



**Choosing Wisely
Australia**

An initiative of NPS MedicineWise



**NPS
MEDICINEWISE**

Choosing Wisely Australia National Meeting

2019 ABSTRACT BOOK

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Tailoring the use of opioids on discharge from hospital

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Misuse of prescription opioids is an increasing problem in our community with many patients prescribed these medications for conditions such as chronic pain which does not reflect accepted best practice.

Patterns of prescribing opioid medications on discharge from hospital may not reflect a collaborative approach with some hospital teams using a default maximal quantity of opioids on discharge which may not have considered the patient's previous conditions such as chronic pain and past substance abuse. The default maximum quantity may be far in excess of that required for the condition treated in hospital and is not tailored to the individual patient's needs, putting some patients at risk of harm from opioids.

While de-prescribing chronic use of opioids is important, we have focused our initial efforts on patients being discharged from hospital with acute pain, and particularly those who have not benefited from the input of the acute pain service.

This project aims to:

- Establish what current prescribing practice is on discharge for patients with acute pain in the services of orthopaedics, general surgery and medicine, and any evidence of short-term harm occurring in these patients (from adverse effects of opioids).
- To survey patients about their use of opioids analgesics after discharge.
- In conjunction with the acute pain service, create condition specific guidelines for analgesic prescribing – focused on the amount of opioids supplied/prescribed on discharge.
- Introduce these guidelines to both junior medical staff and ward pharmacists to provide decisional support on both selection of quantity and type of opioids/analgesia to prescribe on discharge.
- Re-evaluate the prescribing patterns after implementation.

This work will provide useful insights into current hospital prescribing practice and be innovative in developing guidelines to help prescribers and patients understand the likely duration of their pain and need for analgesia for particular conditions.



Colonoscopy and Australian healthcare services – changing the standard of care wisely

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The Australian Commission on Safety and Quality in Health Care developed the Colonoscopy Clinical Care Standard on the basis of variation identified in the Atlas of Healthcare Variation and following national support for quality standards for colonoscopy.

The standard supports Choosing Wisely recommendations from the Gastroenterological Society of Australia and the Royal Australian College of General Practitioners. Both sets of recommendations target behaviours relating to overuse of colonoscopy, despite the existence of precise evidence-based guidelines for colonoscopy in screening and surveillance.

In 2017 there was one colonoscopy conducted for every 32 Australians. Between 2004-2015, MBS-reimbursed colonoscopies with and without polypectomy increased by 177% and 51% respectively.

Overuse of the procedure makes it harder for patients in greatest need to access care. While 75% of colonoscopies are carried out in private hospitals, only 50% of Australians have private health insurance.

Although the risk of complications is low, inappropriate use increases exposure to potential harms including perforation, sedation-related complications and adverse patient experience - which may reduce future participation in screening.

What can help change clinical practice? The Colonoscopy Clinical Care Standard supports change in three ways:

- It provides information to help consumers share decisions, provide fully informed consent and manage their ongoing screening and surveillance needs.
- It is supported by quality indicators, which are also used in ongoing recertification of colonoscopists. Mandatory quality assurance monitoring of indicators has been associated with reduced risks of interval colorectal cancer and cancer death.
- Adherence to the standard is required for acute health services undergoing mandatory accreditation to the National Safety and Quality Health Service Standards.

The standard reflects current guidelines and addresses primary care referral, colonoscopist certification, bowel preparation, sedation, patient-centred care, and evidence-based surveillance.

System interventions such as clinical care standards can be an important lever for Choosing Wisely recommendations.



Reducing the noise to engage consumers and referrers to Western Health Medical Imaging

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Background

Western Health is one of 12 Victorian Health services funded by Better Care Victoria (BCV) to become a Choosing Wisely Champion Hospital.

Project aim

To reduce harm to patients by improving the clinical information on the referral forms and to also follow the 6 recommended diagnostic imaging criteria from Royal Australian and New Zealand College of Radiologists (RANZCR).

Method

The key to our success will be cutting through the noise to engage our consumers and our health professionals. At Western Health the 'noise' we identified was staff 'resistance to change'. To understand the 'noise' we surveyed clinicians to ascertain their level of support for the broader aims of Choosing Wisely Australia. Consumers were also engaged through surveys to gauge their understanding of Choosing Wisely.

Results

- 92% of WH practitioners surveyed believe they have a responsibility to help reduce inappropriate diagnostic imaging
- 46% of clinicians believe they have limited or no influence on reducing unnecessary imaging
- Results enabled the project team to identify themes from both consumers and referrers to mould project timelines and action plan to safeguard success and sustainability of Choosing Wisely at Western Health

Conclusion

We are using our data to ensure:

- Education sessions and decision aid tools address concerns raised
- Clinicians are aware of the benefits of including Choosing Wisely in their practice – 'What's in it for me?'
- Post implementation surveys demonstrate CW program has addressed the consumers' experience with engagement in decisions around their health care
- To develop a PR strategy based on themes identified to ensure success of our Choosing Wisely movement for a long-term future.



