODS	RESULTS/CONCLUSION
Corinne, H., et al (2011). *"Structured Interdisciplinary Rounds in a Medical Teaching Unit"*, Arch Intern Med 171(7) 678-684	assess the effect of an intervention designed to improve interdisciplinary collaboration and lower the rate of adverse events.	trial of an intervention being SIDR. The intervention combined a structured format for communication with a forum for regular interdisciplinary meetings.	3.9 per 100 patient days for the intervention unit compared with 7.2 and 7.7 per 100 patient days for the control units. The study showed that SIDR significantly reduced the adjusted rate of adverse events in a medical teaching unit.
O'Leary, J,. Boudreau, Y,. Creden, A,. Slade, M & Williams, M. (2012). *"Assessment of Teamwork During Structured Interdisciplinary Rounds on Medical Units"* Journal of Hospital Medicine, 7(9) 679-683	Evaluation and characterising teamwork during Structured Interdisciplinary Bedside Rounds (SIDR).	Use of a cross-sectional observational study of six medical units which have implemented SIDR.	A number of improvements were observed as a result of the use of SIDR. These were improved situational awareness and teamwork scores.
Schmutz, J. & Manser, T. (2013). *"Do team processes really have an effect on clinical performance? A systematic literature review"*, British Journal of Anaesthesia 110(4) 529-44	Conducting a literature review to examine the impact of team process behaviours on clinical performance.	A systematic literature review was undertaken by the authors of the article.	28 studies were reviewed. These reported at least one relationship between team process or an intervention and outcome. Team process behaviours have been shown to influence performance. Training in team behaviours results in improved performance.

PUBLICATION	OBJECTIVE	METHODS	RESULTS/CONCLUSION
Seigel, J,. Whalan, L,. Burgess, B,. Joyner, B,. Purdy, A,. Saunders, R,. Munn, L,. Yip, T, & Willis, T. (2014), *“Successful Implementation of Standardized Multidisciplinary Bedside Rounds, Including Daily Goals, in Pediatric ICU”.* The Joint Commission on Quality and Safety 40(2) 83-90	Design and implementation of a multidisciplinary standardised rounding structure for bedside rounds to improve communication between team members in caring for critically ill patients.	Implementation of morning briefing to update the team on the status of patients. The use of daily goal sheets which outlines the plan for the day for the patient. Implementing a standardised rounding structure to allow information sharing between all members of the healthcare team allowing for the improvement of teamwork and communication.	From surveys conducted post implementation, 100% of the staff indicated that they knew what the patient problems were and 94% states that there was a clear daily plan. These results indicate that having standardised and structured communication tools allowed for the improvement in communication between members of the healthcare team and families of the children.
Weller, J,. Boyd, M, & Cumin, D. (2014). *“Teams, tribes and patient safety: overcoming barriers to effective teamwork in healthcare”*, Postgrad Med J 0:1-6	Outlining the characteristics of effective healthcare teams.	Review of literature focused on improving the sharing of important information between healthcare professionals.	Shared mental models, mutual respect and trust and closed-loop communication are underpinning conditions required for effective teams. Seven actions were identified to overcome barriers to team communication in healthcare: 1) Teach effective

PUBLICATION	OBJECTIVE	METHODS	RESULTS/CONCLUSION
			communication strategies 2) Train teams together 3) Train teams using simulation 4) Define inclusive teams 5) Create democratic teams 6) Support teamwork with protocols and procedures 7) Develop an organisational culture supporting healthcare teams.

4. Agency Visits

4.1 Northwestern Memorial Hospital, Chicago, Illinois, USA

PROFILE
Northwestern Memorial Hospital (NMH) was established in 1966 and is an academic medical centre hospital located in Chicago, Illinois. It is the primary teaching hospital for Northwestern University's Feinberg School of Medicine and has 885 inpatient beds with more than 51,000 admissions.

NMH is ranked 10th best hospital in the USA[iii], ranked number one in the Chicago metro area[iv], and ranked number one in the state of Illinois[v].

