Government of **Western Australia**
Department of **Health**
Institute for Health Leadership

2020 MSI Annual

Service improvement project summaries

January 2021

2020 Medical Service Improvement Program

The Medical Service Improvement Program, now in its ninth year, continues to engage enthusiastic, motivated junior doctors in service improvement across WA Health.

A total of 170 Resident Medical Officers and Registrars have now participated in the program since its commencement in 2012. The reputation of the program continues to grow locally within the junior doctor cohort, as well as nationally and internationally.

With the COVID crisis impacting much of WA Health, a number of rotations throughout 2020 were impacted with participants reallocated to meet the increasing need for healthcare workers across the system. As such, the 2020 program supported 15 junior doctor participants across a total of 7 participating hospitals. 2020 saw the launch of the program at 2 additional WACHS sites, taking the total to 3 WACHS sites in 2020.

Participating hospitals included:

- Albany Health Campus
- Bunbury Regional Hospital
- Geraldton Health Campus
- Perth Children's Hospital
- Royal Perth Hospital
- SCGOPHCG
- SJOG Midland

A list of the 2020 participants is provided overleaf.

Service improvement projects

Each junior doctor participant in the Medical Service Improvement Program undertakes a service improvement project at their hospital site supported by an Executive Sponsor, Clinical Supervisor and Service Improvement Supervisor/s. The Institute for Health Leadership provide additional project support and also assistance with data analysis as required.

This document provides one-page summaries for all the service improvement projects completed during 2020. Each project summary outlines the project rationale and aim statement, as well as improvements made and outcomes to date. Recommendations for implementation and/or next steps are also included in the summaries as appropriate.

The MSI Program is an opportunity for the participants to develop their leadership skills while leading a service improvement project. These leadership skills are an essential part of being a clinician in healthcare today and therefore this program enables the RMO participants to develop and refine these skills right from an early stage in their medical careers.

Further information

In 2021 the MSI Program will expand to the Clinical Service Improvement Program and is open to medical, allied health, nursing and midwifery and dental staff across participating WA Health sites. Visit the Clinical Service Improvement Program website:
https://ww2.health.wa.gov.au/articles/a_e/clinical-service-improvement-program

Contact the Institute for Health Leadership leadership@health.wa.gov.au; (08) 9222 6459.

2020 Program Participants

Participant		Health Site	Hospital	Rotation No.	Service improvement project
Maya	De la Lande	Child and Adolescent Health Service	PCH	3	ECLiPS; Enhancing Communication Lines in PCH STARS
Shani	Law-Davis		PCH	3	INTERgreat – Integrating interpreter use at PCH
Oscar	Morlet		PCH	4	Bed Time: Timely Bed Booking for Planned PCC Admissions
Sophie	Wiegele		PCH	4	FunKIE: Functional Kids In the ED
Sam	Carbone	East Metropolitan Health Service	RPH	2	Project cancelled due to COVID
David	Hille		RPH	2	Project cancelled due to COVID
Jessica	Haley		RPH	3	RePAIR: Reconstructive Partnership for Lower Limb Open Fractures
Marc	Waugh		RPH	3	AMU Tetris
Aaron	Frederiks		RPH	4	bioLOGIC: Best Practice Management of Psoriasis Patients on Biologics
Andreana	Manifold		RPH	4	CLOTWATCH: Venous thromboembolism (VTE) prophylaxis review and documentation in RPH Spinal Service patients
Malindi	Haggett	North Metropolitan Health Service	SCGH	4	Transfusion Confusion: Tackling Wrong Blood in Tube and 'Doctor Unknown' Errors
Richard	O'Halloran		SCGH	4	Project JAWs: Junior Doctor Administrative Workflows
Isabelle	Kamenou	St John of God WA Country Health Service	Midland	2	Tracking the Pulse: Streamlining ED Short-Stay Unit admissions for low risk pain patients
Ashwita	Siri Vanga		Midland	4	EVERY DROP COUNTS: Blood Transfusion in Elective Gastrointestinal Surgeries
James	Charleson	WA Country Health Service	Bunbury	4	Project Known Entity
Brittney	Wicksteed		Albany	4	Improving clinical assessment and handover of miscarriage in ED
Paul	Mario		Geraldton	4	Cellulitis Easier

Government of Western Australia
Department of Health
Institute for Health Leadership

ECLiPS
Enhancing Communication Lines in PCH STARS

Medical Service Improvement Program
Lead • Improve • Transform

ECLiPS; Enhancing Communication Lines in PCH STARS

Dr Maya de la Lande, Child and Adolescent Health Service

The improvement process

A process mapping session was conducted to demonstrate the patient journey afterhours. Issues raised during this session included lack of transparency of communication, unclear leadership, and poor teamwork. Three Time in Motion Studies were conducted to gather data to confirm or refute these problems and how frequently they occurred. Data showed that ISOBAR was only used in 17% of patient-related communication, 37% of the tasks requested afterhours were for jobs that should have been completed during normal working hours, and the workload was unevenly distributed between the STARS team with one staff member performing 41% of the entire STARS load whilst another was only allocated 8%. During the Analyse phase, lack of governance, poor Vocera (ICT) functionality and unclear policy and procedures were identified as the root causes of the issues.