Choosing Wisely: setting the scene at St Vincent's Hospital Melbourne

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Aim

To pilot two Choosing Wisely focus areas with a view to 'kick-start' the initiative.

Method

In May 2018, two pilot focus areas were identified in the Department of Critical Care Medicine:

- routine chest x-rays;
- blood gases and clinical observations in 'ward ready' patients.

Clinical leads for the focus areas were supported by the continuous improvement team to utilise a problem-solving framework. The governance structure of which was consistent with that used for other improvement projects at the hospital.

Results

There was a 60% reduction in the number of unnecessary chest x-rays and blood gases from intervention implementation in September 2018 to January 2019. The number of clinical observations recorded in 'ward ready' patients also reduced significantly, with only 7% of patients receiving hourly observations in January 2019.

In December 2018, clinicians from other areas expressed interest in 'Choosing Wisely' and as a result two new focus areas commenced within 6 months of the pilot commencing:

- reducing coagulation testing in the Emergency Department;
- reducing chest x-rays following drain removal in cardiac surgery patients.

Discussion

Monthly executive review meetings assist in maintaining project momentum and provide an avenue for accessing guidance and support in overcoming barriers. Opening these meetings up to all stakeholders and interested clinicians help to promote the initiative and engage those interested in pursuing focus areas in their own department.

Working through the pilot focus areas resulted in a greater understanding of the tools and support clinicians need to lead this work into the future.

Conclusion

Widespread change across large and complex organisations such as health care can be challenging to navigate. Utilising a 'pilot' model and supporting change in a specific area, the scene has been set for future Choosing Wisely improvement work more broadly across St Vincent's Hospital Melbourne.



Moving past the panic - healthcare staff responses to disinvestment— a systematic search and qualitative thematic synthesis

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Healthcare services must deliver high quality, evidence-based care that represents sound value. Disinvestment is the process of withdrawing resources from any existing health care practices that deliver low gain for their cost, and reallocating these toward practices that are more effective, efficient and cost effective, thus benefiting patients and the community.

This is the first review to examine the responses of healthcare staff to disinvestment and investigate the factors that increase the likelihood of these staff accepting disinvestment or reallocation of resources from health services they provide. We conducted a systematic search of five electronic databases using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) framework. A critical appraisal process of the quality of the included studies was performed by two authors. We undertook a thematic synthesis of the qualitative data to develop an overarching narrative.

Twelve studies were identified for synthesis and all found that the disinvestment process was challenging and controversial for those healthcare staff involved. Negative staff reactions to disinvestment identified were anxiety, disempowerment, distrust, and feelings of being dismissed and disrespected. Healthcare staff have a strong professional identity associated with autonomy in their decision making in the provision of healthcare services. Disinvestment from a service that healthcare staff can usually choose to provide threatens this identity.

Engaging clinical champions to lead change, using rigorous patient outcome data and transparent decision-making processes may assist healthcare staff to embrace a new identity as innovators and accept disinvestment in low-value healthcare. Engagement with disinvestment was observed when staff were invited to participate in a process they considered transparent and in the best interests of the community.



Helping people to choose wisely: A pilot study of methods to engage consumers in health decisions across health literacy levels

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Background

Consumers need support to be involved in decisions about eliminating the use of unnecessary/harmful tests, treatments, and procedures. Researchers have suggested that such interventions should include two stages: 'preparation' followed by 'enablement'. The impact of this approach on efforts to support patient involvement is unknown and specifically its use among people with different levels of health literacy (HL) is untested.

Aim

To pilot-test the relative effectiveness of preparation and enablement interventions among people with different HL levels.

Method

- Design, setting, participants: Randomised controlled trial in Australian adults aged >18 years, recruited via an online market research company.
- Intervention: We developed a video for the preparation intervention and the Choosing Wisely Australia® 5 questions were the enablement intervention.
- Randomisation: 164 participants were presented with a hypothetical low-value care 'back pain' scenario and randomised to one of three intervention groups (preparation alone [n=55]; enablement alone [n=58]; both [n=51]), stratified by HL.
- Primary outcomes: Mean difference (from baseline to follow-up) in self-efficacy to ask questions and be involved in health decisions, and intention to engage in shared decisions about low-value care.

Results

The preparation video alone resulted in a significantly greater increase in self-efficacy to be involved in health decisions compared to the enablement questions alone (6.93 vs 3.80; $p=0.044$). An intervention-by-HL interaction was observed for intention to engage in shared decisions ($p=0.025$). For those with higher HL, the combined intervention yielded the greatest change in intention, followed by the preparation video, whereas the enablement questions resulted in no meaningful change. However, for individuals with lower HL, the enablement questions alone demonstrated the greatest change in intention followed by combined intervention, with the preparation video alone resulting in little-to-no change.