BACKGROUND AND PURPOSE OF VISIT
The purpose of the visit to NMH was to meet with Dr Kevin O'Leary, Chief, Division of Medicine Hospital Medicine. Dr O'Leary is the lead for the INTERdisciplinary Approaches to Communication and Teamwork (INTERACT) project for NMH.

INTERACT is designed to improve communication and teamwork on general medical hospital units. The intervention consists of Prepared Nurse-Physician Co-Leadership and Structured Inter-Disciplinary Rounds (SIDR). Research, conducted at NMH has shown improved teamwork and a reduction in the rate of adverse events as a result of these interventions. These efforts were supported by a grant from the Agency for Healthcare Research and Quality. SIDR provides a platform that allows the member of a healthcare team to gather together at an agreed time each day to improve collaboration.

NMH has also published a number of journal articles demonstrating that SIDR has improved teamwork[vi,vii] and decreased adverse events[viii].

SUMMARY OF ACTIVITIES
The primary purpose of the visit was to obtain further information on SIDR and how it is currently being implemented at NMH. SIDR is a structured communication tool for the team to discuss each patient on the unit so that all members of the healthcare team are able to develop a shared mental model for the care of the patient. There are 3 areas that are discussed during SIDR:

1) **Overall Plan of Care**
    - Diagnosis
    - Patient's chief concern

- Test/procedures today
- Medication – Changes/issues
- Consulting services
- Diet (aspiration precautions)
- Telemetry

2) **Discharge Plans**
    - Patient education needs
    - Anticipated Discharge Date/Time
    - Discharge needs/barriers
        - Placement
        - Home health needs
        - Transportation
        - Dialysis
3) **Patient Safety**
    - PCP Contact
    - VTE prophylaxis
    - Mobility assessment (falls)
    - Can we reduce pressure ulcer risk
    - Can central lines be removed (including PICCs)
    - Can foley catheter be removed
    - Goals of care and Code Status

Activities that were undertaken at NMH included:

- Meeting and discussion with Dr O'Leary in how teamwork and communication has improved in medical teams at NMH as a result of the use of SIDR and discussion on potential areas for collaboration;
- Outlining CEC programs that aim to improve patient safety;
- Outlining the In Safe Hands programs and how SIDR can be utilised as a tool to improve teamwork and communication between healthcare team members;
- Observing SIDR on two wards;
- Providing feedback and observations of SIDR to a group of NMH unit medical directors, patient care coordinators and nurse managers;
- Meeting and discussion with Ms Patricia O'Sullivan, Director, Medical Nursing on impact of SIDR on nursing staff.

FINDINGS AND CONCLUSIONS

The visit to NMH provided further evidence on the importance of bringing members of the healthcare team together at an agreed time each day so that a shared mental model for the coordination and care of the patient can be developed. This is achieved through SIDR at NWM. In addition to better coordination and care, patient safety is also heighted as a result since safety issues are raised and addressed during SIDR. Evidence of these improvements has been published by NMH[ix].

NMH are currently implementing SIDR across their Division of Medicine to improve performance. A comprehensive evaluation framework has been developed to monitor if

SIDR is making a positive difference. Although NMH are not implementing TeamSTEPPS, the concepts of developing situational awareness, shared mental model and mutual support are being realised as members of the healthcare team come together through SIDR to share information.

There are a number of key differences at NMH compared to hospitals in NSW which primarily relate to workforce. Units were staffed and led by hospitalists and nurse practitioners who are based on the unit full time and there were no residents allocated to the units that were visited. As a result, this allows the workforce to be quite stable and not as itinerant compared to NSW Health facilities. This environment is also conducive and encourages the improvement in teamwork and communication since the members of the healthcare team are all collocated on the unit looking after the same patients.

IMPLICATIONS

- Focus on developing and building unit based teams for NSW Health facilities.
- Collaboration with NMH through Dr O'Leary in strategies to improve teamwork and communication.
- Concepts which are part of TeamSTEPPS can be utilised without implementing the TeamSTEPPS program. This is also evident with the In Safe Hands program where these concepts have been utilised.
- Incorporating SIDR as a tool for the In Safe Hands program.

4.2 Emory Healthcare

PROFILE

Emory Healthcare was established in 1905 and is the largest health care system in Georgia, USA. It is the only health network in Georgia that brings together a full range of hospitals, clinics and local practices together.