Project outcomes

- STARS specific team room
- Governance over the STARS team
- Compulsory team ward rounds at the start of each STARS shift
- Electronic Task Allocation System
- Vocera proforma with ISOBAR format
- Reallocation of RMO responsibilities to improve workload distribution
- Improved communication and collaboration between staff members
- Increased staff morale
- Developed a culture of improvement

Recommendations

- A revision of the current team structure to ensure it is a consistent team to enhance collaboration and improve leadership of junior staff
- Upskilling of staff including the CNS to perform more procedural tasks afterhours
- Additional resources including Accuveins purchased to support junior staff members performing procedures
- Changes in policy and procedure to clearly describe roles of STARS members and escalation processes. This needs to be supported by appropriate education and be accessible to all staff members.

Project Aim

To ensure that Perth Children's Hospital (PCH) provides excellent care for patients admitted to the ward 24 hours a day, seven days a week by improving the functioning of Safety Team Afterhours Response Service (STARS).

Rationale

At PCH, afterhours care is provided by the STARS team. The team is comprised of staff members with varied skills but who are working in silos and not functioning as an effective team. Consequently, poor communication occurs which impacts on the team's ability to provide safe patient care. PCH Clinical Incident data showed that between 1/7/18 until 9/8/20 more than 50% of incidents were occurring afterhours, with the equivalent of 3 clinical incidents per night being recorded.

Improvement team members

Supervisors:
Andrew Martin
Shobhana Maruthayanar
Jaynie Kirkpatrick

Supporters:
Simon Wood
Esther Dawkins
Mariana Donlin
Louise Houliston
Tracy Markus
Shani Law-Davis
PCH Project Management Office
Chris Kirkwood

Government of Western Australia
Department of Health
Institute for Health Leadership

INTERgreat – Integrating interpreter use at PCH

Dr Shani Law-Davis, Child and Adolescent Health Service

The improvement process

This project closely followed the DMAIC model for Clinical Service Redesign. During the initial process mapping session, key stakeholders explored the process of identifying the need for an interpreter and identified key issues in the process. An audit tool, in the form of an electronic staff survey was developed and distributed via REDCap, to 134 participants including Medical, Nursing, Allied health, teaching and clerical staff who regularly work on ward 4B (General Paediatrics Ward) at PCH, in the last 12 month period. The results of the audit showed that 20.4% of staff were not satisfied with their previous experience with over-the-phone interpreters and only 11.8% of staff found it easy to establish if an in-person interpreter had been arranged by another staff member. Two root causes were established:

1. A lack of clear process around who and how an interpreter was booked for use on the ward
2. Limited awareness and education around interpreter use.

Project outcomes

Three key solutions were generated:

- Increased face-to-face staff education about interpreter use at PCH
- Automated process for booking interpreters for use on the ward: 4B Pilot Project
- Language Services Lanyard Cards

Recommendations

Further research into barriers and enablers to interpreter use, as well as support for ongoing development of future potential solutions is vital to ensuring we deliver equitable health care to all and taking steps to ensure the voice of every patient is heard.

Potential areas for future work include:

- Increased multilingual signage
- Translation of patient health fact sheets
- Telehealth
- Patient feedback process

Project Aim

To explore barriers to interpreter use in the inpatient setting at Perth Children's Hospital, and ultimately improve use of interpreters in order to deliver equitable health care.

Rationale

An increasing proportion of the Western Australian population is from linguistically diverse backgrounds. Previous work in the area of interpreter use in medical fields have highlighted the risks to patients, staff and organisations if interpreters are not effectively and regularly used in patients with limited comfort with English. A recent audit of interpreter use at Princess Margaret Hospital reviewed a total of 46 occasions of inpatient service and found that 54% had no interpreters used at all, and 0 admissions had daily documented interpreter use. This data, compared with the NSQHS standards (particularly Standard 2: Partnering with Consumers) and held against the Children and Adolescent Health Service (CAHS) core values of Compassion, Excellence, Collaboration, Accountability, Equity and Respect highlight the need for sustainable change in this area.

Improvement team members

Supervisors:

- Clinical Supervisor - Dr Sarah Cherian
- Service Improvement Supervisor - Jaynie Kirkpatrick and PMO team
- Esther Dawkins, Institute for Health Leadership
- Diana Rodriquez-Losada and Nadine Alig, Language Services PCH
- The dedicated Medical, Nursing, Allied health and Clerical staff of PCH – thank you!

Government of **Western Australia**
Department of **Health**
Institute for Health Leadership

Bed Time: Timely Bed Booking for Planned PCC Admissions

Dr Oscar Morlet, Perth Childrens Hospital, CAHS

The improvement process

Key stakeholders from the PCC, Surgical, and clerical staff at PCH were invited to participate in a number of sessions for this project. A process map was devised to cover the entire decision making and process pathway in booking PCC beds. From this a number of issues were raised by staff, which were echoed in feedback from patients' families. A subsequent audit revealed that at least one case in a 12 month period was cancelled due to a problem with the bed booking system. Root cause analysis isolated process complexity and unclear governance to be the driving factor for these issues. Multiple solutions were generated, of which one key proposal was instituted within the timeframe of the project term.