Conclusion

In this pilot study, preparation and enablement interventions had a differential impact across HL levels on supporting involvement in health decisions.

Theme 1: Spreading the Choosing Wisely message: Cutting through the 'noise' to engage consumers and health professionals



1. Contribution of NPS MedicineWise to the scientific literature in Australia: a bibliographic analysis

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Introduction

Regular bibliographic analysis (BA), the detailed evaluation of scientific publications, provides meaningful information to guide research. We aimed to provide a theme-based, longitudinal BA on recent research publications by affiliates of NPS MedicineWise.

Method

A retrospective BA was conducted on publications indexed in PubMed, with “NPS MedicineWise” in any data field or at least one co-author from NPS MedicineWise in the Affiliations section. Abstracts of all types of articles were analysed for the article theme(s), subject focus, and research topic.

Results

Analysis of 48 abstracts between 2013 and 2018, published in 28 journals, showed that the number of publications increased dramatically from 3 (in 2013) to 13 (2018), with an average of eight publications per year. The Medical Journal of Australia hosted most of the publications (14 articles), followed by Australian Prescriber (5). Assessing 307 keywords/subjects showed that the main focuses were on the elderly (11), therapeutic use (10), standards (7), and physicians' practice patterns (7). Anti-bacterial agents (6) was the most common specific medications appearing in the publications. Average number of times an article had been cited, including self-citations, was 2.19.

Conclusion

This study, as the first BA on publications by affiliates of NPS MedicineWise in Australia, provides a new overview of current research landscape. The increasing number of research publications is promising and improves the visibility of research on medication safety. Stating “NPS MedicineWise” in authors' affiliations or article metadata, will help future researchers to leverage upon this BA and provide more detailed evaluation of published research.



2. Patients' perspectives about using the five Choosing Wisely questions: A qualitative study

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Introduction

Few studies address consumer engagement in Choosing Wisely. To address this gap, we conducted a qualitative study to ascertain patients' perspectives on using the five Choosing Wisely questions. The questions are: Do I really need this test or procedure? What are the risks?, Are there simpler, safer options?, What happens if I don't do anything?, What are the costs?

Methods

The study design was qualitative descriptive using semi-structured interviews in a large healthcare organisation in urban Australia. To be included, participants were referred by their general practitioner for a computerised tomography scan. Using purposive sampling, 22 patients and carers with a wide range of educational backgrounds participated in a semi-structured interview about their perceptions of shared decision-making with their doctor.

Findings

Five themes resulted from the thematic analysis:

1. Needing to know
2. Questioning doctors is not necessary
3. Discussing scans is not required
4. Uncertainty about questioning, and
5. Valuing the Choosing Wisely questions. Participants reported that they presented to their GP with a health problem that they needed to understand and solve.

They reported ambivalence about engaging in shared decision-making with their doctor. Participants commented on barriers for patients including lack of knowledge about the Choosing Wisely questions and their perception that the 'doctor knows best'. Participants considered enabling factors including posters in doctors' waiting rooms, and doctors providing patients with prompt cards containing the questions.

Conclusions

Shared decision-making is an important principle underpinning Choosing Wisely however considerable cultural change is required. Practice implementation requires understanding patients' motivations to engage in shared decision-making. Systems level support and education for healthcare practitioners needs to emphasise communication with patients with varying motivation to engage in shared decision-making and Choosing Wisely.



3. Northern Health Consumer Awareness Project – Improving confidence for consumers in using NPS MedicineWise ‘5 Questions’

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Background

Through our Consumer Awareness Project, Northern Health set out to promote awareness of Choosing Wisely and determine whether the use of NPS MedicineWise ‘5 Questions’ improved consumer confidence to ask their health provider questions about their healthcare.

Method

Patients were surveyed pre- and post-appointment in the waiting area of two outpatient clinics: Orthopaedic and Antenatal. Interview questions included gauging whether patients felt confident in asking questions of health professionals and about the value of the NPS MedicineWise ‘5 Questions’ resource. Patient demographics were collected, including patient age group, gender and whether an interpreter was required. Patients were given the ‘5 Questions’ brochure during the pre-appointment interview. Where possible, after their appointment, the same patients were interviewed about the effectiveness of the brochure.

Results

242 people were surveyed; Antenatal (138) and Orthopaedic (104): 86% of respondents were patients and the remainder were family/friend/Medical Treatment Decision Maker for the patient. The majority of patients felt confident to ask their health care professional questions (93%). Only 11% had seen the ‘5 Questions’ brochure before the survey but 69% (from both clinics) reported that it will help them in future appointments. In Antenatal clinic, 90% of patients reported the brochure made them feel more confident to ask questions while only 66% felt this way from Orthopaedic clinic. Several reasons were identified as to why the resource did not help, but there was no predominant reason.

