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

2017 MSI Annual

Service improvement project summaries

18 December 2017

health.wa.gov.au

2017 Medical Service Improvement Program

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

A total of 130 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.

The 2017 program involved 22 junior doctor participants across a total of 10 participating hospitals, as listed below:

- Armadale
- Fiona Stanley
- Fremantle
- King Edward Memorial
- North Metropolitan Mental Health Service
- Princess Margaret
- Rockingham
- Royal Perth
- Graylands
- Sir Charles Gairdner

A list of the 2017 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 and Clinical Support Directorate provide additional project support and also assistance with data analysis as required.

This document provides one-page summaries for the 22 service improvement projects completed during 2017. 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.

This document also includes a one-page Leadership Journey overview for each RMO who did the program in 2017. 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

Visit the Medical Service Improvement Program website:
http://ww2.health.wa.gov.au/Articles/J_M/Medical-Service-Improvement-Program

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

2016 Program participants

Participant		Health Site	Hospital	Rotation No.	Service improvement project
Melanie	Yeoh	Child and Adolescent Health Service	PMH	2	ASAP project: Appropriate Surgical Antimicrobial Prophylaxis
Jonathon	Stewart	East Metropolitan Health Service	AHS	2	Improving the Clinical Management of Agitated Patients in the ED
Peter	Nguyen		AHS	3	Streamlining And Management Of Surgical Admissions (SAMOSA)
Arusha	Miocevich		AHS	4	A Butterfly Effect: reviewing inpatient pathology services
Nicholas	Ward		RPH	3	COMMIT: Reducing Day of Surgery Elective Theatre Cancellations
Sarah	Mason		RPH	4	HOOP Project: Haematology Organised Outpatient Planning
Emily	Jasper	North Metropolitan Health Service	OPH	2	PEACE Project: Prevention and Early Active Care for delirium in the Elderly
Karen	Darbyshire		NMHS MH	4	EPIC Project: Engaging Patients in Collaborative Practice
Paul	Shoemack		SCGH	2	The PIE Project: Psychiatric Inpatient Emergency flow
Murray	Di Loreto		SCGH	3	Not in Vein: Improving the Management and Removal of Peripheral Vascular Catheters
Jasmin	Korbl		SCGH	4	Project Pow Wow: Improving Clinical Debriefing at SCGH
Kelly	O'Donovan		WNHS	2	Optimising Preoperative Group and Hold Testing for Elective Obstetric and Gynaecology Surgery
Jade	Hollingworth		WNHS	3	The Journey to Genetics - redesigning the appointment process
Kath	Stead		WNHS	4	The SOUND Project: Striving for Outstanding Ultrasound Requests
Paige	Bavich	South Metropolitan Health Service	FSH	2	The PAIN Project: Providing Analgesia in Need - FSH Emergency Department
Heather	Patterson		FSH	3	Better MAMAS: MFAU Admissions Management & Streamlining
Matthew	Palladino		FSH	3	PAGER Project: Paging and Amcom: Generating and Enabling Response
Kiran	Narula		FSH	4	Streamlining Theatre equipment and consumable Resources (STAR)
Devaki	Wallooppillai		FH	2	Uber transfers: Improving transfers from FSH to FH in General Medicine
Anthony	Ng		FH	4	The F.L.O.W Project: Fixing Length-of-stay on the Orthopaedic Ward
Samuel	Ognenis		RGH	2	iPeAR: improving Antibiotic Prescribing at Rockingham
Emma	Higgisson		RGH	4	The RAPID Project – Rapid Access for Patient's Imminent Delivery

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ASAP Project: Appropriate Surgical Antimicrobial Prophylaxis

Dr Melanie Yeoh, Princess Margaret Hospital for Children (PMH), Child and Adolescent Health Service

The improvement process

Staff surveys and a live manual audit were performed to identify issues relating to surgical antimicrobial prophylaxis. A patient journey was mapped from admission to knife-to-skin. The results demonstrated variations regarding antibiotic usage within surgical departments, poor adherence to guidelines, incorrect timing of antibiotic administration, and inaccurate documentation of antibiotic administration on electronic and written records. A root cause analysis session revealed that lack of awareness of local guidelines, late recognition of patients requiring prophylactic antibiotics, and the variability among surgeons' preferences contributed to these issues.

Project outcomes

- Improved knowledge of surgical nursing staff regarding appropriate duration of surgical prophylaxis
- Increased awareness of local antimicrobial guidelines
- Improved staff communication via formalising the pre-operative huddle
- Streamlining surgical antibiotic prophylaxis guidelines
- Easier accessibility of local antimicrobial guidelines
- Improved the process of identifying patients requiring surgical prophylaxis, with the aim to improve timing of antibiotic administration
- Encourage discussions at a surgical departmental level to reach a consensus for prophylaxis

Recommendations

- Formal preoperative huddle – discussion about antibiotic prophylaxis for all patients on the list, attendance of decision maker recommended
- Consistency throughout surgical specialties will facilitate anaesthetists administering antibiotics in a timely manner
- Increased engagement between antimicrobial stewardship team and surgical teams
- Mobile device application for local guidelines
- Lanyard printouts of local guidelines

Project aim:

To investigate antibiotic prescribing habits for surgical prophylaxis at PMH, with the aim to reduce inappropriate usage.

Rationale:

As surgical prophylaxis is included in both the NSQHC Standards and Quality Care statements, it is a focus of hospital accreditation and an important aspect of safe surgery.

The recent National Antimicrobial Prescribing Survey (NAPS) revealed that surgical prophylaxis is inappropriate in 40% of causes. As there is limited paediatric data available, this project is a good opportunity to identify paediatric specific issues that may play a role in prescribing.

Improvement team members

Supervisors:

Dr Chris Blyth
(Clinical Supervisor)

Karen Ziegelaar (Service Improvement Supervisor)

Supporters:

ChAMP team

Surgical services

Anaesthetic department

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Dr Melanie Yeoh– My Leadership Journey

Profile

Current Hospital

Princess Margaret Hospital for Children

Area project completed in

Surgical antimicrobial prophalaxis

Personal Leadership Journey

As project lead for the ASAP project, I was able to manage competing interests; studying for my RACP Clinical examination and completing this project.
I learnt to prioritise time-critical issues and focus on efficiency, which resulted in better time management and the ability to juggle multiple tasks.

The highlight of my time during this project was the “analyse and solution generation” session that was attended by health professionals from different backgrounds. Coordinating this meeting was challenging, however, the involvement and desire to improve demonstrated by the attendees was inspiring.

Future career aspirations

I plan to continue pursuing my career in paediatric medicine with progression to Advanced Training in 2018, and specialisation in Paediatric Oncology.

This program has introduced me to the world of Health Leadership, and I am acutely aware that this is a necessary skill for doctors as they progress through their careers.

Hints and tips for future participants

- Have belief that the project you are working on can make a difference, no matter how big or small. It may range from bringing awareness to an issue, to changing hospital policies, but it still is an *improvement* to the health care system. Change is difficult.
- Go ahead and apply for MSI! There is no better opportunity to learn a different skill set and to challenge yourself!

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Improving the Clinical Management of Agitated Patients in the ED

Dr Jonathon Stewart, Armadale Health Service

The improvement process

This MSI project followed the lean six sigma (DMAIC) framework. Voice of the staff was formally captured through an ongoing survey sent to all ED staff, receiving over 50 responses and detailed comments. Comments were analysed for recurrent themes and categorised. A process mapping session was held with representatives from ED, mental health, and security and mapped the pathway of extremely and moderately agitated patients in the ED. 1 years worth of EDIS and security data was pulled and analysed. This informed a root cause analysis and a solutions generation session with key stakeholders. Ideas from this session, and all solutions put forward by staff in survey comments were aggregated. Solutions were then prioritised and actioned.

Project outcomes

Approval for over $8000 in funding for ED environmental design and distraction therapy.

Development of

- Comprehensive Agitation Management Guidelines
- ED Specific Agitation and Arousal Chart
- Agitation Clinical Escalation (ACE) Team
- Patient Management Plan Guidelines
- Challenging Behaviour Decision Making Guide

Contributed to the culture of service improvement that exists at AH.

Provided opportunity for staff to safely express their thoughts and attitudes towards current management of agitated patients in the Emergency Department.

Recommendations

I recommend ongoing executive support and clinical governance of solutions as they are implemented and evaluated. In addition to the project outcomes, the project also supports the recommendations regarding

- Hiring of a Drug and Alcohol Nurse
- Change from “0 Tolerance” policy to a “Mutual Respect” policy
- Further evaluation of staff training in managing agitated patients
- Evaluate ways to improve ED Doctor access to PSOLIS

Project aim:

To improve the clinical management of agitated patients in the emergency department.

Rationale:
The clinical management of agitated patients in the AHS Emergency Department was identified as an important issue by the Armadale executive team through prior work regarding Mental Health in the ED. Up to 90% of emergency department staff will experience some type of violence in their careers. Opportunities include reducing the length of stay of the agitated patients in ED, preventing the progression of agitation to aggression and violence, reducing adverse events, increasing staff confidence and knowledge in managing the agitated patient, and reducing the time until appropriate mental health assessment.

Improvement team members

Supervisors:
Jodi Collier
Lucy Ellis

Supporters:
Shae Seymour
Payal Sawhney
Jacqueline Donnelly
Paul Hill
Jane Husain
Monica Taylor
Ahmed Munib

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Dr Jonathon Stewart – My Leadership Journey

Profile

Current Hospital

- Armadale Health Service

Area project completed in

- Emergency Department

Personal Leadership Journey

Through the medical service improvement program I've come to see that all clinicians and all those involved in healthcare are leaders, and in fact system improvement works best when everyone feels empowered to take an active role in continual improvement. My personal highlights from the program include discussing issues with staff in the Emergency Department then working with executive staff to develop and action solutions.

Future career aspirations

I have an interest in Critical Care Medicine, and also the intersection between emerging technologies, medicine, and healthcare systems. Though I'm uncertain about the specifics of my future career, completing this program has definitely expanded my interest in service design and improvement. In the future I hope to continue to be involved in service improvement and redesign.

Hints and tips for future participants

To anyone interested in (or frustrated by!) clinical systems I would highly recommend you apply do the Medical Service Improvement Program. It's a great and unique opportunity to make a hopefully long lasting difference to an area of health. To those about to start their project I would say that you may have more autonomy in your days than you're used to with clinical work. The DMAIC framework provides a useful methodology to structure your days and weeks. Having executive support for the project is very important, and the right people can make things happen quickly. Healthcare is a complex system, and even more so "behind the scenes", so having someone experienced to help you navigate these complexities is invaluable.