Project outcomes

Adaptation of the eReferral system for PCC bed requests

- ★ The eReferral system is already in place at PCH for a variety of inpatient and outpatient departments, services, and teams. Its use is primarily in digitising the referral process of patients from treating teams to relevant specialties, however it has been successfully adapted at PCH for more niche service requirements.
- ★ The basic system requires a requesting clinician to select the service that they wish to refer a patient to, which automatically loads a pre-determined questionnaire for the clinician to complete. Once submitted a responding clinician from the service is able to review the referral and either accept or reject the request, automatically informing the requestor.
- ★ The questionnaire used for the PCC service was adapted from the existing Excel Smart Form, then revised with the input of the PCC consultants. Training was undertaken for the PCC and clerical stakeholders who would be using the new system. CAHS ICT were also responsible for preparing to remove the key components of the current system.

Recommendations

Two supplementary proposals are recommended:

- ★ Institution of an Electronic Medical Record (EMR) at PCH
- ★ Adjustment of PCC nursing rosters and staffing levels to ensure greater availability of beds

Project Aim

To reduce complexity and improve communication in the bed booking process for planned Paediatric Critical Care (PCC) admissions after elective procedures at PCH.

Rationale

PCC admission is often required for patients with cases complicated by complexity or pre-existing conditions. Currently there are flaws in the current process including duplication of work, poor transfer of information, and a lack of closed-loop communication. There is the opportunity to ameliorate the workflow and communication issues in this system with an over-all aim to reduce the impact on families of patients with postponed or cancelled procedures.

Improvement team members

Supervisors:

Dr Simon Erickson (PCC)
Jaynie Kirkpatrick (PMO)
Natalia Talikowski (PMO)

Supporters:

Giulia Petrocchi (CAHS ICT)
Jess Ryan (CAHS ICT)

Government of Western Australia
Department of Health
Institute for Health Leadership

FunKIE: Functional Kids In the ED

Dr Sophie Wiegele, Perth Children's Hospital, North Metropolitan Health Service

The improvement process

Interested stakeholders were identified as the initial steps of this improvement process. With input from these parties, the current process was mapped, with the starting point identified as patient presentation to the Emergency department, ending in the patient being seen by the appropriate outpatient clinic. 27 issues were identified. These issues were grouped and validated and the root causes of the issues were identified, being: unclear patient governance, unclear referral pathway and lack of junior doctor confidence and education. Solutions to address these root causes were generated and either implemented or handed over to interested stakeholders.

Project outcomes

- Increased awareness of Functional Disorders amongst medical staff at Perth Children's Hospital
- Identification in a lack of education around Functional Disorders amongst junior doctors
- Commencement of the development of an Emergency Department guideline around Functional Disorders
- Commitment of multi-faculty support for the development of an online Functional Disorders module

Recommendations

1. Completion of the development and education around an Emergency Department Guideline around Functional Disorders.
2. Fact sheet for parents and children discharged from the Emergency Department.
3. Online learning module around Functional Disorders for clinical staff.
4. Use of current support services e.g. KKIND in the Emergency Department to support these children and families.

Project Aim

To streamline the referral pathway for children presenting to the Emergency Department who require assessment for a Functional Disorder.

Rationale

Children with a possible Functional Disorder are a common presentation to the Emergency Department. These children are time and care intensive, with clear evidence that earlier treatment leads to better outcomes. Currently, doctors feel uncomfortable with knowing where to refer these children, and that current education and resources around Functional Disorders are lacking. This may lead to wrong, delayed or lack of referral to multidisciplinary services.

Improvement team members

Supervisors:

Simon Williams

Jaynie Kirkpatrick

Natalia Talikowski

Supporters:

Kim Liard, Veronica Kretzer, Oscar Morlet, Sabrina Barrett, Sing Tie, Deirdre Spendewinde, Jo White, Peter Clissa, Ainslie Poore, Esther Dawkins

Government of Western Australia
Department of Health
Institute for Health Leadership

rePAIR RECONSTRUCTIVE PARTNERSHIP

Medical Service Improvement Program
Lead • Improve • Transform

RePAIR: Reconstructive Partnership for Lower Limb Open Fractures

Dr Jessica Haley, Royal Perth Hospital, EMHS

The improvement process

A process mapping session with key stakeholders was conducted to map the acute inpatient journey from admission to discharge. A number of issues and variables were raised in this session, and data was collected surrounding the key points in the inpatient journey where issues/variations were concentrated. A root cause analysis session with the same stakeholder group revealed that the current absence of management guidelines, as well as lack of combined theatre space and clear post-reconstruction instructions were some of the main factors contributing to the issues surrounding the current inpatient pathway.

Project outcomes

To date, the current implementations have occurred:

- RPH Standard Operating Procedure, detailing a clear referral pathway from Orthopaedics to Plastic Surgery. This enables earlier collaboration, which has various benefits including earlier reconstruction, less operations and reduced length of stay
- A combined weekly Ortho/Plastics theatre list for combined 'fix and flap' operations, which has encouraged collaboration and reduced the cancellation of patients from Plastics Trauma List.
- Change of consultant bed-card to Plastics consultant from Orthopaedic consultant immediately following reconstruction. This has reduced confusion amongst the nursing and medical staff regarding what team is responsible for ward-based care.