Conclusion

The NPS MedicineWise ‘5 Questions’ is a helpful resource for consumers, improving their confidence level to ask their health provider questions. Patient responded similarly in both clinics when asked whether the resource would be helpful, but responses varied when asked if the resource improved patient’s confidence level. Hence, the brochure may be more helpful in certain clinics or patient populations and follow-up research could explore this further.



4. Engaging for change - a consumer perspective

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Idea

Involving consumers is something that is much more easily talked about than done. All the engagement frameworks in the world cannot necessarily help people take that first step into the unknown.

Objectives

Provide an insight into what works, what doesn't work and what could be possible in leveraging the passion of consumers in promulgating the work of Choosing Wisely.

Approach

The lightning presentation will be interactive (using Sli.do) and engaging, highlighting current best-practice engagement thinking, and pragmatic day to day examples of how this works in the real world. Possible strategies for people to try in their own worlds and health service will be suggested for people to go away and try.

Outcomes

People who listen to this presentation will have the motivation and confidence, and some ideas to try.



5. Engaging clinicians as part of a Choosing Wisely Champions program to build capacity and sustainability in a tertiary hospital

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Background

Royal Perth Bentley Group (RPBG) joined the Choosing Wisely movement in 2017. To enable a strategic cultural change, clinicians from a diverse range of backgrounds have been nominated as Choosing Wisely Champions with the purpose to engender support and embed Choosing Wisely values into everyday practice. As part of a continuous improvement process, feedback was sought from Champions and the program was reviewed.

Review process

Qualitative interviews were conducted with existing Choosing Wisely Champions with different backgrounds and experiences and a thematic analysis was undertaken.

Champions indicated a strategy to implement CW as part of a cultural change needed to be an organisational approach with strong communication, collaboration as well as being sustainable and proactive.

Based on the interview findings, the following have been implemented:

- A health service wide communication strategy to ensure consistency in communication across all areas.
- Monthly meetings as a forum for Champions to showcase the work they have completed, promote discussion, networking and inspire junior staff to undertake projects.
- A quantitative survey was administered electronically via a Zeetings application at the first meeting on 12 February 2019 to gain additional clinician input.

Next steps

- Continue to proactively approach clinicians and offer support, including the newly developed project toolkit, due to project resources being the most commonly selected response when asked what areas of support Champions would like most (14/51; 27%).
- Introduce Microsoft Teams as a networking tool and to break down barriers to effective communication between clinicians.
- Establish a platform to share resources such as audit tools.

Summary

The CW Champions program is a key mechanism to drive cultural change and embed the CW values into everyday practice in a sustainable way.



6. Empowering consumers in Choosing Wisely and shared care at East Metropolitan Health Service

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Background

Anecdotally, patients and their families do not feel comfortable raising questions during consultations. An intervention brochure was collaboratively developed to educate consumers on what questions to ask at their next healthcare appointment as part of shared decision-making. Pre and post surveys were conducted which aimed to: (1) describe current consumer attitudes towards their health care and (2) measure the effectiveness of the intervention brochure.

Method

The intervention brochure was mailed out with appointment letters for newly referred patients attending selected outpatient clinics (including surgical and medical) at Royal Perth Hospital (RPH) and Armadale Health Service (AHS) from April-June 2018. Patients were invited to complete pre and post self-administered paper-based surveys by the administration clerk on arrival.

Results: Sample size was n=92 in the pre-survey (59% RPH; 41% AHS) and n=108 (52% RPH; 48% AHS) in the post survey.

The proportion of patients who agreed that having a medical test when they did not need one could be harmful for their health increased significantly from 21% in the pre-survey to 33% in the post survey ($p=0.03$).

The proportion of patients who didn't know what questions to ask their doctor decreased significantly from 61% in the pre-survey to 29% in the post survey ($p=0.027$).

Summary

Patients were found to have a positive attitude towards managing their own health and telling their doctor any concerns they may have about their health.

Findings indicated the intervention brochure to have had a positive influence on increasing health literacy of patients and their understanding of what questions to ask their doctor.

Through targeted campaigns, including a video developed by East Metropolitan Health Service, awareness of CW is gradually increasing among consumers and contributing to building a culture of shared decision-making.



7. Complementary Medicines – helping consumers to understand the evidence

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Issue

A significant number of Australians report that they take complementary medicines (CM). Two of the Choosing Wisely recommendations of the Pharmaceutical Society of Australia address the effectiveness of CM, including homeopathy. Consumers are provided with recommendations for CM in the media including social media, online, in health-food stores, in pharmacies and from family and friends. However, these recommendations may not be accompanied or supported by reliable evidence-based information.

Objectives

Since 1 July 2010, NPS MedicineWise has been delivering a national in-house telephone service (Medicines Line) to Australian consumers staffed by pharmacists. Calls received by Medicines Line from January 2014 to December 2018 about CM were analysed.