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SAMOSA: Streamlining and Management Of Surgical Admissions

Dr Peter Nguyen – Armadale Hospital, East Metropolitan Health Service

The improvement process

A process mapping session was conducted with 20 participants, representatives from the Emergency Department, Surgical Ward and General Surgery team, mapping the patient journey from time of presentation to Emergency Department, to final disposition, whether that was discharge, admission or transfer to a tertiary site.
Issues raised during this process mapping session can be grouped as uncertainty with governance, unclear communication, inadequate education and decreased access to services at a secondary site. Solutions Generation Sessions were held with key stakeholders to develop solutions targeted at these four groups of issues.

Project outcomes

- Designed a 24 hour General Surgery Model of Care approved by Armadale Executive which encompasses working hours between Sunday night and Friday night ensuring utilisation of pre-existing theatre hours, and the provision of an on-site registrar and on-call consultant. Model of Care to be implemented in February 2018
- Implementation of an education session for ED Juniors led by General Surgery Registrars to improve communication and build a culture of teamwork
- Designed clear communication flows between the ED, General Surgery team, Surgical Ward and Theatre to minimise duplication, ensure transparency in process and better facilitate theatre usage

Recommendations

- Ongoing feedback and audit of theatre utilisation
- Rostering of General Surgery registrars in alignment with consultant theatre sessions

Project Aim

To reduce delays in disposition for General Surgery patients in the Armadale Emergency Department.

Rationale

A retrospective analysis of 12 months of EDIS presentation data demonstrated a median length of stay exceeding four hours for general surgery patients. Furthermore, theatre sessions were being underutilised, and a large proportion of patients were being transferred to tertiary centres for further management.
There is an opportunity to improve utilisation of theatre, decrease transfers and improve adherence to WEAT for general surgery patients.

Improvement team members Supervisors:

- Jo Collier
- Dr Jacqui Donnelly

Supporters:

- Rekha McCarthy
- Lucy Ellis

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Dr Peter Nguyen – My Leadership Journey

Profile

Current Hospital

- Royal Perth Hospital

Area project completed in

- Surgical Admissions

Personal Leadership Journey

I had been involved in a few leadership positions outside of work previously, but had very little insight into the workings of the health services, and what it actually took to enact change in the workplace.
Through the Medical Service Improvement program I've learnt that clear focus and clear communication are key to effective leadership.
One of the highlights of my leadership journey so far is hearing about the other MSI projects at the mid-point presentation, and seeing potential solutions shared amongst the health services. In future I'd love to get involved with Medical Education and utilising online platforms for learning.

Future career aspirations

In the future, I'd like to specialise in Radiology, as I find the diagnostic process interesting and particularly enjoy the collegiate environment in which you work.

The MSI program really allowed me to see the workings of the hospital from a non-clinical perspective, and definitely confirmed my desire to work in a Hospital setting.

Hints and tips for future participants

- Lock in your timelines early, and lock in your meetings as soon as possible. Stakeholders are difficult to pin down and their calendars fill up quickly.
- Ask lots of questions early. There were many times when I was quickly directed to someone who knew exactly what I wanted to know
- Enjoy your weekends!

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"A Butterfly Effect: A Review of Inpatient Pathology Services"

Dr Arusha Miocevich, Armadale Hospital

The improvement process

A comprehensive process mapping session was conducted with 12 participants, mapping the inpatient pathology request process from request to result. It was determined from Path West data that the average sample transport time was 42 minutes, and 39% of pathology requests were made on paper. These statements were analysed in 2 root cause sessions and the following root causes identified: 1. Low number of Chute Canisters 2. Inadequate stocking of Intravenous Cannula Trolleys 3. Computer and Printer request generation delays 4. Poor access to ICM and CPOE Software Programs 5. Add on requests must be handwritten. The printing of paper results was also identified as a significant and wasteful process.

Project outcomes

The final proposed solutions strategy consisted of 5 main arms:

1. **Standardisation of the IV Trolleys:** Governance accepted by Safety and Quality Unit for implementation.
2. **Governance of the Chute Canisters:** The Corporate Operations Department has accepted governance for the number, location and maintenance of the canisters.
3. **Cessation of printing of paper pathology results:** This solution has been proposed to MAC (the Medical Advisory Committee) for completion of a specific form (FRM- 187) by each Head of Department.
4. **Labelling of the CPOE printers:** The labelling of CPOE printers has been attended to by the CPOE specialist.
5. **Increase Access to ICM /CPOE:** This request has been made to Medical Administration who has advised that they can increase ICM access via repeat submission of eHFN-30. Governance of increasing CPOE access is undetermined.

Recommendations

- Further engagement with Path West regarding viability of phone Add On tests
- Allocation of canisters to the phlebotomy IV Trolleys
- Establishment of phlebotomy ward collection priority
- Removal of ward request boxes for routine phlebotomy
- Allow ongoing Handwritten Pathology Requests for ward collection of samples by clinicians
- Engagement with existing projects for reviewing test necessity
- Development of Armadale site procedure for results acknowledgment
- Streamlined approach for flagging computers and printers for repair and review

Project aim:

To review the inpatient pathology process at Armadale Hospital over a period of 10 weeks, and identify and reduce inefficiencies.

Rationale:

The 'Armadale General Medicine Service Improvement Admit to Ward Project' established that '70 % of discharges from the acute medical unit occur after 12pm' with one possible reason for delayed discharges being that medical teams were "waiting for results".

Scope:

Inpatient pathology: excluding ED, ICU, outpatients. Results necessity and results acknowledgment out of scope.

Improvement team members

Supervisors:

Jodi Collier

Jaqueline Donnelly

David Blythe

Supporters:

Frank Mancini

Bridget De Bil

Claire Davies

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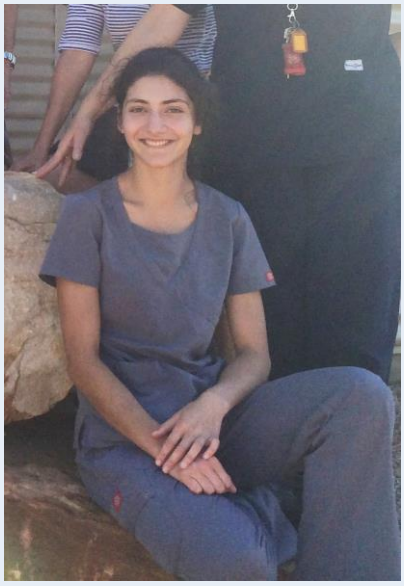
Dr Arusha Miocevich – My Leadership Journey

Profile



Current Hospital

- Armadale Health Campus

Area project completed in

- Inpatient Pathology Services

Personal Leadership Journey

I am 25 year old, PGY2 graduate from UWA. I have participated in the Sir Charles Court and Amanda Young leadership programs previously and a successful scholarship applicant to the Academy of Emerging Leaders in patient safety 2018.
From participation in the MSI program 2017, I have had the opportunity to significantly revaluate my communication skills and my problem solving approaches. This for me has directly translated to improved clinical care for my patients, in the form of how I go about implementing change.
A key learning point from workshops attended through the MSI program I found extremely challenging and humbling was:

1) It doesn't matter how "right" you are if you fail to influence change, and this is a reflection of your skills as a leader and communicator

I am hoping to have ongoing participation through the institute of health leadership, and will be continuing to participate and manage further service improvement projects concurrently with my clinical practice.

Future career aspirations

I consider service improvement in healthcare, a critical component of any area of clinical practice I work in. I love working with patients, and have a strong interest in Public and Global Health. I am aiming to establish strong general foundation for whatever opportunities arise in the future for a potential career in rural and remote practice.

Hints and tips for future participants

Be as organised as you can, set yourself deadlines and stick to them. Talk to everybody, you will be amazed what you learn.
If you are a passionate highly motivated individual, who wants to change the system but don't know how, this is the programme for you.

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COMMIT

COMMIT: Reducing Day of Surgery Elective Theatre Cancellations

Dr Nicholas Ward, Royal Perth Hospital

The improvement process

A medical service improvement project was performed at Royal Perth Hospital, utilising the DMAIC method with an aim to reduce the amount of elective day of surgery cancellations. The project began by establishing the process involved in getting a patient to their elective surgery.
Within the initial stages it became clear that there were two distinct pathways for elective cases, the traditional waitlist pathway and the Fast Track pathway, for both orthopaedic and plastic surgery patients. Data was collected around issues within the two distinct pathways, that were established in the process mapping session. Significant inconsistencies were found in the Fast Track process. Primarily in how the patients are booked for their fast track process, but also variations in roles within the process. A root cause analysis session was conducted addressing these issues. This identified the root-cause; that there was currently no process or pathway for booking Fast Track patients for theatre. Within the elective process no root cause was identified, however poor communication was established as the main contributing factor. The out of date surgical admission booklet, containing incorrect contact numbers for the hospital, was a key contributor to this poor communication. From this we established a new pathway for booking patients for Fast Track theatre, created solutions for it success whilst also raising the issues with the surgical admission booklet with executives

Project outcomes

- Establishment of a new “Unplanned Elective” pathway to replace the previous Fast Track pathway
- Unified agreement on roles within pathway and the key steps that are essential for its success
- Education material developed which was used to educate everyone involved, whilst also handed over for future education
- People responsible for future education established and education material handed over
- Posters developed to encourage patients to attend to the clinic clerks prior to leaving clinic
- Development of lanyards and posters as resources for non-medical and medical staff

Recommendations for the future

Due to time constraints the surgical admission handbook issues could not be addressed, however this was brought up with the executives. The job of establishing a new booklet was handed over to the director of clinical services.

Project aim:

To reduce the day of surgery elective theatre cancellations

Rationale:
Day of surgery cancellations is one of the six components of theatre efficiency.

1. Theatre Utilisation
2. Theatre Start time *
3. Sessions that finish early
4. Sessions that finish late
5. Day of surgery cancellations
6. Average turnaround time between case

All of these factors contribute to the effectiveness and efficiency of how a hospitals theatres run. For the last financial year RPH sits at 7.91% of same day cancellations out of total elective cases.