The Emory Healthcare Network is spread across Georgia which includes Emory University Hospital, Emory University Midtown, Emory University Orthopaedics & Spine Hospital. Emory Saint Joseph's Hospital and Emory Johns Creek Hospital.

BACKGROUND AND PURPOSE OF VISIT

The CEC has a close working relationship with Emory Healthcare through the In Safe Hands program. One of the key tools utilised to implement In Safe Hands is Structured Interdisciplinary Bedside Rounds (SIBR) which was developed by Dr Jason Stein.

SIBR is a ward round conducted at the same time each day, where medical, nursing and allied health members of the healthcare team speak with the patient and family, and where the team sets a daily treatment plan and goals for the patient. SIBR is a structured communication tool which allows members of the healthcare team and the patient and family to have a concise dialogue. The structure is outlined in Figure 1.

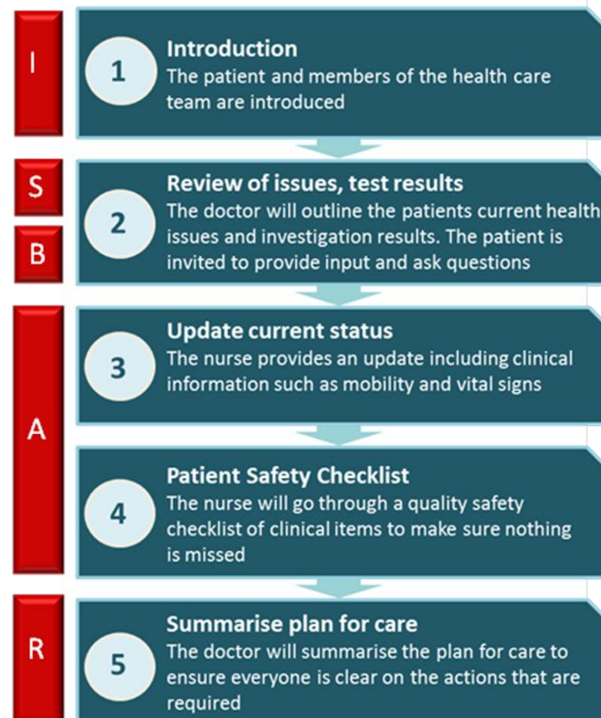

Figure 1

At Emory Healthcare, Accountable Care Units (ACU) are being implemented. ACUs have four key features which are:

1. Unit based teams
2. SIBR
3. Unit performance data
4. Unit management by nurse and physician partners

Emory Healthcare has demonstrated that healthcare teams that have become ACUs have demonstrated improvements in mortality, infection rates, glycaemic control, patient satisfaction and length of stay[x].

As discussed above in regards to the clinical microsystem and the wider system, one way in improving teamwork and communication can be done through SIBR. This involves using a checklist tool to aid comprehensive but concise daily assessment of a patient's care.

The primary purpose of this visit was to continue to collaborate with Emory Healthcare and to share ideas in how NSW Health is implementing In Safe Hands compared to Emory Healthcare in implementing ACUs and to learn from the different approaches for implementation.

SUMMARY OF ACTIVITIES

The visit involved a number of meetings with Dr Jason Stein and his team who are implementing ACUs at Emory Healthcare. These meetings consisted on the sharing of experiences in implementing SIBR and further collaboration between the CEC and Emory Healthcare.

In addition to Emory Healthcare, other hospital systems in the USA have expressed interest in the concept of the ACUs and have been working with Dr Stein in planning and implementation. I was able to sit in on meetings between Emory Healthcare and Methodist Health, Indianapolis, Indiana in how to implement ACUs. This provided a unique insight that allowed for the comparison in how In Safe Hands is being implemented in NSW and the activities in the USA in implementing ACUs.

As part of the visit, I presented at the Emory Healthcare Accountable Care Unit Learning Collaborative which was attended by 70 participants who were staff from units that have or are planning to implement ACUs. This presentation provided the context of NSW Health and what the CEC is trying to achieve with the In Safe Hands program and how it is being implemented across NSW Health. The presentation also included results from the evaluation of process measures, patient and staff experience and patient safety. Discussion with participants furthered the sharing of ideas.