Recommendations

- Ongoing developments include an 'ortho-plastics' sticker for injury-related information to be central in the patient's notes
- 6 monthly review of the newly implemented pathway for re-assessment and continued re-evaluation

Project Aim

This project aimed to develop a streamlined pathway for patients presenting to RPH with open fractures of the lower limb.

Rationale

RPH is home to the Level 1 State Major Trauma Unit for WA. As such, the majority of the state's major trauma, including open fractures, are admitted to RPH. A collaborative ortho-plastics approach is endorsed by many surgical units across the world, with the current literature indicating that this reduces infection rates and improves overall patient outcomes [1,2]. At present there are no Australian Guidelines for the management of open lower limb fractures, and this project was seen as an opportunity to evaluate the current practices at RPH, and to create a new pathway for optimal, collaborative, patient-centred care.

Improvement team members

Supervisors:

Mr Jeremy Rawlins, Katherine Birkett

Supporters:

Mr Sudhakar Rao, Mr James Plant

A/Prof George Eskander, Dr Sumit Sinha-Roy

1. BOA and BAPRAS. Audit standards for Trauma: Open Fractures. Dec 2017. Cited 15/6/2020. Available from: https://www.boa.ac.uk/uploads/assets/3b91ad0a-9081-4253-92f7d90e8df0fb2c/29bf80f1-1cb6-46b7-afc761119341447f/open%20fractures.pdf
2. NICE. Quality Statement 3: Open Fractures. March 2018. Cited 15/6/2020. Available from: https://www.nice.org.uk/guidance/qs166/chapter/Quality-statement-3-Open-fractures

Government of Western Australia
Department of Health
Institute for Health Leadership

AMU Tetris

Dr Marc Waugh, Royal Perth Hospital, EMHS

The improvement process

AMU Tetris was an eight-week project in collaboration with the East Metropolitan's Data and Digital Innovation (DDI) Department and Telstra Purple. It used Agile Methodology to create a digital journey board for the RPH AMU. The team was co-located in DDI at RPH and used weekly sprints to create workable software in a short period of time. As the product owner, I was responsible for stakeholder engagement and for development and refinement of the team's backlog.

Project outcomes

By the end of the project, AMU Tetris was a working application drawing live data from existing systems. Further work still needs to be done to ensure successful adoption of the program. This is being done by the rest of the AMU Tetris team who have continued on with the project.

The Tetris Team

- Anna Rajander – Project Manager
- Marc Waugh – Product Owner
- Dan Laidlow – Developer
- Ben Lowry – Developer
- Luke De Carlo – Developer
- David Martin – Developer
- Gian Lorenzetto – Developer
- Mike Northall - Developer
- Kalpesh Sanghavi – Data Scientist
- Morgan Murray – Designer
- Phil Delalande – Designer

Project Aim

To develop a digital journey board for the Royal Perth Hospital (RPH) Acute Medical Unit (AMU).

Rationale

Staff in the RPH AMU work in silos and communication between these groups is limited. There is no program that all staff use. The journey board is an attempt to surface information available to different staff in a central location to augment communication and ensure high quality patient care.

Much of this information is data drawn from other digital systems that could be pushed to a digital journey board. A digital board would update automatically and more regularly, thereby decreasing the amount of unsatisfying, laborious work for AMU staff, whilst also reducing human error.

Improvement team members

Supervisors:

Service improvement supervisor: Katherine Birkett

Executive sponsor: Dr Sumit Sinha-Roy

Government of Western Australia
Department of Health
Institute for Health Leadership

bioLOGIC
BEST PRACTICE MANAGEMENT OF PSORIASIS PATIENTS ON BIOLOGICS

Medical Service Improvement Program
Lead • Improve • Transform

bioLOGIC

Dr Aaron Frederiks, RPH, EMHS

The improvement process:

The patient journey was process mapped by stakeholders from when the decision was made to start a biologic to the start of the second reapplication for a biologic. There were two clusters of issues that arose – the first was around the application documents being posted to Tasmania and the second was around the rebooking process. Following this, an audit was carried out, which found 55% of files had evidence of script delays, 25% had evidence of late bookings and 40% had evidence of early bookings. It was also found that there was some variation in audited files around the approach to infection screening and immunisation. When root causes were explored, the stakeholders found that no systems were in place for any of the problem questions explored.

Project outcomes:

The stakeholders generated three solutions.

(1) The first was to use the Health Professional Online Services (HPOS) portal to lodge application documents with PBS, in order to address the problem of script delays.

(2) The second was to provide the patient with a best-practice 'Standard Letter' on initiation of the biologic, acting as an 'aide memoir' to the patient, dermatologist and GP by setting out the dosing schedule and pertinent information regarding vaccinations and infection management.

(3) The third was creating an electronic database to be administered by a biologics nurse in order to have a centralised repository of information, including PASI scores and previous treatments, and including a built-in visit calculator to allow the biologics nurse to track and ensure that patients were not being rebooked too early or too late.

The first two of the solutions have been implemented by the team with great success and positive feedback to date.