Improvement team members

Supervisors:

Dr Shaun Obrien

Dr Grant Waterer

Ms Katherine Birkett

Supporters:

Institute for Health Leadership


Royal Perth Hospital

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Haematology Organised Outpatient Planning

Haematology Organised Outpatient Planning (HOOP)

Dr Sarah Mason, Royal Perth Hospital, East Metro Health Service

The improvement process summary

Define: Shadowing stakeholders in haematology inpatients, outpatients and MDU. Conducted a process mapping session with 12 stakeholders. Plan for capturing the 'patient voice' and informal discussions with patients about issues. This further helped us define the scope. Process identified as 'haematology cancer patient admitted to haematology inpatient ward 10C for a planned cycle of chemotherapy and the steps that need to be taken for a complete follow up plan being made and communicated to the patient'.

Measure: 10 patient interviews ranging from 30-90 mins (lead by patient with a few prompting questions focusing around specific experiences, issues and things that went well); real time audit of follow up organisation process and manual audit of 30 discharge summaries to identify if key information was communicated in written documentation.

4 key areas of issues were identified from the define and measure stages:

1) Lack of key information given to the patient on discharge
2) Patients who were discharged at the weekend often weren't receiving any discharge or follow up information
3) Process for booking outpatient follow up was long and convoluted
4) Patients weren't having blood tests prior to their next booked admission (meaning some admitted patients were clinically unsuitable for the planned course of chemotherapy)

Analysis and project outcomes: A root cause analysis session was conducted with 16 key stakeholders. This information was added to root causes identified in discussions with patients. Root causes corresponding to the issues above were:

1) We don't have standardised written information that we give to every patient. Outcomes:
    a. New discharge letter template
    b. Information pack now given to patient on day 1 of admission with information on medical condition, precautions, support lines
    c. Contact card updated after discussion with staff about who is the most appropriate contact person
    d. Out of hours triage form updated with MR number and escalation process now in place. Used in hours too to provide consistency
2) No prompt to discuss discharges in advance. Outcome:
    a. MDT sticker with focus on early discharge planning
3) JMO's had multiple methods of booking outpatient follow up, with the process being duplicated in email and phone due to no departmental process documented and unclear roles and responsibilities in MDU and haematology. Outcomes:
    a. Updated haematology orientation manual
    b. Updated referral process from MDU (from their redesign team)
4) No process for patients to have blood tests prior to next admission
    a. Clinic appt prior to re-admission with consultant / nurse practitioner follow up of blood results

Effect of change so far

Improved communication with patients and between staff members with defined roles and responsibilities. Development of a culture of improvement.

Project aim:

To improve the follow up process for haematology cancer patients and staff

Rationale:

Previous follow up arranging process was inefficient, involved multiple duplicated steps, and resulted in dissatisfaction from patients and staff. Evidenced by:

- Follow up (mainly admin) booking process taking up to 1hr 23mins (done by RMO)
- Poor patient satisfaction (8/10 patients finding their experience of follow up to be poor or acceptable)
- Patients missing key information in their discharge information meaning that they were confused about follow up and appointments were accidentally missed
- Disorganised process of checking blood results and planning for MDU appointment meant that patients were only informed if they had abnormal blood results. This increased the likelihood of clinical incidents and reduced patient confidence in treating team

Improvement team members

Supervisors:

Dr Michael Leahy (clinical)

Katherine Birkett (non-clinical)

Supporters:

Melita Cirillo

Sung-Kai Chiu

…and the rest of the haematology team

MDU redesign team -

Ying Choo and Kay Griffiths

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Haematology Organised Outpatient Planning

Dr Sarah Mason – My Leadership Journey

Profile

Current Hospital

- Royal Perth Hospital

Area project completed in

- Haematology inpatient and outpatient department at Royal Perth Hospital. With close links to Medical Day Unit Re-design team

Personal Leadership Journey

- Prior to taking part in the MSI term, I had developed leadership skills through various clinical rotations but had struggled with knowing how to improve on weaknesses and build strengths further. I found the personal development sessions on leadership particularly useful; this gave me the chance to analyse my current behaviour and provide me with resources to make positive change.
- Taking the lead as 'Project Manager' gave me the power to show and improve my organisation and presentation skills. I really enjoyed working with patients and having more time to look into their experiences and how we could use their voice to make long-lasting and meaningful change. Team working and negotiation were also integral, especially in the relatively short timeframe of the term.

Future career aspirations

- I plan to apply for ophthalmology specialty training this year
- After completing this MSI rotation I would definitely consider working in management in the future. I'd like to find out more about splitting clinical duties with managerial work
- This term has allowed me to learn the practicalities of CSR and steps required in the designing and implementation of change. I want to take this forward in my clinical practise and will look out for opportunities in future placements.

Hints and tips for future participants

- Emails are a wonderful form of communication but only to arrange meetings and to follow meetings up with a recap of actions. Face-to-face discussions are really the only way to get anything done and are integral in building longstanding relationships.
- Don't be shy, introduce yourself to everyone. Also, don't underestimate your own skills. Years of medical school and experience in hospital make you an important member of any team and this is the perfect opportunity to hone your leadership skills.

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PEACE Project

Prevention and Early Active Care for delirium in the Elderly

Dr Emily Jasper, Osborne Park Hospital, NMHS

The improvement process

The DMAIC methodology was utilised in the PEACE project, starting with a Process Mapping session to understand the current process at OPH. This was followed by data collection regarding Delirium at OPH in 2016 from three sources; the Department of Health, a file audit and staff survey. Issues identified from this included; lack of formalised screening, delay from recognition of high risk patient to preventative measures and a delay from diagnosis to treatment measures. The root cause analysis session revealed these issues arose from; unclear screening tool, lack of awareness about the importance of a cognitive screen, lack of time at admission, lack of accountability and lack of staff awareness about signs of delirium, preventative measures and treatment.

Project outcomes

Screening:

- Adoption of 4-AT into nursing admission form, to ensure all geriatric patients are screened for delirium at time of admission.
- 4-AT available in sticker format to be entered into patient's notes if repeat screen required during admission for an acute change in behaviour.

Ward based intervention:

- Development of a delirium risk assessment tool, with a focus on delirium prevention. To be trialled for a three month period on Ward 3 at OPH.
- Selection of seven Delirium Nursing Champions (two per ward and one night champion) to continue focus on delirium.

Family involvement:

- Formation of a Delirium Education Brochure for distribution to families (focus on interventions and post-discharge follow up).

Education:

- Tailored education sessions on delirium to be delivered to nurses, timed with implementation of 4-AT screening. A delirium education session will also be included in the junior doctor education series.
- Nursing Practice Guideline for Delirium Management approved.

Recommendations

- Continued focus on delirium at OPH; ongoing presence of delirium in education program and input from Delirium Champions.
- Re-audit of Ward 3 post trial of Delirium Risk Assessment Tool. If successful, tool to be expanded to Ward 4/5 at OPH.
- Re-audit of initial measure outcomes one year post implementation of screening tool at OPH.

Project aim:
Reduce time from detection of delirium or identification of high-risk patient for delirium to implementation of an intervention by clinical staff.
Secondary Outcomes:
-Reduce the incidence of delirium and associated length of stay
-Reduce rate of complications known to be associated with delirium
-Educate and involve patients and their families in delirium care

Rationale: Delirium will be included in the 2nd edition of the National Safety and Quality Health Service Standard (NSQHS), meaning delirium screening, prevention and management will soon form part of accreditation standards. Osborne Park Hospital is the major geriatric rehabilitation hospital for the NMHS, providing an appropriate setting to develop their delirium diagnostic process to meet the requirements of the new Clinical Care Standard. With up to 30% of geriatric patients demonstrating features of delirium at some point during their admission, there is a need for an increased focus on screening, preventative actions and early treatment for these patients, to improve their safety and minimise distress to families.

Improvement team members

Supervisors:

Dr Kien Chan - Clinical supervisor
Jenny Francis - Service improvement supervisor

Executive Sponsors:
Dr Michael Levitt
Marie Slater

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Dr Emily Jasper – My Leadership Journey

Profile

Current Hospital

- Sir Charles Gairdner Hospital (Primary Employer)
- Osborne Park Hospital (Medical Service Improvement site)

Area project completed in

- Geriatrics - Delirium

Personal Leadership Journey

I have always been interested in leadership and have previously taken on opportunities with the SCGH RMO society and with my medical student society during my university years. I also feel very strongly that purely by being a doctor, one takes on a leadership role, hence I think it's important to continually strive to improve one's leadership skills.
I feel through taking on the role as a Project Leader with the Medical Service Improvement project, this has developed my organisation, communication and negotiation skills. I am sure I will continue to apply these leadership skills when I make the transition to a Registrar later this year and eventually one day as a Consultant.

Future career aspirations

I have always had a strong interest in Geriatrics and am currently in my second year of Basic Physician Training. Through completing my medical service improvement project within the field of Geriatrics, it has definitely enhanced my passion for geriatrics but in particular has developed my specific interest in cognitive impairment. After completing my Basic Training exams, I hope to gain a position as a dual trainee in Geriatrics and Palliative Care.
I am very grateful to Osborne Park Hospital, who have offered to sponsor me to attend the Australasian Delirium Association Masterclass in Sydney later this year, which will be an incredible Professional Development Opportunity.

Hints and tips for future participants

If you are already passionate about a certain area in medicine, I would recommend finding a project within that field. It will definitely increase your passion and enjoyment for the project and likely lead you to exciting professional development opportunities.
I would highly recommend applying to be part of the Medical Service Improvement Program as it allows you to experience a very different side of Medicine and appreciate the complexity of the hospital structure. I feel it also helps further develop the analytical side of the brain, which with no doubt will be beneficial for one's return to clinical medicine also.

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EPIC Project: Engaging Patients in Collaborative Practice

Dr Darbyshire, Graylands Hospital, North Metropolitan Mental Health Service

The improvement process

- Mapping of Care Planning Process to identify issues and barriers to change and Root Cause Analysis.
- Clarification of legal requirements.
- Collaborative ideas generating for process improvement & Greenfields Mapping for ideal process.
- Production of collaborative care planning pathway addressing issues and path forward with Pilot study and support team in place.

Project outcomes

- Excellent stakeholder participation, co-operation and motivation
- Barriers to collaborative care planning were identified as:
  1. Changes to the process historically to present.
  2. Lack of clarity of intent and uncertainty over which documents are required and no clear concise instruction as to how to complete the required documentation.