Outcome and Impact

During the study period 2096 enquires (5.1% of total calls) were about a CM. The majority of the calls came from females (79.1%) and over 75% of calls were from the eastern states of Australia.

The most common enquiry type was predominantly about possible interactions with other medicines (52.1% of calls). This was followed by enquiries about side-effects (15.1%), breast-feeding (10.6%), the indication of a CM (6.6%) and pregnancy (6.4%).

The CM most commonly enquired about was fish oil (12.3% of calls), followed by magnesium (10.2%), probiotics (8.3%), ascorbic acid (7.1%) and colexicaliferol (7.0%). The herbal medicine that was most often enquired about was echinacea (4.2% of calls) followed by St. John’s Wort (4.1%) and Hedera helix (3.6%) and 2.9% of CM calls were about homeopathic remedies.

These results highlight that there is a lack of reliable information available to assist consumers in determining if the evidence exists to show that a CM is effective, safe and able to be taken with other medications. The pharmacists on the Medicines Line are uniquely placed to interact with consumers to help them sift through the information and deliver evidence-based recommendations and guidance.



8. Diluting the supply of evidence-poor products: Homeopathy in pharmacy

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The use of complementary and alternative medicines (CAMs) is hotly debated in discussions about evidence-based clinical practice. Levels of evidence for these products vary widely, and for some, the benefit vs risk ratio may even compare favourably compared to some conventional medicines. However, the National Health and Medical Research Council's (NMHRC) 2015 review on homeopathy made the clear conclusion there are no health conditions with reliable evidence that homeopathy is effective.

CAMs, including homeopathic products are widely available including through pharmacies. While PSA's Code of Ethics for Pharmacists states pharmacists should only purchase, supply or promote a product "where there is credible evidence of efficacy and the benefit outweighs the risk", the majority of individual pharmacists employed in pharmacies do not have direct influence over store purchasing decisions. Often these are determined by managers, or banner group purchasing obligations.

In PSA's role as the professional peak body representing pharmacists across all areas of practice, the ongoing supply of homeopathic products from pharmacies is in conflict with presenting the profession as evidence-based health practitioners.

Two of PSA's Choosing Wisely recommendations launched in December 2018, focus on CAMs. Choosing Wisely has provided us with the vehicle to make an explicit recommendation that homeopathic remedies should not be promoted or provided by pharmacists.

To further highlight that PSA considered the provision of homeopathic products was not consistent with expectations for professional or ethical practice, an open letter was distributed to pharmacy banner groups.

PSA has welcomed the positive reaction to our Choosing Wisely recommendations and is pleased it has generated discussion across the profession about the place of homeopathy. While many pharmacies stopped supplying these products some time ago, we hope through consumer and profession awareness raised through Choosing Wisely that these products will disappear from pharmacy shelves.



9. Have ideas? We're Listening. Engaging our consumers, clinicians and community partners to choose wisely

Ms Megan Giles¹

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As an initial step in becoming a Choosing Wisely champion health service, the Sunshine Coast Hospital & Health Service (SCHHS) undertook both a clinician perceptions survey and consumer perceptions survey in 2018.

91.7 % of clinician respondents Agreed or Strongly Agreed that having tests, treatments and procedures can be harmful for patients, however, more than half (55.9%) indicated they have limited or no influence in reducing such requests.

86% of consumer respondents were not aware of the Choosing Wisely questions and the top three barriers to asking questions included; trust in doctors' judgement, not believing the questions relate to their condition, and a short appointment time.

In response to these findings, the SCHHS established a Choosing Wisely Faculty to guide the initiative within the health service. Five consumers participated from the initial Kick-Off meeting to ensure a truly co-designed approach, along with clinicians who proactively sought involvement from across disciplines and services, and the PHN as one of our community partners. It was an intentional decision to invite engaged clinicians those who believed they could influence change, rather than force disinterested staff to participate. In line with change management theory it was proposed that a smaller group of passionate staff would create the momentum required to engage others and ultimately achieve more sustainable outcomes.

Immediate outcomes of this approach have been:

- Tailoring the Choosing Wisely questions to ensure relevance and meaning to our consumers
- A rapidly growing Faculty as clinicians recognise Choosing Wisely as an avenue to translate consumer-focused and high value care improvement ideas into action with organisational support for sustained impact
- Actively collaborating with the PHN to identify opportunities involve patients in decisions about their treatment across the care continuum, recognising that a hospital visit is just one part of their journey.



10. Back to the future of social media

Mrs Jemma Gonzalez¹, Jason Ealey¹, Josh Meyers¹

¹*NPS MedicineWise, Sydney, Australia*

Early imaging of non-specific low back pain does not improve clinical outcomes and, in some cases, can lead to unnecessary treatment and harms.

The limited role of imaging is also highlighted in several Choosing Wisely recommendations. So, NPS MedicineWise recently launched a national program to improve patient outcomes and optimise MBS expenditure.