Recommendations:

The Dermatology team is continuing to work with the RPH Executive around optimising dermatology nursing resources. Additional dermatology nurse FTE would allow the implementation of the third solution and facilitate best-practice management and follow up of biologics patients.

Project Aims:

(1) Reduce the amount of time psoriasis patients are without supply of scripts for biologics.

(2) Optimise resources for clinicians and patients around vaccinations and infection screening at initiation and with continuing therapy.

Rationale:

RPH dermatology manages approximately 50 psoriasis patients on biologics.

Prescription is tightly controlled by the Pharmaceutical Benefits Scheme (PBS). If scripts are delayed or lost in the post either to or from the Complex Drugs Programs office in Tasmania, it can lead to delays in treatment potentially resulting in morbidity to the patient.

The mechanism of biologics in modulating the immune system can lead to increased risks of infections. This mandates attention to patients' vaccination history and infection screening at initiation and with continuing therapy.

Improvement team members:

Clinical supervisor: Dr Graham Thom, HOD Dermatology

Service improvement supervisor: Katherine Birkett

Government of Western Australia
Department of Health
Institute for Health Leadership

CLOTWATCH
RPH SPINAL SERVICE

Medical Service Improvement Program
Lead • Improve • Transform

CLOTWATCH: Venous thromboembolism (VTE) prophylaxis review and documentation in RPH Spinal Service patients

Dr Andreana Manifold, Royal Perth Hospital, EMHS

The improvement process

The CLOTWATCH project employed the DMAIC methodology for clinical service redesign. A multidisciplinary process-mapping session outlined the process for assessment, review and documentation of spinal patients' VTE prophylaxis from admission to discharge. Data was collected through a file audit, staff survey, and data on after-hours requests for review of VTE prophylaxis plans. Root cause analysis focused on the reasons behind inconsistency in documentation on admission and daily review. Solutions proposed by the Spinal Service Team during a solutions-generation session informed the development of the Spinal Service's VTE Prophylaxis Policy and accompanying measures outlined below.

Project outcomes

- Development of the Spinal Service's VTE Prophylaxis Policy.
- Amendment to, and official hospital recognition of, the Spinal Service's Anticoagulation Form, to highlight the documented daily VTE prophylaxis plan while anticoagulation is withheld.
- Consultant supervision of daily VTE prophylaxis review and documentation after hours and on weekends.
- Clear pathways to empower nursing and physiotherapy staff to escalate concerns about VTE prophylaxis and post-surgery mobilisation.
- Development of a patient discharge handout incorporating advice on physiotherapy and VTE prophylaxis management.
- Development of a Spinal Service VTE prophylaxis poster for display on the RPH Spinal Ward.
- Amendment to information provided on orientation to Spinal Service Junior Doctors and Registrars, and to Orthopaedic Registrars covering spinal patients after hours.

Recommendations

The above solutions are in various stages of implementation. An Action Plan has been developed that has allocated leads to each outcome. Outcomes will be audited in the future to assess the success and utility of the implemented solutions.

Project Aim

Ensure clear processes for the daily assessment, review, documentation and escalation pathways for VTE prophylaxis in RPH spinal patients.

Rationale

Patients with traumatic spinal injury, especially those with new-onset paraplegia or quadriplegia, have a very high risk of developing VTE. In spinal patients, VTEs are frequently asymptomatic and in the event of a pulmonary embolism, can be fatal. However, chemical VTE prophylaxis is also associated with a high risk of peri-spinal bleeding complications, potentially worsening a neurologic injury. To effectively manage this risk, the RPH Spinal Service is seeking to ensure it has in place best-practice processes for the daily review and documentation of VTE prophylaxis in spinal patients, complemented by clear escalation pathways for nursing and physiotherapy staff.

Improvement team members

Supervisors:

Mr Peter Woodland (Clinical Supervisor)

Katherine Birkett (MSI Supervisor)

Supporters:

A/Prof George Eskander (Executive Sponsor)

Esther Dawkins (Institute for Health Leadership)

Government of Western Australia
Department of Health
Institute for Health Leadership

Transfusion Confusion: Tackling Wrong Blood In Tube and 'Doctor Unknown' Errors

Dr Malindi Haggett, SCGH, North Metro Health Service

The improvement process

Transfusion Confusion' was conducted as a 10-week Medical Service Improvement term from August to October 2020. The DMAIC methodology was used to address two related issues:

1. Group and screen specimen collection errors; and
2. 'Doctor Unknown' errors, where the doctor requesting pathology test cannot be accurately identified.

Three areas were identified for improvement; variability in the specimen collection process, education and pathology request form design.

Project outcomes

- Development of an education program on correct specimen collection practices to be delivered to CAT RMOs at SCGH
- Redesign of ward-based PathWest request forms to:
  - encourage doctors to include their provider number
  - prompt collectors to sign, date and time group and hold specimens
  - prompt collectors to fill in the collector's declaration
- Ongoing access to the PathWest database to monitor errors
- Recommendations for further improvements

Recommendations

- Ongoing review of specimen collection and Doctor unknown errors at SCGH
- Ongoing training and education regarding best practice for specimen collection
- Provision of targeted and timely feedback to staff involved in errors
- Additional PathWest Phlebotomy rounds
- Further exploration of:
  - confirmatory group and screen sample policies
  - two-person verification polices for patient identification
  - electronic patient identification and sample labelling systems

Project Aim

To reduce the number of WBIT errors for group and screen samples at SCGH **and** to ensure that doctors who request a pathology test can be easily identified by the laboratory.