Recommendations

1. Implement the Acute Mental Health Collaborative Care Plan process identified.
2. Implement a multidisciplinary monitoring and review culture to support implementation of the process changes thereby influencing a change of focus of the multidisciplinary team meeting.
3. Pilot the process with implementation of a supportive team to guide staff on the educational and quality control/assurance components of collaborative care planning and database entry skills.
4. Executive policy to be simplified and clarified as to the documentation requirement for patients admitted to Graylands acute wards, to ensure process and intent are clear and manageable for all.

Project aim:

To improve collaborative care planning in the acute mental health setting

Rationale:

Evidence indicates that patient's involved in their own health journey display better health outcomes than those that are not engaged. Collaborative care planning is recommended in patients admitted with acute mental health illness but difficulties have been encountered with successful implementation at Graylands Hospital.

Improvement team members
Supervisors:
Kirsty Snelgrove
Dr Samir Heble
Dr Viki Pascu

Supporters:
Robert Miller
Ruth Hill
Linus Boon/Dom Zolezzi
Hazel McLean
Danielle Orifici/Diane Redken
Ann Brown
Patricia Fonceca/Andrew Miller
Robyn Vogel
Janelle McCrow
Rory Deng
Tony Jonikis

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Dr Darbyshire – My Leadership Journey

Profile

Current Hospital

- Sir Charles Gairdner Hospital

Area project completed in

- North Metropolitan Mental Health Service, Graylands

Personal Leadership Journey

The most striking aspect of my experience with the MSI project was that prior to commencing the project I was concerned that my placement was in a hospital I had never worked in and in an area of health care I had little experience in.

This turned out to be extremely beneficial because I arrived with a new set of eyes, no preconceived ideas and no previous relationship challenges. I would support placement of participants out of their base hospital as a positive experience for MSI projects.

I was extremely interested in the Root Cause Analysis process and the clarity this process shed on the issues causing the problem, which were not the issues I had predicted. This was an exciting finding in the project and really guided and simplified finding solutions to the problem.

The major leadership learning point for me was the need for clarity of intent in order for people to be able to do their job effectively. Clarity of intent can easily get lost in layers of bureaucracy and policy documentation and simplification of process is essential for effective work practice because if people are not clear upon what they need to do it will not get done and even the most enthusiastic and willing people can lose heart and direction.

It is upon us as leaders to provide clarity of purpose and intent to help people work effectively in their role.

This MSI experience was extremely beneficial for both my working and my private life. I would thoroughly recommend the experience to colleagues as it extends out of scientific/analytical thinking and provides a new dimension to working in health care.

Future career aspirations

General Medical Registrar working between tertiary Western Australian Hospitals and rural and remote regions to improve patient journeys for those requiring medical care away from home.

Junior Doctor advocate for more flexible and supportive working environment.

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Department of **Health**
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Psychiatric Inpatient Emergency flow

Dr Paul Shoemack, Sir Charles Gairdner Hospital

The improvement process

Staff from psychiatry, ED and administration helped map the journey of a psychiatric presentation through ED to discharge or transfer. Delays included intoxication, ambiguity in the psychiatric referral process, time completing paperwork, rostering and transport delays. Issues included transport officers only working 1200-2200 and only two working, limited access to PSOLIS for medical staff and out of catchment patients. A root cause analysis session identified transport delays, waiting for psychiatric assessment, ambiguity of referral, no bed available and patient condition as the major sources of delay / inefficiency. Solution sessions brainstormed key strategies aimed at reducing length of stay, expediting transport and improving standard of care.

Project outcomes

- Guidelines for medical clearance and referral to psychiatry
- Enhanced training for triage, nursing and medical staff
- Improved communication between ED, clerical and psychiatry staff along with improved morale
- Implementation of CARPS for logging transport requests
- Improved collaboration between PLNs and clerical staff
- Changing MHOA admission criteria to improve patient flow
- Minimising duplication of paperwork

Recommendations

- Finalisation of the medical assessment and referral guidelines, to be implemented with accompanying education for medical staff
- The use of CARPS to log booking requests for transport – ongoing auditing required to analyse improvements in efficiency
- Further discussions regarding MHOA admission criteria for high risk patients
- Awaiting approval of assertive patient flow recommendations which will improve flow and reduce LOS in ED
- Reappraisal of the current mental health patient transport contract with SJA in 2018 in favour of internal site-specific transport

Project aim:

To reduce length of stay for psychiatric patients in ED and improve standard of care.

Rationale:

Psychiatric patients have a vastly prolonged length of stay in ED compared to non-psychiatric patients. Waiting for transport, bed request process and ambiguity of referral / medical clearance have been identified as areas of delay. This directly impacts patient care and KPI targets. An opportunity exists to improve the flow and safety of psychiatric patients through ED.

Improvement team members

Supervisors:

Clinical supervisor: Dr Anne O'Sullivan

Service improvement supervisor:

Jennifer Francis

Supporters:

Dr Meredith Arcus, Dr Mark McAndrew, Dr Peter Allely, Fiona Bowden, Russi Travlos

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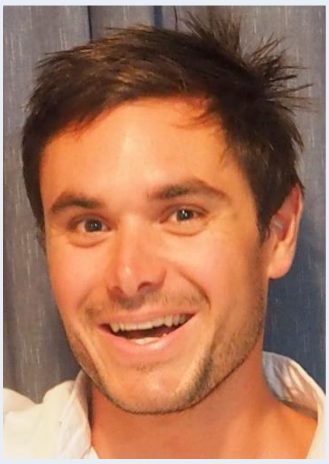
Dr Paul Shoemack – My Leadership Journey

Profile



Current Hospital

- Sir Charles Gairdner Hospital

Area project completed in

- Psychiatry / Emergency

Personal Leadership Journey

The service improvement program was an amazing opportunity for me to conduct clinical research in a supportive, well – structured environment. I have always had an interest in medical research and asking questions regarding the most efficient way a system can be run.

The interface between Emergency and Psychiatry is an extremely challenging one, that is constantly evolving and developing as we understand more about the difficult logistical processes at play. My project improved the flow of these patients through emergency, and further developed dialogue between the Medical and Psychiatry staff which is an integral part of achieving the best outcomes for the patient and the health system.

Future career aspirations

I will be working in Broome for WACHS in 2018, with further aspirations to complete the ACRRM program with Anaesthetics as a sub-specialty. As many of my friends will attest, I love the outdoors and I am a huge advocate of work-life balance. Working as a rural generalist is an incredibly rewarding job, and my experience so far in the North-West has put me in good stead to further develop my skills.

Hints and tips for future participants

Try not to think about the big picture too much, sometimes fixing the small things will lead to outcomes you never dreamed of!

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Choosing Wisely Australia

NOT IN VEIN
IMPROVING THE MANAGEMENT AND REMOVAL OF PERIPHERAL VASCULAR CATHETERS

Medical Service Improvement Program
Lead • Improve • Transform

Not in Vein: Improving the management and removal of cannulas

Dr Murray Di Loreto, North Metropolitan Health Service

The improvement process

Initial stages of the process involved mapping the journey of a cannula with a group of nurses and doctors. Issues within the process included poor communication of cannula plan between medical and nursing staff, and a large amount of variation in when cannula assessment was performed and documented.

A manual audit of the majority of G block wards was undertaken. 113 patients were included in the audit, and I observed the appearance of each cannula, the documented assessment (PIVAS score), and determined if the cannula was clinically necessary. Roughly one quarter of cannulas were in situ without a clinical indication, and about half of cannulas did not have complete assessment documentation each nursing shift. The appearance and dressing of each cannula was excellent, with the majority having clean, intact dressings, extension tubing attached, and PIVAS scores <2.

Root causes analysis and solution sessions with over sixty total personnel were conducted to improve these aspects of cannula management and removal. Root causes included poor medical staff attention to cannulas during ward rounds, lack of triggers to remember PVC assessment and documentation, and no established pathway for patients who are difficult and time consuming to cannulate. There was an underlying conception that cannulas are a benign extension of the patient, as opposed to a potentially deadly invasive device. Key stakeholders were engaged in each stage of the improvement process, including the infection control CNS, ward CNS, junior doctors, ward nurses, IV Access Nurses and a SCGH IV working group.

Project outcomes

Educational and promotional material was created to increase awareness of the dangers of peripheral vascular catheters. This included posters and an A4 information handout. Insertion documentation is hoped to improve through reminder posters attached to IV trolleys. PVS assessment charts will also be found in the IV trolley to make insertion documentation easier.

The PVC assessment chart was changed so that it now prompts nurses to consider the clinical indication of the cannula, and empowers them to remove it using clinical criteria provided on the form. A cannula documentation reminder has also been added to the nursing care plan as a quality control measure. An invasive device board is to be trialled – visual magnets were created to provide a snapshot of common invasive devices that a patient has in situ. This will act as a reminder and communication tool during ward rounds and nursing handover. Adherence to the PVC policy will be measured through regular audits that occur four times a year at SCGH.

Recommendations

Project recommendations focus on reducing the reluctance to remove cannulas from patients who are difficult to cannulate. They include:

- Increasing the amount of IV competent nursing staff at SCGH
- Creating a clear escalation plan for patients who are difficult to cannulate, with IVC policy mandating referral to the duty anaesthetist or IV access nurses
- Funding a dedicated ward intravascular access nurse to assist in cannulation and provide education on correct technique/management

Project aim:

To decrease the amount of cannula-related blood stream infections by improving the management and removal of cannulas at SCGH

Rationale:

SCGH had the highest rate of staph aureus blood stream infections out of thirty major Australian hospitals in 2015-2016. Prevention of these infections is achieved through adherence to the SCGH *peripheral vascular catheter policy*. The aseptic insertion of cannulas is a crucial element of infection control; however, this aspect had recently been studied. Hence, I chose to identify how we can improve the management and removal of cannulas at SCGH.

Improvement team members

Supervisors:

Jenny Francis

Dr James Rippey

Bobby Kemp

Supporters:

Dr Meredith Arcus

Dr Sumit Sinha-Roy

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Murray Di Loreto – My Leadership Journey

Profile

Current Hospital

Sir Charles Gairdner Hospital

Area project completed in

Improving management and removal of peripheral vascular catheters

Personal Leadership Journey

Over the last three and half years working at SCGH, there have been many times where I have wondered why we persist with some very inefficient processes. The frustration and perceived lack of control over these processes motivated me to apply for the medical service improvement term. I have now learnt a methodology for identifying and measuring problems, as well as engaging with staff to implement solutions to solve them.