Research shows that patients often expect to receive a scan for low back pain. This is a considerable driver for GP referrals and influences treatment choices. So, we developed a targeted consumer social media campaign to address consumer expectations.

We identified social media as a key channel to reach Australian consumers. In this program, we used social media to reach consumers in two distinct ways:

- a. to develop the products, by recruiting 222 consumers (with a 65% completion rate) to review a new resource - a fact sheet 'Low back pain: do you need a scan?'. We spent \$200 on advertising on Facebook which greatly increased reach.
- b. to disseminate key messages - encouraging them to stay active and minimise the risk of long-lasting pain.

NPS MedicineWise developed a series of short videos for Facebook and Twitter. Each of these were short, to the point and optimised for mobile viewing. There were 125,000 video plays with a \$1000 media cost which is 0.02 per play.

Also, we encouraged consumers to ask questions about their own situation. Consumers posted questions on the NPS MedicineWise Facebook page, and answered by Medicines Line pharmacists or the Australian Physiotherapy Association. This content reached over 7600 people. 7 questions were published and all reactions, likes etc. had a positive sentiment.

This lightning talk or poster will discuss the impact of each social media activity and highlight potential improvements for future programs.



11. QFIRST - Quality Focused Interventions for the Relief of Symptoms Team

Dr Alex Grosso¹

¹*Sunshine Coast University Hospital, Birtinya, Australia*

Issue: “More is always better”

- 62% of operative deaths reviewed by QPPAMRC classified as “inevitable death that would have occurred irrespective of anaesthetic or surgery procedures”
- High risk surgery accounts for <12.5% of surgical procedures but >80% of postoperative deaths.

Objectives: “Cutting through the noise”

- Empower patients to ask questions about their care and the consequences of each option.
- Engage with patients to develop an understanding of their goals, facilitating multidisciplinary discussion accounting for risks, benefits and acceptable compromises.

Approach: “From consultation to conversation”

- QFIRST Nurse meets with patient to establish:
 - What matters to them
 - Their goals of care
 - What compromises / complications are acceptable
- Multidisciplinary team ensures all options are considered and aligned with the patient’s goals of care
- QFIRST Nurse provides case management, care coordination and follow-up on patient reported outcome measures.

Outcomes

April-December 2018: 27 patients referred

- 89% participated (24)
- 87% discussed (23)

Interventions

- 33% non-surgical
- 17% modified
- 50% planned surgery
- 100% advanced care planning (ACP)
- 81% ACP uploaded onto The Viewer

Benefits

- Department
- Avoid unnecessary procedures
- Greater patient & staff satisfaction
- Reduced lengths of stay
- Reduced day of surgery cancellations / delays
- Reduced delayed care due to specialist follow-up
- Clinicians
 - One point of contact / coordination
 - Knowing patients will be followed up
 - Improved communication between clinicians
 - Greater awareness of their patients wishes, beliefs & ongoing quality of life care

- Consumers
 - One point of contact within the hospital
 - Feel supported
 - Greater understanding of own values and life wishes
 - Peace of mind around ACP
 - Shared decision making & patient engagement
 - Increased satisfaction through continuity of care from decision to recovery
 - Improved disability free survival and functional outcome measures

Follow-up (WHO DAS 2.0)

Days	Total	Same or Better
30	11	72%
90	8	75%
180	3	66%



12. Friends of Science in Medicine: Advocating for scientifically-based, informed choice of therapeutic goods and services

Assoc Prof Ken Harvey¹, Prof Rob Morrison², Mr Malcolm Vickers¹

¹Monash University, Melbourne, Australia, ²Flinders University, Adelaide, Australia

FSM was formed at the end of 2011 to emphasise the importance of basing Australian health care on scientifically sound research and established scientific knowledge published in peer-reviewed journals of accepted standing. Valuing scientific rigor is especially important in an age where unsubstantiated health claims are rampant, often financially motivated, and scientific consensus is 'imbalanced' by the views of extremists. In 2019, FSM has more than 1200 leading scientists, clinicians, lawyers and consumer advocates as supporters.

FSM campaigns, and submits complaints, against unethical promotion of therapeutic goods and services to consumers. The former includes many complementary medicines, diagnostic tests and medical devices. The latter includes some services offered by both registered and unregistered health professionals.

We are as concerned about medical practitioners offering unproven and exploitive services, such as infusing intravenous vitamins and chelation therapy, as we are about Traditional Chinese Medical Practitioners claiming that acupuncture can treat infertility or Naturopaths advocating homeopathy.

We encourage tertiary institutions and students of medicine and health sciences to critically appraise therapeutic products and services as part of the courses offered. Complementary medicines provide a fertile field in which students can assess often-outrageous claims and report regulatory breaches.

We engage with regulators, such as the Australian Health Practitioner Regulation Agency (AHPRA) and their National Boards, the Australia Competition and Consumer Commission (ACCC) and the Therapeutic Goods Administration (TGA) about our concerns.