Rationale

Failure to correctly identify patients and correctly label 'Group and Screen' samples compromises patient safety. The most severe result of this failure is a patient receiving an incompatible blood component which can result in death.

Failure to identify the doctor who requests an investigation hinders investigations into specimen collection errors and prevents individualised feedback for doctors when errors do occur.

Improvement team members

Supervisors:
Rebecca McLean
Sue Darby
Russi Travlos

Supporters:
Deepan Krishnasivam
Tor Ercleve

Government of Western Australia
Department of Health
Institute for Health Leadership

PROJECT JAWS

Project JAWs: Junior Doctor Administrative Workflows

Dr Richard O'Halloran, Sir Charles Gairdner Hospital

The improvement process

Analysis of 245 end-of-term surveys from junior doctors showed strong associations between rotations with higher administrative workloads and poorer experience and greater overtime worked. Detailed surveys and follow-up interviews were then conducted with 19 junior doctors across three departments to assess how time was spent and identify specific rewarding and unrewarding tasks that could warrant intervention. Solution mapping of the discharge process (identified as a key administrative burden for junior doctors) was undertaken to develop potential solutions, with further analysis and stakeholder engagement to ascertain their suitability and facilitate rollout

Project outcomes

- Better uptake of a pre-existing hospital policy to use procedure reports (instead of also writing discharge summaries) for uncomplicated same day or overnight elective procedures, to minimise junior doctor admin and improve patient safety
- Proposed hospital-wide standardisation of how follow-up outpatient appointments are booked for patients at the time of discharge
- Applying the mapped junior doctor activities to help develop a pilot multidisciplinary team (SNAP) to assist departments with junior doctor shortages, as part of continuity planning for workforce constraints

Recommendations

Key challenges remain to improving junior doctor morale. This includes: better non-medical support in performing roles, including expanding the role of clinical pharmacy and clerical staff; improving electronic systems such as NaCS (for discharge summaries), investigation requests and a future electronic medical record; and promoting programs that increase rewarding roles, particularly education and patient contact.

Project Aim

Analyse the extent and types of administrative tasks performed by junior doctors and develop solutions for particularly time-consuming or unrewarding tasks.

Rationale

Improving job satisfaction and morale amongst junior doctors is a key priority at Sir Charles Gairdner Hospital. Poor morale is costly to recruitment and retention, with reputational loss and poorer clinical performance. The administrative burden of JMOs is a key contributing factor to morale. High administrative burdens can limit junior doctor professional development and wellbeing, and create inefficiencies which would exacerbate any potential workforce shortages from COVID-19

Improvement team members

Supervisors:

Dr Fiona Lake

Dr Deepan Krishnasivam

Russi Travlos

Government of Western Australia
Department of Health
Institute for Health Leadership

Tracking the Pulse: Streamlining ED Short-Stay Unit admissions for low risk chest pain patients

Dr Isabelle Kamenou
St John of God Midland Public and Private Hospitals

The improvement process

The DMAIC methodology was used during this project. A process mapping session with 16 key stakeholders was held to draw out the journey from patient triage to discharge from ESSO. Key impediments identified were delayed paperwork completion, variation in timing of ESSO bed request with respect to troponin result and delayed review for discharge in ESSO. Data was collected in order to quantify these issues and in particular, mean time from final troponin result to discharge was identified as 2 hours. Root cause analysis revealed that access to senior doctors, communication between staff and leadership structure in ESSO were major contributors to this delay. This was validated by further data collection and staff surveys.

Project outcomes

Primary outcomes:

- Establishment of multi-disciplinary working group for the development of Criteria Led Discharges in ESSO.
- Initiation of changes to Acute Coronary Syndrome pathway and proforma in the Emergency Department.

Secondary outcomes:

- Improvement of transparency of patient journey in ED and ESSO.
- Provision of access for results checking to nursing colleagues.
- Development of system for easy recognition of ESSO doctors by nursing staff.

Recommendations

- Analysis of prolonged length of stay in ESSO in evening hours.
- Development of task management tool for ESSO doctor.
- Development of criteria led discharges for other diagnoses admitted to ESSO e.g. renal colic, gastroenteritis.
- Development of rapid access chest pain clinic for follow up.

Project Aim

To streamline the admission of low risk chest pain patients to ESSO (ED Short-Stay and Observation Unit) and reduce their length of stay.

Rationale

Chest pain is a common presentation to the Emergency Department (ED). 3172 patients presented to Midland Hospital ED with chest pain from July – December 2019 and 13% (417 patients) were admitted to ESSO for further investigations for ACS (acute coronary syndrome). Their average combined length of stay in ED and ESSO was 10.2 hours, which is twice the recommended of the hospital's low risk chest pain pathway. There are impediments at multiple points in the patient journey, including delayed handover to ESSO, governance issues and delayed discharge, thus reducing the availability of acute assessment beds and negatively impacting patient satisfaction.