You very quickly learn that influencing people to create change is not easy. People want to change but are very reluctant to change their daily practice. One of the most important lessons I have learnt through this term is to always have a plan when you are trying to influence someone to change. People won't change because you ask them nicely, they will change because you present the change as something that will benefit them! Take some time to figure out what that is for each person you approach with your solutions.

The bureaucracy I encountered this term was exhausting and there were times where I thought the barriers to change insurmountable. I developed a strong admiration for the staff in the innovations and improvement unit as they have faced these challenges for many years and that gave me inspiration to keep going.

Future career aspirations

Radiologist

Hints and tips for future participants

- Identify staff interested in your project and use their expertise and influence to help create change
- Attempt to negotiate obstacles by yourself initially, however if you feel the barrier is unfair talk to your executive sponsor promptly
- Keep in contact with your fellow MSIP RMOs, you'll become great friends!

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Improving Clinical Debriefing at SCGH

Dr Jasmin Korbl, SCGH, NMHS

The improvement process

A tailored six- sigma approach was applied to this project. During the diagnostic phase it became apparent that there was no usual process for clinical debriefing. Clinical debriefing was being done on a very ad hoc basis depending on the consultant or team leader at the time.

In the analytical phase, a survey was distributed to all JMOs to gain an understanding of the importance of clinical debriefing to them, the situations in which JMOs would like to debrief and the benefits of debriefing. JMOs identified that whilst 90% of them would like to formally debrief after stressful events at work, there are no consistent forums, frameworks or facilitators in order for this to take place. Barriers to clinical debriefing also included confidentiality, logistics, a culture of not talking about issues and time constraints.

In a future state mapping session, JMOs voiced the desire for regular, scheduled debriefs during office hours. There was an overwhelming wish for this to be a safe space for open and honest dialogue with a trained facilitator.

After widespread consultation, a thorough review of the literature and benchmarking with other health services, emergency services and industry leaders a clinical debriefing and peer support package was created.

Project outcomes

The following products were developed as part of the “Project Pow Wow” package

1. A framework for clinical debriefing:
   - Monthly facilitated Pow Wow Sessions
   - A structured outline for the Pow Wow Sessions
   - Schedule for 2018 (and pilot in Nov 2017)
2. A model for clinical debriefing
3. List of Departmental Wellbeing Advocates
4. Escalation Pathway for JMOs seeking further support
5. Communication strategy and marketing templates

Recommendations

PGME have accepted governance for the ongoing sustainability of the program. The project was presented to the medical executive committee at SCGH and received unanimous endorsement. The SCGH RMO Soc has committed to funding the program for 2018 and we have applied for endorsement from the Doctor Health Advisory Service.

Project aim:

To Improve Access to Clinical Debriefing at SCGH.

Secondary Outcomes:
To initiate a culture change concerning the importance of clinical debriefing and JMO wellbeing.

Rationale:
At least one third of doctors are experiencing burnout and the spotlight on JMO welfare has been further emphasised following the tragic suicides of several junior doctors this year.

A myriad of factors contribute to junior doctor welfare however the recent AMA Hospital Health Check highlighted clinical debriefing as one significant area for improvement at SCGH.

Improvement team members

Supervisors:

Clinical supervisor: Dr Nick Martin

Service improvement supervisor: Jennifer Francis

Supporters:

Dr Sumit Sinha-Roy

Dr Hadley Markus

Executive Sponsors:

Dr Meredith Arcus

Dr Karen Murphy

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

Dr Jasmin Korbl – My Leadership Journey

Profile

Current Hospital

- Sir Charles Gairdner Hospital

Area project completed in

- Junior doctor wellbeing (PGME/Innovation Unit)

Personal Leadership Journey

My leadership journey began as a teenager when I was a team leader at my local youth movement and it continued throughout my undergraduate studies when I lead “The March of The Living”, a heritage tour of holocaust memorial sites in Poland.

As a junior doctor I have continued leadership roles as the PMCWA JMO forum Education representative and most recently as a member of the AMA DIT Welfare Subcommittee.

This MSI project has further developed my leadership qualities by encouraging me to recognise my own strengths and weaknesses as a leader. Through the MSI Program masterclasses I have refined my communication style, improved my negotiation skills and learnt the importance of being reflective and dynamic.

As doctors we are often presumed leaders, however I believe that leadership is not innate and requires experience and learnt skills. I hope to continue to apply, foster and develop myself as a leader in order to become a better clinician.

Future career aspirations

I have always been interested in Dermatology however at this early stage of my career my interests are vast and are usually shaped by the inspirational people that I meet. Over the next 12 months I am hoping to gain experience in many different specialties, participate in research and perhaps undertake further study.

I would also like to continue my work on improving junior doctor welfare. Whilst this project has been an excellent platform for raising the profile of junior doctor health, there is still lots of work to do to change the culture of medicine.

Hints and tips for future participants

- Chose a project that motivates you to foster change in others
- Keep the scope small but ideas bright and far reaching
- “We are here to put a dent in the universe. Otherwise, why even be here?”- Steve Jobs

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The G&H Project

Medical Service Improvement Program
Lead • Improve • Transform

The G&H Project – Optimising preoperative Group and Hold (G&H) testing for elective Obstetric and Gynaecology Surgery

Dr Kelly O'Donovan, King Edward Memorial Hospital, Women and Newborn Health Service

The improvement process

A process mapping session was conducted and a number of aspects were measured including: auditing late G&H data, auditing G&H request forms, patient and staff surveys, and analysis of 9 years of transfusion data for elective surgery at KEMH**.**

The following key issues were identified which guided focus areas for the root cause analysis and solution generation:

- Poor staff awareness of transfusion medicine guidelines, with 87% of survey responders not aware of the MSBOS
- Confusion over the timing and place of G&H sample collection
- Poorly defined roles and responsibilities for G&H test ordering and following-up of results prior to surgery
- Poorly completed G&H request forms impacts sample processing time
- Increasing numbers of late G&H tests
- Low rates of transfusion for the KEMH patient cohort for low-risk (particularly laparoscopic) surgery

Project outcomes

- An **updated and reformatted Maximum Surgical Blood Order Schedule** (MSBOS), based on 9 years of hospital transfusion data and using an evidence-based algorithm
  - Approved and published on the hospital intra/internet with changed metadata to improve keyword search relevancy, as well as laminated and displayed in clinics
- **Transfusion data** has been published and distributed to all staff and posters and emails have been circulated to advise staff of the roll-out
- **A G&H prompt included in the Waitlist Inclusion Form** (booking form for theatre) has been submitted to the Forms Subcommittee for approval
- A G&H request form will be **removed from theatre booking packs** to discourage signing the form as a default option
- A process has been implemented for **ongoing auditing of late G&H data** and distributing outcomes to clinical staff
- Processes for **routine follow-up of G&H** tests are being implemented
- Commitment from clinical staff departmental educators for **ongoing education** related to transfusion medicine processes

These solutions will ensure improved and consistent decision-making around pre-operative blood ordering, as well as communication with patients. There will also be a greater awareness amongst clinical staff about the impacts of late and unnecessary tests.

Recommendations

Embedding solutions relating to education around transfusion medicine practices and consistent follow-up of preoperative tests is required.

Ongoing monitoring of the implemented solutions is required to ensure patient safety and effective management and use of blood products, in accordance with the National Safety and Quality Health Service Standard 7.

The redesign process used in this project can be used to focus on optimising other pre-operative blood tests, and to create or update an MSBOS in other institutions**.**

Project aim:
To optimise G&H testing for elective O&G surgery to reduce the number of **unnecessary** and **late** pre-operative tests being ordered

Rationale:
There was an opportunity to reduce the numbers of late and unnecessary G&H tests. This was expected to minimise theatre delays on the day of surgery, improve theatre workflows, reduce pressure on laboratory staff and provide financial benefits to the hospital with reductions in costs for unnecessary routine G&H testing.

A G&H sample is considered 'late' if it is received by the KEMH Laboratory after 15:30hrs the day prior to surgery. A 2016 audit done by PathWest identified 140 cases of late requests for G&H; double the cases noted in 2015.

Orders for pre-operative G&H are guided by the hospital's Maximum Surgical Blood Order Schedule (MSBOS) which recommends red cell requests for surgical procedures.

Improvement team members

Supervisors:

Clinical supervisor: Dr Roger Browning (Anaesthetic Consultant)

Service improvement supervisor: Ms Brodene Straw

Executive Sponsor: Dr Allison Johns

Supporters:

KEMH Laboratory Scientists: Madaleine Gallagher-Swan, Bernie Ingleby, Chris Arnold

Gynaecology Liaison Nurse: Jen Howe

Data analyst RPH: Kevin Trentino

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Dr Kelly O'Donovan– My Leadership Journey

Profile

Current Hospital:

- King Edward Memorial Hospital

Area project completed in:

- Anaesthetics/ Pre-operative care – G&H tests and blood ordering for elective surgery

Personal Leadership Journey

My leadership journey started at high school when I was head girl of my boarding school. I then held several leadership roles at university; mainly through my residential college and through the university global health club. These roles were different and somewhat easier than undertaking the medical service improvement (MSI) project. The process of service improvement and project management is an unfamiliar process for a junior doctor, made challenging by difficulties in stakeholder engagement, and complex governance systems and bureaucracy to navigate.

A particularly memorable workshop was one run by Andrea Lloyd where we utilised the Life Styles Inventory to map our personal leadership styles. My map was mostly 'green' showing traits of approval-seeking and being dependent. I think that this is partly a reflection on one's role as a junior doctor, requiring supervision. It allowed reflection on a tangible representation of personal attributes and gave some clear goals and objectives on how to become more 'blue'; the desired colour on the spectrum.

Future career aspirations

I am hoping to pursue a career in Obstetrics and Gynaecology, and to one day be a consultant that can contribute to or supervise quality improvement projects, as a top down approach is often key to effective change.

I have a particular interest in medical education and feel that many of the skills developed through this program will be beneficial in pursing this interest. Particularly, improved skills in facilitating sessions and workshops, in giving presentations, in influencing key stakeholders and through practiced collaboration efforts.

Hints and tips for future participants

Identify key people and make sure you have a face-to-face conversation with them at an early stage in the project. Email is not always the best way.

Don't be too much of a perfectionist and don't take push-backs or set-backs personally. It is a messy system but it can be a fun journey and extremely rewarding!