FSM has become a credible source of expertise to the media on these matters.

A recent publication analysed 76 news stories that featured FSM as a 'voice' on complementary and alternative medicine (CAM) in mainstream news media between December 2011 and April 2017. The article concluded that FSM clearly dominated as, 'a voice that carries the credibility and legitimacy of biomedical expertise, apparently trusted by journalists as the new "CAM watchdog".'



13. Slow-release opioids post-surgery: what messages are patients receiving?

Ms Parnaz Aminian¹, Mr Kyle Booth¹, Ms Alison Tyedin¹, **Dr David Liew¹**, Ms Elizabeth Su¹, Dr Tom Wilsdon¹, Dr Bonnia Liu¹, Ms Asmara Jammali-Blasi^{1,2}, Prof Albert Frauman¹, Mr Kent Garrett¹

¹Austin Health, Heidelberg, Australia, ²Choosing Wisely Victorian Collaboration, Heidelberg, Australia

The use of slow release opioids for acute pain has been under scrutiny since the release of the ANZCA position statement in 2018 (1). Post-surgical use of slow release opioids at our organisation, despite a lack of supporting evidence, has been a traditional practice and was likely employed for various reasons; to achieve goals of post-operative mobility, reduce post-operative constipation (in the case of oxycodone/naloxone and tapentadol), reduce length of stay and an extrapolated benefit drawn from chronic pain practices.

At our institution, clinical pharmacists are involved in all patient discharges from the wards and often special instructions regarding intended duration with follow up advice are counselled on medication lists or dispensing labels. The aim of this retrospective audit is to assess the consistency of this information provision on discharge, the documentation provided to community prescribers about the follow up plan and review the appropriateness of discharge quantities of slow release opioids post-surgery based on local guidelines.

Patients discharged with a slow release opioid from a surgical unit over a one-month period (October 2018) are included in the study. The patient cohort was drawn from the pharmacy dispensing software. Information was gathered from medication charts and discharge summaries from our electronic prescribing system, label directions from our pharmacy dispensing software and medication list special directions from pharmacy records. Results will be presented at this meeting.

Through understanding our current practices, we will be in a better position to intervene and improve our patient's expectations on intended duration of therapies, our handover documentation to community carers and consistency of discharge advice we provide.

1.ANZCA: Position statement on the use of slow-release opioid preparations in the treatment of acute pain. Published in March 2018 edition of ANZCA bulletin.



14. The Our Pills Talk app that speaks medication instructions to the patient in their preferred language

Ms Margaret Raptis¹

¹Our Pills Talk App, Sydney, Australia, ²Queen St Pharmacy, Sydney, Australia

The Our Pills Talk App is a medication safety App invented by Sydney Pharmacist Stephen Cohen. This App addresses the issues faced by those patients who are unable to read medication instructions that are printed on the label dispensed by the pharmacy. This includes people who have limited vision, low literacy levels, dyslexia, autism and those from a non-English speaking background.

The objectives of this App are to reduce the rate of medication errors thereby improving patient health and safety and reducing hospital admissions. The App allows the patient to choose their preferred language within the settings and it speaks the medication instructions to the patient by scanning a QR bar code that is generated at the time of dispensing by the dispensing pharmacy. This means that we do not rely on the expectation that a patient is able to read the label in English and understand what they are reading or that they are able to read at all. By utilising the Our Pills Talk in their preferred language, the patient will have a greater chance of understanding the medication instructions as they are spoken to them.

The patient requires either an Android or Apple device and the App is up and running and available for download from both the Apple 'App Store' and the Google 'Play Store'. Some pharmacy dispensing software companies including Simple Retail and Corum Health have the software built into their dispensing programmes for pharmacies to print the QR bar code label that is unique to each dispensed medication. There is also a built-in alarm system to remind patients to take their medicines, patient profile can be added, and it stores the scanned information if the patient chooses to do so.



15. What do we really know about defensive medical practice? We read 67 studies so you don't have to

Assoc Prof Nola Ries¹, Mr Charlie Hacker¹, Dr Jesse Jansen²

¹University of Technology Sydney, Sydney, Australia, ²University of Sydney, Sydney, Australia

Issue

Clinicians' fear of legal liability and defensive practice are commonly cited as drivers of low-value care. Defensive practice involves ordering tests and procedures, making referrals, and prescribing drugs mainly to reduce perceived legal risks, rather than to advance patient care. Literature on defensive practice dates back to the 1970s but has never been systematically analysed.

Objectives

We recently conducted the first-ever mapping review of published empirical studies on defensive practice. This presentation will “cut through the noise” to deliver (1) a clear picture of the key findings and limitations of this body of research and (2) the implications for understanding and addressing defensive practice in Australia.