Improvement team members:

Dr Sayanta Jana (executive sponsor)

Dr Michele Genevieve & Dr Matt Summerscales (ED Heads of Depart.)

Dr Nicole Ghedina

Dr Melissa Maluda

Dr Anita Smith

Greg Hallett & Mieke Steele

Esther Dawkins

Government of Western Australia
Department of Health
Institute for Health Leadership

EVERY DROP COUNTS: Blood Transfusion in Elective Gastrointestinal Surgeries

Dr Ashwita Vanga, St John of God Midland Public and Private Hospitals, East Metropolitan Health Service

The improvement process

The service improvement process closely followed DMAIC Methodology. A process mapping session was undertaken to map the patient journey from the time of decision made in surgical outpatients to book patient for elective major gastrointestinal (GI) surgery to time of discharge after having the planned procedure. Further data was collected via Staff and Patient surveys. The key issues identified were: delays in intervention, deviation of practice from standards, lack of awareness regarding existing policy among caregivers and lack of specific blood management policy. Root cause analysis session indicated *lack of preoperative haemoglobin optimisation* as the predominant cause of existing incidence of blood transfusions in elective surgical patients. This was validated by the data collected from an audit that showed 3 out of 4 patients receiving blood transfusions after major elective GI surgeries were anaemic before having the surgery and their haemoglobin was not optimised for the procedure. A solution generation session was then held to discuss ideas to achieve two future vision statements i). “All patients undergoing major elective GI surgeries are assessed for anaemia and their haemoglobin is optimised before surgery” and ii). “All caregivers working at Midland hospital involved in the clinical care of elective GI surgical patients are aware of the policy regarding blood transfusion”. The solution recommended to achieve this was to screen patients to identify anaemia early and manage accordingly in the surgical outpatients’ itself.

Project outcomes

Memos are placed in the public and private surgical consult rooms to guide clinicians with perioperative anaemia assessment and management of all major elective GI surgical candidates at the time of booking them for surgery.

Recommendations

1. Patient Blood Management (PBM) policy to be developed specific to SJGMPPH: undertaken by Blood Management Committee.
2. All clinical caregivers involved in the care of elective surgical patients to be made aware of the PBM policy via eLearning modules.

Project Aim

To reduce blood transfusions in elective gastrointestinal (GI) surgical patients.

Rationale

Health RoundTable data depicted 5.4% incidence rate of at least one whole red blood cell transfusion during the episode of care for a planned major gastrointestinal procedure (2019 Apr – 2020 Mar) as compared to 0.0% incidence rates in peer hospitals in WA. Thus, there is a deviation of clinical practice from the Standard 7 ‘Blood Management Standard’. There is an opportunity to reduce the incidence of blood transfusion leading to reduced length of stay, enhanced patient satisfaction and financial gains for the organisation.

Improvement team members

Supervisors:

Dr Mary Theophilus,
Clinical Supervisor

Dr Melissa Maluda,
Service improvement supervisor

Supporters:

Dr Sayanta Jana - Executive Sponsor; Dr Kevin Chan - Consultant Dept of Anaesthesia; Katrina Parker - Clinical Data Management Coordinator; Stuart Blinman - Theatre NUM; Vince Mazoue - Surgical ward NUM; Ann-Maree Atkinson - Pre-Admission Clinic NUM; Greg Hallett - Project Officer; Esther Dawkins - Senior Project Officer, Institute for Health Leadership.

Government of Western Australia
Department of Health
Institute for Health Leadership

Project Known Entity

Dr James Charleson, Bunbury Regional Hospital, WA Country Health Service

The improvement process

Using the DMAIC methodology, it was found that:

- 24% of patients did not have their regular medications charted on day 0 or day 1 of admission.
- 50% of patients had at least one medication error on the first round of prescription.
- 20% of patients had their first medical entry by another team in response to clinical deterioration with no admission note to assist them.

Validated root cause analysis with key stakeholders identified two primary areas for improvement. Firstly, improvement in the flow of information from private pre-operative assessment to the hospital and secondly, expansion of the hospital's pre-admission service to allow pre-operative clerking and optimisation of patients.

Project outcomes

- A process for receiving and entering private correspondence to the hospital's digital medical record has been implemented.
- A list of upcoming elective patients is now available to the ward doctors 24 hours in advance.
- Patients are now clerked by surgical team post-operatively.
- Pre-admission information regarding medications is standardised.
- Business case submitted and approved to establish a complex care pre-admission clinic with nursing, pharmacy and RMO.

Recommendations

- Ongoing audit and review of the standard of care post establishment of clinic.
- Ongoing review of pre-admission clinic to establish the potential benefit to other surgical specialties at the hospital.

Project Aim

To improve the standard of the post-operative ward care provided to the elective, multi-day admissions under general surgery at Bunbury Regional Hospital.

Rationale

Patients scheduled for elective surgery at Bunbury Regional Hospital undergo preoperative medical assessment by their surgeons and anaesthetists privately. Therefore in the case of planned overnight and multi-day admissions nothing is known of a patient's medical status when they arrive on the ward. The post-operative period is a time of significantly increased medical risk to patients, especially those in this age group undergoing major bowel surgery.