FINDINGS AND CONCLUSIONS

SIBR is a key tool which is currently being utilised to improve teamwork and communication for units that are implementing In Safe Hands. SIBR brings the team together around the bedside to involve the patient in the planning and coordination of their care. Models for

specific specialities (i.e. emergency, aged care) have been developed and are currently being spread across NSW Health.

Emory Healthcare's approach in implementing ACUs is to ensure that fidelity is maintained in the model. This has caused some issues since keeping with fidelity would mean that units may find it more difficult to implement since they need to change to fit the model. This was the case for one unit at Emory Healthcare where they stopped the model since it was not working for them. The need for flexible customisation of the model is required to ensure that it will be sustainable in the long term as it has been adapted to fit the unit. In NSW Health, this is the approach that has been undertaken. Fidelity is not discounted but flexible customisation is emphasised. With SIBR, there are key principles which are the phases a healthcare team will go through during the round. What is discussed and how it is undertaken needs to be flexible as each unit within a hospital is different. For example, the patient safety checklist items on one unit will be different from another or the composition of the team members that attend the rounds would be different.

The key findings and conclusions from the visit to Emory Healthcare in relation to SIBR also apply to SIDR and TeamSTEPPS being that if a healthcare team implements any of these models, they should focus on how to customise and change these models to fit their unit instead of changing the unit to fit the model as each of them have key principles that should not be deviated from.

IMPLICATIONS

- Focus on developing and building unit based teams for NSW Health facilities.
- Collaboration with Emory Healthcare through Dr Stein in strategies to improve teamwork and communication.
- Continue to utilise SIBR as a tool for the In Safe Hands program.

5. Conference Attendance

5.1 2014 TeamSTEPPS National Conference

BACKGROUND
The 2014 Team Strategies to Enhance Performance and Patient Safety (TeamSTEPPS) National Conference was held on June 11-12 at Minneapolis, Minnesota, USA. TeamSTEPPS is an evidence-based teamwork training program developed by the US Department of Defence Patient Safety Program in collaboration with the Agency for Healthcare Research and Quality (AHRQ) which provides a solution to improving collaboration and communication for health services. Teamwork has been found to be one of the key initiatives within patient safety that can transform the culture within healthcare.

The aim of the National Implementation of TeamSTEPPS program in the USA is to create a community of TeamSTEPPS users and implementers. To build a user community, the National Implementation program works with six regional training centres to provide Master Training courses. These centres are:

- Duke Medicine
- UCLA Health
- University of Minnesota
- North Shore-Long Island Jewish Health System
- Tulane Center for Advanced Medical Simulation & Team Training
- University of Washington

The courses aid healthcare workers to not only learn the concepts of TeamSTEPPS, but also teach this methodology to others. To further support this community, continuous education and updated resources are provided through the TeamSTEPPS User Support Portal[xi]. This portal not only highlights recent case studies, but also provides a continuously evolving evidence base and virtual education/collaboration opportunities.

The National Conference serves as a forum for cross facility collaboration and interactive implementation workshops to further strengthen the community and to highlight TeamSTEPPS implementation from across the USA over the past year.

SUMMARY OF ACTIVITIES
Summary of sessions attended which had relevance to the project are provided below.

Session Title: Putting the Patient at the Center of Care

Presenters:

- Chrissie Blackburn, MHA (University Hospitals Case Medical Center)
- Myrta Rabinowitz PhD, RN, BC (North Shore-Long Island Jewish Health System)

Summary:
The session focused on the enhancement of patient and family engagement and how to teach them to partner with the healthcare team. Initiatives focused on communication at the bedside and staff training on how to invite patient and family into the healthcare team was also presented. Partnership done well equates to better care and lower costs.