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The SOUND Project
Striving for Outstanding Ultrasound Requests

The SOUND Project – Striving for Outstanding Ultrasound Requests

Dr Katherine Stead, King Edward Memorial Hospital, WNHS

The improvement process

A process mapping session identified issues, delays and variations in the current ultrasound request process. Measurements were obtained via an audit of the ultrasound request forms, a time in motion study in the Ultrasound Department, a staff survey and a patient survey.
The following issues were identified which guided focus for root cause analysis and solution generation:

- 95% of the audited request forms were filled out incompletely
- 61% of staff were unaware they were able to look up outpatient ultrasound appointments on MediWeb
- At least 15 calls per day to the Ultrasound Department enquiring about patient appointments
- There were up to 7 different methods that staff used to submit ultrasound requests to the Ultrasound Department
- In 5 days, there were 5 patients with duplicate appointments made in MFAU

Project outcomes

- A revision to the ultrasound request form that is easier to complete with adequate information for the Ultrasound Department
- Introduction of a standardised submission box that is identical in the antenatal clinic, MFAU and inpatient wards
- Introduction of Radiology Information System into MFAU, to achieve consistency with the booking process used by the Ultrasound Department
- Promotion of the use of MediWeb to check outpatient imaging appointments
- Introduction of a ‘daily list’ of inpatient ultrasound bookings on the inpatient wards
- Introduction of a ‘ultrasound completed’ stamp for insertion into the inpatient notes on completion of a scan
- Provision of education via medical and midwifery orientation, quarterly feedback sessions and distribution of a “cheat sheet” communicating these changes

These solutions will reduce variability in processes and therefore in patient care.

Recommendations

Ongoing monitoring and evaluating is required to ensure compliance to the solutions. Recommendations outside the scope of the project:

- Installation of electronic journey boards on the ward with a column dedicated to imaging
- Electronic ultrasound request forms
- Having a sonographer present in every antenatal clinic

Project aim: To ensure ultrasound request forms received by the Ultrasound Department are adequately completed and appropriate. To reduce the duplicate appointments made in the Maternal Fetal Assessment Unit (MFAU).

Rationale: Radiology request forms are an essential form of communication between the clinician requesting the scan and the team scanning the patient and reporting the findings. An opportunity was presented to improve the current process. An audit conducted found that 95% of 105 ultrasound request forms were incompletely filled out. A time in motion study demonstrated five duplicate appointments were made in MFAU in a five day period.

By improving these systems, it was expected that there would be benefits for staff, patients and the organisation as a whole.

Improvement team members

Clinical Supervisor: Professor Dickinson
Project Support: Michelle Pedretti
Service Improvement Supervisor: Brodene Straw
Supporters:
Ronita Wheeler (Ultrasound Department Office Manager)
Jacinta Heddle (Ultrasound Department Booking Clerk)
Barb Lourey (Acting Midwifery Co-Director)
Cathy Rivers (Acting Clinical Midwife/Nurse Manager)

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The Journey to Genetics

Dr Jade Hollingworth, KEMH, Genetic Services of WA

The Improvement Process

The project commenced by engaging key stakeholders and reviewing the current process of referral triage. The voice of the staff, patient and organisation was gathered in order to gain an understanding of the barriers that existed to improved patient care and to ensure maximal use of current resources could be obtained. Solutions that addressed the critical to quality requirements and implementation of these was both planned and executed.

Project Outcomes

There were 4 main solutions approved by the executive committee:

1. Revision of the referral paperwork including the referral form, the family history questionnaire and the receipt of referral letter
2. Patient and referrer education aiming to provide expectations to the public around the roles of GSWA (Genetic Services of WA) and what the appointment will entail
3. Redesign the triage categories and create a streamlined referral processing pathway
4. Simplify the consent to access family cancer information

All 3 of these solutions were implemented and a review planned for 12 weeks post full implementation. Unfortunately, solution 4 was unable to be fully implemented within the allocated time. A submission was made to Legal and Legislative Services at the Department of Health and advice is awaited.

Recommendations

The following recommendations were made to GSWA at the conclusion of the term:

1. This state-wide service has 2 other divisions that were largely excluded from this project to ensure that the project could be completed to a high standard within the allocated time frame. The implemented solutions, following a rigorous review and adjustment process, would likely be transferable and advantages to the other areas.
2. Ongoing maintenance of the updated website to ensure its impact and relevance remains paramount
3. The completion of a solutions review session with recommended adjustments be made

Project Aim:

To improve the referral processing pathway, aiming to identify areas to improve patient access to the service and avoid delays in the appointing process.

Rationale:

Immediately following the 2013 public announcement of Angelina Jolie's gene fault, there was a significant rise in referrals for genetic counselling/testing. The service was oversaturated with referrals and there was a rise in the number of patents who did not attend their appointment. These issues necessitated a change in the way that referrals were processed., Most patents fail to engage with the service (fail to return their family health questionnaire), creating a significant delay in appointing patients.

Improvement Team Members

Executive Sponsor

Jenny O'Callaghan

Supervisors

Dr Nick Pachter,
Brodene Straw

Supporters

Rebecca D'Souza
IHL Staff
Staff at GSWA:
Genetic Counsellors
Data Manager
Administration staff

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The PAIN Project

- Providing Analgesia In Need-

Dr Paige Bavich, Fiona Stanley Hospital

The improvement process

A mapping session was conducted with key stakeholders to determine the current process of a patient in pain from point of presentation to ED to discharge from ED. Multiple issues were raised with the current process and these clustered around three specific points; accessing prescriptions, accessing medications and a general lack of knowledge regarding ideal pain management practises. These issues were validated with a prospective audit and root cause analysis identified a number of contributing factors. The most significant were deemed to be; medications are difficult to access from triage, there is no consistent protocol for prescribing analgesia and there is a lack of education surrounding pain management.

Project outcomes

- **Medication cupboard at triage.** This contains simple analgesia and prevents delays from having to go into the department to obtain medications.
- **A Nurse Initiated Analgesia policy**. This allows for early prescription and administration of simple analgesia and provides a clear flow-diagram for nursing staff to follow. This prevents delays which come from the patient having to be seen by a doctor to access analgesia.
- **Development of an education session**. This is to be delivered to JMO's every rotation and provides a structured and evidence-based approach to safe prescribing in pain.

Recommendations

- Audit post the implementation of the policy and education session. This should occur at 2 weeks and again at 6 months to determine improvements on time to analgesia, appropriateness of prescriptions and rates of reassessment.
- Junior doctor feedback on education session. To determine effectiveness and usefulness.
- Review of the policy annually, to ensure it remains up to date and in line with best practise.

Project Aim:

To provide timely and appropriate analgesia and ongoing management of pain to patients presenting to the Emergency Department.

Rationale:

Pain is the most common complaint for patients presenting to the Emergency Department (ED) in Australia. Both patients and physicians alike perceive adequate pain management to be a high priority when delivering a quality health service. It is accepted best practise that pain management should include an early initial assessment, timely provision of appropriate analgesia and ongoing reassessment and management of pain. Despite these attitudes towards pain management, it is known to be suboptimal in the ED.

Improvement team members

Supervisors:

Dr Vanessa Clayden

Mr Jon Oldham

Supporters:

Laura Hoskins, Matthew Szabo, Catherine Li, Rowan Ellis, Sarah Everson.

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Better MAMAS: MFAU Admissions Management & Streamlining

Better MAMAS: MFAU Admissions Management & Streamlining

Dr Heather Patterson, Fiona Stanley Hospital

The improvement process

The 'Define' phase entailed close consultation with stakeholders. A staff survey was conducted to confidentially gather staff views on the current MFAU workflow. Process mapping outlined the patient journey from pre arrival phone call to MFAU arrival and discharge/admission.
From a review of the MFAU patient register, it was determined that there were numerous referral sources for women arriving in MFAU, and that the majority of presentations were emergent or unplanned. An obstetric triage scale was applied to assign acuity scores to the cases in the MFAU register, and this demonstrated that there was considerable acuity being reviewed in the unit. This data supported the need for robust systems in MFAU for managing unplanned presentations and for triaging these cases in order to distribute resources according to clinical acuity. Time in motion studies followed 17 patient journeys through MFAU and provided a more detailed insight into the nature of workflow issues that had been raised.
An affinity mapping session with staff was used to identify the underlying root causes for the findings from the measure phase. These were: 1) the need for a standardised triaging system 2) communication issues 3) environmental factors, and 4) inappropriate use of MFAU resources. These formed the focus for solutions generation.

Project outcomes

An obstetric triaging scale has been developed which colour codes patients based on their clinical acuity. Each triage category has time bound targets for clinical review, to ensure care is prioritised based on clinical need. This system also supports communication amongst staff by denoting clinical acuity at a glance.
There is a new larger MFAU whiteboard, and a standardised system for tracking patients through MFAU, including patients in the waiting room and MFAU expects.
Multidisciplinary handovers now occur between midwifery and medical staff twice each day to strengthen communication in the unit.
Use of the whiteboard, triage scale, and clinical handovers have been outlined in an updated MFAU Standard Operating Procedure.
A new MFAU eForm is under development, with the aim of streamlining documentation in the electronic medical record. In addition, the new eForm is to include fields to record the triage category, to generate electronic data for KPI measurement in the future.

Recommendations

A major recommendation from project MAMAS is that there be further analysis of MFAU resources being utilised for routine antenatal clinic appointments. Subsequent to this, it is anticipated that this occurrence can be prevented through strict exclusion criteria for booked MFAU appointments.
For ongoing measurement of performance, it has been recommended that there is periodic audit of triage related performance measures.

Project aim:

To improve the workflows in the FSH Maternal Foetal Assessment Unit to promote the provision of high quality obstetric care in keeping with national standards.

Rationale:

The MFAU at FSH provides care to an increasingly complex case mix, in increasingly large numbers. Clinical incident data related to the unit indicated common themes in the SAC2 and SAC3 incidents, pertaining to communication and triaging in emergency situations.

Improvement team members

Supervisors:

Dr Gargeswari Sunanda

Dr Rae Watson-Jones

Dr Sophie Glenn-Cox

Jonathon Oldham

Supporters:
Dr Sumit Sinha-Roy

Esther Dawkins

Peta Skuthorpe

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Heather Patterson – My Leadership Journey

Current Hospital

- Fiona Stanley Hospital

Area project completed in:

- FSH Maternal Fetal Assessment Unit (MFAU)

Personal Leadership Journey

Having worked as an RMO in MFAU at the beginning of the year, I had the advantage of already having an insight into the unit's workflows, and the benefit of having a good rapport with staff from day one. I found it helped me effect change by being able to use inclusive language and identify myself as 'one of the MFAU team'. It allowed me to demonstrate authenticity in my motivation to improve outcomes in the unit. In addition, I found the change of perspective from working in a clinical role in MFAU to viewing it from the outside during my MSI project to be an eye opening experience.