Improvement team members

Supervisors:

Dr Jacinta Cover - Clinical Supervisor

Dr Paul Rowe – Clinical Supervisor

Executive Sponsor:

Dr Allison Johns – Executive Sponsor

Supporters:

Jo Moore, Rosalyn Kidd, Naomi Lillywhite, Helen Smith, Wendy Doyle, Cristina Taucean, Natasha Schumann.

Government of Western Australia
Department of Health
Institute for Health Leadership

Improving clinical assessment and handover of miscarriage in ED

Medical Service Improvement Program
Lead • Improve • Transform

Improving clinical assessment and handover of miscarriage in ED

Dr Brittney Wicksteed, Albany Health Campus, WACHS

The improvement process

The project followed DMAIC methodology as outlined by the Clinical Service Redesign Handbook. After developing a project charter, a process mapping session was held with key stakeholders to map the journey of a patient presenting to ED, to their outpatient follow up. Data was collected and analysed which demonstrated that investigations were not standardised, 38% of women discharged home from ED did not have a discharge summary completed and only 4% were documented to have been given written patient information. A survey of staff indicated that finding equipment and guidelines or printed material were issues in the department. A root cause analysis session revealed the root causes for the issues included WebPAS application issues, lack of knowledge about resources available/where to find them and low confidence/clinical experience. Key stakeholders participated in a solutions generation session which resulted in many simple but effective solutions.

Project outcomes

- Placement of key guidelines, printed patient handouts and support brochures in new O&G trolley in ED which also contains key equipment
- Request for streamlining autopopulation of clinical notes from WebPAS to NACS completed, update to include discharge information expected end of 2020
- Creation of a visual reference guide to prompt management of early pregnancy bleeding in ED
- Writing and submitting a miscarriage information sheet to be added to the ED Discharge Sheets on HealthPoint
- Incorporation of an education session for ED clinicians around early pregnancy bleeding and miscarriage management, practicing speculum exams, breaking bad news and point of care ultrasound
- Creation of a new referral pathway to O&G with a simple proforma

Recommendations

Ideally education sessions should be an annual part of ED teaching. The ED Discharge Sheets on HealthPoint should be regularly reviewed and culturally diverse materials included.

Project Aim

To improve clinical assessment and handover of miscarriage in ED as well as provision of patient-specific information to the patient on discharge from ED.

Rationale

Albany Health Campus is a large regional hospital that sees approximately 2 patients presenting with bleeding in pregnancy <20 weeks gestation per week. Bleeding in early pregnancy is common, and threatened miscarriage has important implications for the continuing pregnancy. Miscarriage is unfortunately also common, with 20% of pregnancies ending before 20 weeks gestation. Miscarriage can have significant psychological effects and remains a stigmatised topic in the community.

Improvement team members

Supervisors:

Dr Russell Young

Ms Esther Dawkins

Supporters:

Dr Guruparan Sritharan

Dr Carly Roxburgh

Dr Jem Xu

Dr Vinita Rajadurai

Government of Western Australia
Department of Health
Institute for Health Leadership

Cellulitis Easier

Cellulitis Easier

Dr Paul Mario, Geraldton Regional Hospital

The improvement process

A process mapping was carried out with 8 participants mapping out the patient's journey from the ED to admission to Hospital in the Home (HITH). A number of issues were raised during the session concentrated on difficulties on referrals over weekends and afterhours. Data was gathered to check how often this occurred and a survey on ED doctors was done to explore where the challenges of referrals were.

Root cause analysis revealed a referral pathway is in place. Lack of a dedicated medical registrar taking care of HITH including during afterhours and weekends came up as a major challenge to a smooth pathway of referrals.

Project outcomes

- Updated HITH flow chart with Key contacts added
- HITH Pack/Tray – All HITH admission documents put together in a pack and placed on a specific Tray in ED
- HITH Registrar/RMO Orientation manual/email.
- ED Doctors HITH orientation manual/email.
- Interdepartmental HITH Quarterly Meetings addressing new challenges
- Staff education on HITH

Recommendations

A dedicated HITH registrar is key to having a smooth referral process to HITH from ED. Lack thereof has led to task shifting to ED and the HITH team taking up some of the roles.

Identification of a HITH Champion advocating for utilisation of Hospital in the Home services and ensuring best practice is maintained.

Project Aim

To simplify the process of referral of patients with cellulitis from the Emergency Department to Hospital in the home.

Rationale

The Emergency Department accounts for 30% of patients referred to Hospital in the Home (HITH) at Geraldton Regional Hospital. 60% of ED Doctors surveyed described lack of clarity on the process of referring patients to HITH with only 40% having referred eligible patients afterhours or during weekends.

This project was an opportunity to interrogate causes of perceived underutilisation of the HITH service by ED. A clear, simple and efficient process of referral of patients with cellulitis from ED to HITH is attainable.

Improvement team members

Katie Templeman

Jaclyn Chin

Divine Verbe

Esther Dawkins

Supporters

HITH Team

Emergency Department

This document can be made available in alternative formats on request for a person with a disability.