The Centers for Medicare & Medicaid Services (CMS) has patient and family engagement has five metrics for patient and family engagement which is part of their national standards. These metrics are:

1) Prior to admission, hospital staff provides and discusses a discharge planning checklist with every patient that has a scheduled admission, allowing questions or comments from the patient or family.
2) Hospital conducts both shift change huddles for staff and does bedside reporting with patients and family members in all feasible cases.
3) Hospital has a dedicated person or functional area that is proactively responsible for patient and family engagement and systematically evaluates patient and family engagement.
4) Hospital has an active Patient and Family Engagement Committee or at least one former patient that serves on a patient safety or quality improvement committee or team.
5) Hospital has a t least one or more patient(s) who serve on a Governing and/or Leadership Board and serves as a patient representative.

Findings:
TeamSTEPPS offers an opportunity for healthcare teams to include patients and families more in their care. The key learnings from this session are that there is a "new role" for patients and families and they need to be educated and know what their role is. For NSW Health, involving patients and families and to include them as part of the team is the first step in achieving this.

The CMS metrics for patient and family engagement are useful in how to enhance patient and family engagement for NSW Health. Metrics 4 and 5 parallel with the Australian National Safety and Quality Health Standards, Standard 2 – Partnering with Consumers. For NSW Health, the next step is to imbed activities that meet metrics 1-3 which focuses on involving the patient and family in their care and including them as part of the team.

It has been demonstrated at the session that if all 5 metrics are being met, better outcomes for patients, better experience for clinicians and improved patient safety would be achieved. This in turn leads to the question posed through the study tour where the improvement in teamwork and communication for healthcare teams improves the system. By incorporating

the patient and family as part of the team provides many benefits as they are the experts of themselves and can provide additional information which may be missed if they are not seen as part of the team by clinicians. The In Safe Hands program is currently working towards this by actively involving patients during SIBR in the coordination and planning of their care.

Session Title: Five Generations in the Work Place: Sustaining TeamSTEPPS

Presenter:
- Philip Boysen, MD, MBA, FACP, FCCP, FCCM (Ochsner Clinic Foundation)

Summary:
For all healthcare systems, the healthcare workforce is comprised of individuals from a variety of generations. Each generation, from Millennials to Baby Boomers prioritise their life differently. They value different things and learn, think and communicate uniquely. A "generational understanding" is essential so the intergenerational workforce can communicate and work as a team effectively.

In this session, the different generations were identified and defined while communication skills necessary for each generation to understand each other and how they are each different was outlined. These communication skills were reinforced through the principles of TeamSTEPPS.

The session focused on current methods of delivering the TeamSTEPPS curriculum at Oscher Clinic Foundation in light of how each generation is receptive to traditional education modes (eg lectures). As an example, Millenials and Gen2020 (born after 1998), are connected with social media and enjoy social learning through interactive technologies. Research shows that these two generations also favour face-to-face interaction and insist on timely feedback not only daily but instantaneous, and actively seek mentorship and life-long learning. They also view work life balance as no longer relevant, expecting social networking in both the personal and work environment.

Information was provided on how workplaces need to change and adapt when it is estimated that 50% of the workforce will consist of Millenials and Gen2020 by the year 2020.

Findings:
For the CEC, how education and training for teamwork and communication is delivered needs to be reviewed with the knowledge and information gained from this session. In regards to the In Safe Hands program, education and training is primarily delivered through traditional methods such as lectures. In light of this session, the CEC has begun to transition to other methods which is demonstrated in moving towards a social network platform where discussion forums and other forms of communication are possible.

Session Title: Case Studies of TeamSTEPPS Implementation from Across the County

Presenters:

- Scott Chittenden, RN (374 Medical Group, United States Air Force)
- Donna Dasinger, RN (Sharp HealthCare)
- Brenda Helton, RN (General Leonard Wood Army Community Hospital)
- Tina Huffman-Cerullo, RN, BSN, MBA (325 Medical Group, United States Air Force)
- Wouter Keijser, MD (Wacomed/TeamSHOPP)
- Victoria Kennel, MA (University of Nebraska Medical Center)
- Sukh Dev Singh Khalsa, MSN, MBA, RN, PMHNP, PHN (Loma Linda University Behavioral Medicine
- C. Latoya Mason, MD (Baylor College of Medicine

Summary:
TeamSTEPPS is being utilised across a number of facilities across the USA and in a variety of settings and ways. The session included 7 short presentations focused on approaches to implementation. The presentations highlighted challenges and successes in various health care settings.