One of my biggest personal achievements this term was improving my presentation skills. This program helped me out of my comfort zone and as a result I feel far more confident when it comes to public speaking, something I never thought I'd achieve.

Lastly, I have a sense of achievement. Having ownership and responsibility for my own project has been both nerve wracking and immensely rewarding. The flow-on effects have been significant too- staff in the department are continuing to generate their own ideas about how to make MFAU even better. I am so proud to have been a leader in this process.

Future career aspirations

My area of interest in medicine is in critical care, in particular emergency medicine and anaesthetics. I am hoping to gain experience in both of these specialities in the next 12 months and apply for a training position in 2018.

Having seen the impact doctors in training can have in terms of service improvement, I am keen to apply the skills I have learned in this term to whatever field I find myself in. In critical care in particular, clinical services need to be efficient as well as patient safety focused.

Hints and tips for future participants

People are more open to change when suggestions are framed in a positive light- negativity can evoke defensiveness, which is counter-productive. For example, rather than focusing on 'problems to be fixed', promote your suggestions as 'opportunities for growth/improvement / even better workflows'.

Beware the group email – choose your wording carefully as sometimes people can misinterpret your message. Don't write a rushed email at 4pm on a Friday!

Some of your best resources will be the MSI supervisors, and previous and current MSI participants- set up a WhatsApp group, and don't be afraid to share your struggles- often the others are experiencing the same thing and you find solutions together.

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Streamlining Theatre equipment And consumable Resources

Medical Service Improvement Program
Lead • Improve • Transform

STAR: Streamlining theatre equipment & consumable resources

Dr Kiran Narula, Fiona Stanley Hospital, South Metropolitan Health Service

The improvement process

Using the DMAIC process, the STAR project sought to identify waste reduction opportunities and implement systemic changes in a sustainable manner. The key issues raised during the process mapping phase related to lack of regular reporting on waste data and performance targets, absence of recycling culture, and poor understanding of what is recyclable. Root cause analysis showed lack of feedback on recycling effort's progress and of continuing education regarding recyclable waste as factors most contributing to the problem.

Project outcomes

- Established regular reporting of waste outputs by type to operating theatre management.
- Established guidelines for regular communication of theatre waste output and recycling percentages to all theatre staff.
- Developed Champions of Recycling program for implementation by department.
- Identified opportunities for further staff education on recycling.
- Audited use and disposal of surgical consumables in pre-made surgical packs and demonstrated their waste efficiency.
- Developed the 'Optimising Surgical Instrumentation Tray' audit tool designed to identify unused items on surgical instrumentation trays and remove them where safely possible. The tool is most valuable for departments conducting a procedure that has minimal variance between patients and surgeon's technique.

Recommendations

- Recognise the importance of waste reduction as a method of reducing the environmental impact of operating theatres and containing procurement costs.
- A dedicated clinical redesign project is required to progress the multiple flow issues identified within the Central Sterile Supplies Department.

Project aim:

To reduce the environmental impact of operating theatres, whilst remaining cost neutral, by evaluating the use and management of surgical instruments and consumables in the State Burns Unit and Acute Surgical Unit.

Rationale:

With more than 70% of hospital waste being generated from operating theatres globally, there is an opportunity for waste reduction. The majority of this waste comes from disposable surgical equipment and consumables. More than 80% of staff did not demonstrate an awareness of how to use products or dispose of them in a way to reduce waste. Over 90% expressed a desire to improve their waste minimisation practices.

Improvement team members

Supervisors:

Prof Susanne Rea

Prof Fiona Wood

Dr Helen Douglas

Supporters:

Dr Justin Bui

Jon Oldham

Carina Doran

Tracy Fielder

Vicky Warwick

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Dr Kiran Narula – My Leadership Journey

Profile

Current Hospital

- Fiona Stanley Hospital (FSH)

Area project completed in

- Operating Theatres

Personal Leadership Journey

My leadership 'career' begun as a student when I would share my medical school study notes with the classes below me. It sprung into a passion for peer education, and not long after I was leading UWA's medical student society representing their interests and concerns to the Medical Faculty.

As a Junior Medical Officer, in a curiosity to know what was occurring at different hospitals, I availed myself of the PMCWA JMO Forum and AMA(WA)'s Doctor in Training committee. This stoked an inner determination to seek procedural fairness for JMOs. Leading the junior doctors' society at FSH this year, I have advocated for doctors' wellbeing, sought improvements in their ability to access leave and be paid overtime, and worked with hospital executives to deliver hospital wide projects on patient flow.

I enjoy these 'extracurricular' activities just as much as my medicine, and I know they will lead me to as many challenging and interesting – but fun – opportunities.

Future career aspirations

I desire a future career in surgery and aspire to be a plastic surgeon with a (previously expressed) strong interest in medical education. However, this is now rivalled by an equally strong interest in clinical redesign - the MSI program worked its magic! I am particularly interested in how digital aids can transform processes and bring the doctor back to the patient's bedside.

Hints and tips for future participants

Touch base with your supervisor regularly, that is twice or more a week. Articulating your ideas frequently allows them to be supported or challenged so that you develop a firmer concept of the problem. It's also a boon to networking!

A successful project requires good baseline data and an (ideally external) benchmark to compare to. If these are not available from the outset, consider carefully whether the project is feasible within a 10-week timeline.

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Uber Transfers

Dr Devaki Wallooppillai, Fiona Stanley Fremantle Health Service, SMHS

The improvement process

This project was focussed in the Acute and General Medicine Department which has upwards of 74 beds at Fiona Stanley Hospital, where there was a defined need to review and simplify the transfer process. 71.4% of patients arrived after 4pm in the six months ending November 2016, meaning they were admitted by an after-hours team of one junior doctor and one registrar. A process mapping session was conducted at Fiona Stanley and Fremantle Hospital, mapping the patient journey from decision made to transfer to admission at Fremantle Hospital. 47 issues were identified across sites. The main considerations included minimising out-of-hours transfers, high quality handover, minimising duplication of paperwork, simplifying the transfer process and ensuring that patients with tertiary care needs were not transferred. A root cause analysis session and solution mapping session was undertaken which found a multitude of solutions, six of which were chosen for implementation. Although the solutions were created with the Acute and General Medicine department in mind, most of the solutions were applicable across the entire hospital group. The outcomes achieved were listed below.

Project outcomes

- Selected end-of-bed documentation being used across sites trialled May 19, implemented as hospital wide solution 24/7
- Amalgamation of forms across sites, the 40 most commonly used forms for transfer have been co-badged for use August 2017 with old forms being used up as hospital wide solution 24/7
- Policy about transfer criteria, handover, early identification, early discussion with patients and simplified transfer process was created and trialled
- Nursing and Allied Health Admissions being used across sites is being trialled in the Occupational Therapy department
- Listing numbers on the Enterprise bed management, agreed as new standard May 30, 2017
- Further review into ICT and Communications Framework

Recommendations

- Consideration of an electronic medical record system at Fremantle Hospital and across the WA Health System (fully integratable system)
- Development of a hospital communications directory
- Proposed hospital reconfiguration of General and Acute Medicine and Geriatric Medicine should consider the issues brought up in this project.

Project aim:

Safe, effective and efficient transfers to Fremantle Hospital.

Rationale:

Fiona Stanley Hospital is Western Australia's largest tertiary centre. **Fremantle Hospital** is a secondary centre that accepts patients from Fiona Stanley Hospital. Currently, 71% of transfers arrive after 4pm, where a previous service improvement project found that there is an increased rate of clinical incidents and MET team activation as well as a highly duplicated and unclear transfer process. As the Acute and General Medicine Unit is the largest single inpatient unit, it is integral to ensure that this transfer process is improved to ensure the best possible patient care.

Improvement team members

Supervisors:

Executive Sponsor: Dr Hannah Seymour

Clinical Supervisor: Dr Peter Leman

Service Improvement Supervisors: Dr Sophie Glenn-Cox, Dr David Oldham, Ms Kylie Reed

Supporters: Ms Esther Dawkins, Dr Sumit Sinha-Roy, Mr Paul Forden, Ms Nyrene Jackson, Ms Jill Flint, Mr Vincent Saunders-Francis, Ms Kerry Fitzsimons, Ms Carol Simmons, Dr Emma Higgisson, Mr Dominic Deng, Dr Samuel Ognenis

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Department of Health
Institute for Health Leadership

Dr Devaki Wallooppillai – My Leadership Journey

Profile

Current Hospital

- Fiona Stanley Fremantle Hospital Group

Area project completed in

- Acute and General Medicine, however the majority of solutions apply hospital wide

Personal Leadership Journey

As a junior doctor, it is very hard to think that you can make a big difference to the hospital. This project has proven to me the absolute opposite. I have learned a great deal about organising projects, trials, running a meeting with much of the hospital executive and meeting all the people involved in the inter-hospital transfer process.

Future career aspirations

I feel like my career aspirations change often! I am currently planning to pursue a career in General Practice and to jointly undertake a RACMA fellowship, with the eventual aim of being a hospital director or working with the Department of Health. I am currently undertaking a Master of Public Health and Master of Health Management at the University of New South Wales.
This program has definitely cemented my desire in wanting to practice a hybrid of clinical and non-clinical medicine in the future.

Hints and tips for future participants

There are just three words that summarise my experience – go for it! It really opens your eyes to how many people are involved in how any process in a hospital works. It also helps you develop the confidence and skills required for any job in the future and I have already noticed this in my clinical life. The support and discussions with the Institute for Health Leadership (Esther and Sumit) are invaluable and I would encourage everyone to get in contact with them through the project.
Talk rather than email stakeholders early – it is crucial to the success of the project. Don't be afraid and don't take a critical response personally. You know your project best and this will show with time!
Running a project is hard work but is so rewarding when you see what you have done impacts well on people's day.

Talk to past participants – I would be happy to talk with anyone interested!

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Fixing Length-of-stay on the Orthopaedic Ward

Dr Anthony Ng, Fremantle Hospital

The improvement process

A process mapping session was conducted with more than 30 stakeholders mapping patient journey from admission to discharge from hospital.