Key learnings included:

- How TeamSTEPPS can help improve areas of poor performance
- The use of briefs, huddles and debriefs as key tools to improve teamwork and communication
- Sustainability
- Standardisation improves communication

Findings:
The session demonstrated that improving teamwork and communication has a number of benefits from patient safety to culture. The presentations from this session focused on how TeamSTEPPS was able to address issues faced by specific units.

Session Title: Utilizing TeamSTEPPS Methodology to Become a High Reliability Organization

Presenters:
- Susan Gidding, MHS, RN, CCRN, RRT (Saint Alphonsus Health System)
- Steve Hines, PhD (Health Research & Educational Trust)

Summary:
Despite the movement towards a culture of safety in the healthcare setting, medical errors in addition to poor teamwork continue to persist. From this session it was discussed that no organisation or hospital is perfect, yet aiming to become a HRO can be a medium to achieve safety and quality goals. The use of TeamSTEPPS tools to become highly reliable by a healthcare team was presented. The session outlined the following characteristics that are present in highly reliable teams:

- Goal oriented
- Culture based
- System focused

- Process driven

Findings:
HROs are based on good teamwork and communication. This session demonstrated how HROs have situational awareness and a shared mental model which is only found through good teamwork and communication.

The session made one important point that perfection is never attained by becoming a HRO as things are never constant.

From a clinical microsystems perspective, if each unit aims to become an HRO, it is natural that the facility as a whole in which the units are based in will also improve in a variety of metrics which can be process or patient safety measures as a result of itself becoming a HRO. Many of these concepts and ideas can be applied to the In Safe Hands program to develop healthcare teams that are highly reliable in NSW Health.

SUMMARY IN RELATION TO PROJECT
The major themes of the conference included:

- Ways to effectively address various implementation phases of TeamSTEPPS;
- How to incorporate creativity and innovation into TeamSTEPPS training and implementation;
- Physician and leadership engagement;
- New and emerging areas where TeamSTEPPS is being implemented.

Although NSW Health is not implementing TeamSTEPPS as a program, the key principles and ideas which form the foundation of TeamSTEPPS can be applied and integrated into programs that aim to improve teamwork and communication. These key principles are being integrated and applied to the CEC In Safe Hands program. These key principles are:

- Team Structure
- Communication
- Leadership
- Situation Monitoring
- Mutual Support

With these key principles, a healthcare team can develop to become highly reliable. For example, if these key principles were implemented as part of a strategy to build and develop highly reliable teams, the whole facility would naturally see its performance in multiple areas improve since from a clinical microsystems perspective, the healthcare teams make up the whole of the system. If applied to the wider system in a coordinated manner, the expected result would be system wide improvements[xii].

6. Recommendations

Recommendation 1: Incorporate tools and resources gained from the study tour into the CEC In Safe Hands program

The CEC In Safe Hands program provides a platform for healthcare teams to implement tools and resources that focus on improving teamwork and communication for healthcare teams.

SIDR, SIBR and TeamSTEPPS if implemented correctly, create an environment that fosters good teamwork and communication. Key principles are associated with each tool which allows for flexible customisation. This will allow healthcare teams to customise each tool to suit their unit which is evident in the implementation of SIBR by healthcare teams in NSW. By incorporating these tools and resources as part of In Safe Hands, it allows healthcare teams to choose which one is most suitable for them.

Recommendation 2: Continue to implement SIBR as part of In Safe Hands in NSW Health

SIBR is a key tool and component for the implementation of In Safe Hands for NSW Health. SIBR has been implemented on a number of units and early evaluation has shown improvements in process measures, patient and staff experience and patient safety for these healthcare teams.

It is recommended that SIBR continues to be spread across NSW Health as a tool which can be customised for healthcare teams to implement to suit their needs.

Recommendation 3: Utilise SIDR as a communication tool for units that undertake whiteboard/rapid rounds

Many healthcare teams across NSW undertake whiteboard/rapid rounds each day in order to obtain situational awareness and a shared mental model for the care of their patients. Whiteboard rounds are usually the only time that the whole interdisciplinary team comes together for a huddle.

From experience and observations, these rounds are usually unstructured and input is usually only provided by medical staff. Safety issues or concerns are usually not conveyed during these rounds. In order to maximise the usefulness whiteboard rounds, it is recommended that they be structured (1.Overall Plan of Care, 2.Discharge Plans, 3.Patient Safety) so that the communication and information sharing will be consistent for each patient.

It is recommended that SIDR as a tool for whiteboard rounds be part of In Safe Hands and is offered to units that find implementing SIBR is not feasible due to barriers such as logistical or staff availability.

Recommendation 4: Utilise the principles of TeamSTEPPS and relevant tools and resources

TeamSTEPPS provides key concepts that allow for the development of teamwork and communication for healthcare teams. These are situational awareness, shared mental model and mutual support. These concepts should be highlighted and become foundations for the In Safe Hands program.

The suite of tools which are part of TeamSTEPPS should also be considered as tools which heighten teamwork and communication. These tools allow for graded assertiveness and are focused on patient safety.

Recommendation 5: Monitoring of units that have implemented In Safe Hands to see if there is any correlation with improvement in performance in the wider health system

The CEC is currently collaborating with the NSW Ministry of Health Whole of Hospital program through the implementation of In Safe Hands. The CEC should compare the performance of units that have implemented In Safe Hands with those that have not. Some facilities in NSW are implementing In Safe Hands across the whole hospital. Analysis of pre and post implementation data should be undertaken to determine if the improvement of teamwork and communication has had an effect on performance across these hospitals.

Recommendation 6: Partnership with Emory Healthcare

The CEC should continue its partnership with Dr Jason Stein and Emory Healthcare. The experience and lessons learnt from the implementation of ACUs/In Safe Hands by both healthcare systems can be shared and applied.

It is also recommended that opportunities for collaborative research should also be explored based on this projects question of “Improving Teamwork and Communication in Healthcare Teams to Improve the Healthcare System”.

7. References

[i] Johnson, J. (2010). *"The state of science surrounding the clinical microsystem: a hedgehog or a fox?"*, Quality and Safety in Healthcare, 19: 473-474

[ii] Stein, J. (2012). *ACU-SIBR Implementation Guide*, Emory University, Atlanta.

[iii] Chicago Tribune (July 2014). *"Northwestern makes top 10 hospitals list",* Retrieved 16-07-2014 from: http://my.chicagotribune.com/#section/545/article/p2p-80810125/

[iv] U.S News & World Report. *"Best Hospitals in Chicago",* Retrieved 01-07-2014 from: http://health.usnews.com/best-hospitals/area/chicago-il

[v] U.S News & World Report. "Best Hospitals in Illinois", Retrieved 01-07-2014 from: http://health.usnews.com/best-hospitals/area/il

[vi] O'Leary, K., Boudreau, Y., Credan, A., Slade, M. and Williams, M. (2012). *"Assessment of Teamwork During Structured Interdisciplinary Bedside Rounds on Medical Units"*, Journal of Hospital Medicine, 7(9): 679-683

[vii] O,Leary, K., Wayne, D., Haviley, C., Slade, M., Lee, J. and Williams, M. (2010) *"Improving teamwork: Impact of Structured Interdisciplinary Rounds on a Medical Teaching Unit"*, J Gen Intern Med 25(8): 826-32

[viii] O'Leary K., Buck, R., Fligiel., H., Corinne, H., et al (2011). *"Structured Interdisciplinary Rounds in a Medical Teaching Unit"*, Arch Intern Med 171(7): 678-684

[ix] See vi, vii, viii

[x] Pain, C., Odetoyinbo, D., Castle, B., Methvin, A., Vasquez, J. amd Burleson, M. (2012) *"Accountable Care Unit on a Medical Ward in a Teaching Hospital: A new care model designed to improve patient and hospital outcomes"* , Journal of Hospital Medicine 7:191

[xi] TeamSTEPPS Portal. Retrieved 07-07-2014 from: http://teanmsteppsportal.org

[xii] Nelson, E., Batalden, P. and Godfrey, M. (2007). *Quality by Design: A clinical microsystems approach*, Jossey-Bass, San Fancisco