Issues surrounding patient expectation and delays over the weekend were identified and the extent of the issues was measured. 90% of patients believed they would be in hospital for 5 days or more, and patients admitted to hospital on Thursday or Friday had to have 1-2 days longer length of stay compared to patients earlier in the week.

The root cause analysis found that patient expectations were unknowingly being influenced by the surgical bookings, as surgeons overestimated expected length of stay to ensure adequate space for hospital bookings and these overestimated length-of-stay were being sent to patients.

The clinical pathways for total hip and knee replacements were also noted to have several issues delaying mobilisation and discharges. Stakeholders were engaged in coming up with the solutions for the numerous issues identified.

Project outcomes

Addressing patient expectations:

- Improved booking process from surgeons
- Estimated discharge information in patient handbooks

Addressing clinical pathways:

- Urinary catheterisation not to be inserted unless clinically indicated
- Day zero mobilisation by physios or senior nurses
- Cease posterior hip precautions
- Early discharge from acute pain service to facilitate discharge
- Streamline and change Fiona Stanley Clinical Pathways to reflect changes from Fremantle Clinical Pathways

Other project improvements:

- Increased communication between staff
- Culture of improvement and efficiency
- Increase emphasis and improve Friday handover

Recommendations for the future

- Streamlining pain medications for patients post operatively
- Improving referral process to orthogeriatric services
- Auditing outcomes and length-of-stay post improvements

Project aim:

To reduce length-of-stay of patients with total hip and knee replacements on the orthopaedic ward at Fremantle Hospital.

Rationale:

The length of stay for patients with a hip or knee replacement was 4.5 and 5.1 respectively for the year to June 2017. This was below the average compared to other similar hospitals on the HealthRound table database, which takes complexity into account.

We aim to become one of the leaders in Australia by providing an efficient safe service with reduced admission length-of-stay.

Improvement team members

Supervisors:

Mr Omar Khorshid

Dr Hannah Seymour

Dr David Oldham

Supporters:

Dr Sophie Glenn-Cox

Esther Dawkins

Fremantle staff members

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

Dr Anthony Ng – My Leadership Journey

Profile

Current Hospital

- Fremantle Hospital

Area project completed in

- Fixing Length-of-stay on the Orthopaedic Ward

Personal Leadership Journey

As a junior doctor, it is easy to go with the flow and take on a passive role in the hospital. Medicine can be very hierarchical and it is easier to fall into the trap of only leading when your position demands it.

Seeing clinicians who have demonstrated strong leadership skills have shown me how a variety of styles and influenced the type of leader I wish to be. During the program, the workshops have made me realise that I need to take on a more active role and be more aware of the decisions I am making, even if I make the decision to be passive.

The experience of working through the project, where I was the subject matter expert, has also built up my confidence and ability to deal with staff members and resolve conflicts at all levels in a respectful manner.

I will continue actively utilising my leadership skills in my workplace and honing my ability to positively influence the people around me.

Future career aspirations

I would like to pursue orthopaedics in the future. The service improvement program has equipped me with the ability to review hospital processes and will assist in my capabilities as a clinician.

Hints and tips for future participants

I would advise future participants to find a project that you are passionate about, get ready for a lot of networking and personal development.

Also, once you start to have ideas of likely solutions, start to think of how you will go about implementing them, because implementation can take longer than you expect.

I would advise future JMOs to get in on this opportunity as you get a lot of personal development and the satisfaction of making an improvement in WA's health system.

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Improving Prescribing of Antibiotics at Rockingham (iPeAR)

Dr Samuel Ognenis, Rockingham General Hospital, SMHS

The improvement process

Define phase - Critical to Quality statements:

1. Safe, appropriate antibiotic prescribing, that includes patients in their care.
2. Increased access to information and advice to improve rates of safe, appropriate antibiotic prescribing.
3. Address broader issues of prescriber familiarity and preference for certain antibiotics, stemming from knowledge base and state-wide prescribing culture.

Measure and Analyse phases:

1. Prescriber survey: We produced a survey through SurveyMonkey, distributed across RGH to all prescribers. Our 40 respondents were of varying experience level, and from across the hospital. We were able to identify areas of high-yield for potential interventions. **The highest rated potential interventions included**: more rapid access to Pathwest lab reports, antimicrobial stewardship rounds, access to guidelines on mobile phone, ward pharmacists on ward rounds, education sessions, and feedback on ward/individual practice.

2. National Antimicrobial Prescribing Survey (NAPS)**:** We collected data on specific antibiotic prescribing, based on the national NAPS tool. We found that RGH prescribing was optimal in **51.9%** of cases, and did not comply with guidelines in **37.4%** of cases. Nationally, optimal prescribing occurs **65.6%** of the time, and non-compliance only **22.0%** of the time.

3. Surgical prophylaxis: We found improvements in rates of appropriate antibiotic use for surgical prophylaxis at RGH, with no patients on prophylaxis for over 24 hours (which is the national benchmark).

Through root cause analysis, affinity mapping and other further sessions with stakeholders, we attempted to tailor potential interventions to the specific areas needed for improvement at RGH.

Improve and Control phases:

Our implementation strategy attempted to identify achievable interventions, that addressed our goals and objectives, our Critical to Quality statements and were supported by RGH prescribers and the literature base:

1. Specific feedback: to different areas of RGH, areas of good performance and those for improvement.
2. Education: case-based teaching presentation, based on the major infections seen at RGH. We presented to different groups, each time focussing on that audience's specific areas for improvement.
3. Antibiotic guideline poster: we have developed an A0 poster for display around RGH, with the antibiotic guidelines for the most common and important infections seen at RGH. These infections make up the majority of RGH prescriptions of antibiotics, and also primarily focus on areas for improvement.
4. Mobile phone application (MicroGuide): we have uploaded our guidelines onto the MicroGuide app (developed in the United Kingdom and used worldwide), which is free to download for users and allows them to access guidelines quickly at the bedside. Initial feedback has been positive, and we are seeking formal feedback before potentially proceeding to a full license for the longer-term.

Project outcomes

We have engaged with various relevant stakeholders, both within RGH and the broader WA Health community. Ultimately, this project falls within the domain of the various Antimicrobial Stewardship (AMS) committees in the various hospitals, and I will have an ongoing relationship with the SMHS AMS team to carry through the findings and interventions of iPeAR.

Project aim:

To investigate the process of antibiotic prescribing at RGH, collect quantitative data regarding RGH antibiotic prescribing, collect data regarding prescriber perspective.

Develop interventions based on the literature base and data collected, in order to improve RGH antibiotic prescribing to better reflect national guidelines and achieve national targets.

Improvement team members

Supervisors:

Dr Siong Hui (Clinical),
Ms Kerri-Anne Martyn (QI),
Dr Sally Bradley (Executive).


MAIN ENTRY

Government of Western Australia
Department of Health
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R.A.P.I.D.

Medical Service Improvement Program
Lead • Improve • Transform

RAPID Project

Dr Emma Higgisson, Rockingham General Hospital

The improvement process

A process mapping session was held with all key stakeholders to map the patient journey from the time the decision is made that an emergency caesarean section is needed until the baby is delivered. A retrospective audit of emergency caesarean sections in 2016 and a prospective time in motion study of the process was undertaken. Root cause analysis and solution generation sessions informed the development of a new Emergency Caesarean Section Pathway that was initially trialled through simulation and then implemented.

Project outcomes

- Designed and implemented 2 new Emergency Response Codes for emergency caesarean sections
- New interdisciplinary communication system – push button activated
- Created a designated Obstetric Pre-Theatre Bay
- Specific Obstetric Pre-Theatre Bay Equipment Trolley
- Streamlined and minimised jobs required to have patient prepared for theatre
- Created a daily designated emergency theatre team
- Twice daily identification of a “flexible” operating theatre
- Changed and redefined staff roles and responsibilities
- New Emergency Caesarean Pathway
- Weekly reports on emergency caesarean section times generated by STORK database for ongoing review of new process
- Staff Education and Empowerment
- Benchmark Rockingham General Hospital’s guidelines and performance regarding emergency caesarean sections with other hospitals in the Perth metropolitan area

Recommendations

- New Emergency Caesarean Section Pathway should be formally audited 6 months post implementation
- Display of audit results to all project stakeholders
- Review of Rockingham General Hospital Guidelines for delivery times of emergency caesarean sections
- Minimise and shorten paperwork eg. Pre-op checklist

Project aim:

To improve and streamline our communication, to reduce delays and improve patient outcomes for patients requiring an emergency caesarean section. To enable patients to move through a coordinated, efficient and safe process.

Rationale:

An emergency caesarean section is required when there is actual or potential threat to the life of a mother or her baby. Both mother and baby have higher risk of poor outcomes if it takes longer than 75minutes to deliver the baby once it has been decided that an emergency caesarean section is needed. An audit of delivery times in Rockingham General Hospital showed that 34% of emergency caesarean sections took greater than 75 minutes in 2016. There was significant clinical concern from frontline staff regarding the impact of delays on patients and their babies.

Supervisors:

Dr Kirsty Crocker

Emily Nolan

Kerri-Anne Martyn

Supporters:

The Executive, Obstetric, Midwifery, Anaesthetic, Theatre, Nursing and Support Staff of Rockingham General Hospital

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Dr Emma Higgisson – My Leadership Journey

Profile

Current Hospital

- Rockingham General Hospital

Area project completed in

- Emergency Caesarean Section

Personal Leadership Journey

My journey to become an emerging leader in clinical medicine began two years ago when I was an intern. I established an "Intern Shadow Program" in my hospital which arranged for final year medical students to follow interns on call and during their day-to-day job to ease the transition from final year medical student to intern doctor.

Participating in the MSI Program has been the highlight of my leadership journey to date.

Future career aspirations

Participating in the MSI Program has been instrumental in my development as a leader.

I look forward to building on the skills that I have learned through the MSI program and I am excited to undertake further clinical service redesign projects in the future.

My particular areas of interest are patient flow, communication systems, and emergency preparedness/response. I am passionate about change management and conflict resolution.

Continually engaging in and leading clinical service redesign projects will give me a unique perspective as I progress my career as a physician.

Hints and tips for future participants

Avail of all the additional workshops organised by the Institute for Health Leadership – they are invaluable

Practice your presentation skills as often as you can – no audience is too small

Support your fellow MSI participants – you often learn the most from each other

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