Approach and outcomes: 67 studies met our inclusion criteria. We extracted data on: year of publication; country/region of study; study setting (e.g. general practice clinic, emergency department); population studied (e.g. GPs, surgeons); method of data collection (e.g. survey, interview, record audits); and disciplinary affiliation of investigators (e.g., medicine, law, economics). We also extracted key findings on the types of defensive practice reported, drivers of this behaviour, and proposed solutions.

Our analysis shows that most research has been done in the United States by medical researchers, using quantitative surveys of clinicians, particularly GPs, obstetricians and psychiatrists. Caution is needed in applying these data to other countries. Only one study was from Australia.

Research activity on defensive practice intensified markedly from 2011 to present, with an increase in studies outside the US. This timing coincides with the expansion of Choosing Wisely campaigns.

Ordering unnecessary tests was the most commonly reported defensive practice. In addition to fear of legal liability, the culture of medicine and patient expectations were identified as drivers of low-value care. Proposed solutions included ameliorating clinicians' “existential anxiety” about medico-legal risk and reducing “blame culture” through system-level changes.



16. Using the Patient Activation Measure to improve health outcomes for Australians with chronic illness

Mr James Ansell¹, Ms Leanne Wells¹

¹*Consumers Health Forum of Australia, Deakin, Australia*

Chronic illnesses are the leading cause of ill health, disability and death in Australia. Chronic illness affects more than 11 million Australians, account for more than 60% of Australia's burden of disease and are associated with more than 7 in 10 deaths in Australia. Thus, by improving how the healthcare system engages with chronic illnesses, both those with chronic illnesses and Australia at large will benefit.

This CHF research project proposes to use the Patient Activation Measure (PAM®) to determine the level of patient activation in Australian's with chronic illness. The PAM® assesses an individual's knowledge, skill, and confidence for managing one's health and healthcare. Individuals who measure high on this assessment typically understand the importance of taking a pro-active role in managing their health and have the skills and confidence to do so. The PAM assigns patients on a 0–100 scale that segments patients into one of four activation levels along an empirically derived continuum. Each activation level reveals insight into an array of health-related characteristics, including attitudes, motivators, behaviours, and outcomes.

For this research, a statistically representative sample of n=1700 Australians with chronic illness will be surveyed via the Dynata platform in order to determine their level of patient activation.

By understanding which of the four levels of activation a chronically ill patient or group of chronically ill patients falls within, along with their levels of service utilisation and patient satisfaction, the healthcare system will be better able to tailor interventions and communications to be most effective for those patients. This will then be able to empower both patients and healthcare providers to “choose wisely” the most appropriate actions for the level of patient's activation improve overall health outcomes.

This project is funded by the Australian Department of Health.



17. No escape! Facing up to high rates of low-value care in Australian hospital practice

Assoc Prof Ian Scott¹

¹*Princess Alexandra Hospital, Brisbane,*

The problem

Clinicians may ignore the Choosing Wisely campaign unless confronted with compelling evidence of substantial overuse of care within their own practice.

Objectives and scope

This study:

- 1) quantified the extent of overuse of care reported in Australian studies of hospital practice; and
- 2) assessed the extent to which quality improvement (QI) interventions used in the same studies reduced overuse.

Methods

PubMed was searched for reports in 16 Australian medical journals between 2008 and January 2018 using 'appropriate' 'overuse' and synonyms in titles or abstracts (search #1). Australian studies published in overseas journals were searched using 'appropriate' and 'Australia*' (search #2). Studies that applied direct, evidence-based, appropriateness of care standards to medical records of individual patients and reported cohort-based overuse rates were included. The impact of QI interventions in reducing overuse in these studies was also assessed.

Results

35 studies were selected, 14 for investigations, 21 for management interventions.

For investigations, rates of overuse $\geq 20\%$ comprised: 64% of coagulation tests, 22% of thrombophilia screening tests, 34% to 62% of CTPA scans, 36% to 40% of low back imaging tests, 54% of abdominal imaging tests, 63% of blood cultures, 23% to 43% of troponin assays, 20% of echocardiographs, 38% of telemetry monitoring.

For management strategies, corresponding figures were: 74% of blood product infusions, 34% of chronically prescribed medications among older patients, 99% of ondansetron prescriptions, 63% to 90% of gastric acid suppressants, 34% of direct oral anticoagulants, 21% of antimicrobial prescriptions.

Of 8 studies reporting post-audit QI strategies, professional education strategies, guideline or pathway dissemination, and implementation of algorithms and other decision supports predominated. In 5 studies, post-QI follow-up audits demonstrated 12 to 35 percentage point reductions in rate of overuse.

Conclusions

Substantial overuse of care exists in Australian hospital practice which can be significantly reduced by multi-faceted QI interventions.



18. A practical approach to using the Drug Burden Index to guide deprescribing of sedatives and anticholinergics

Ms Elizabeth Su¹, Dr Christopher McMaster¹, Dr Rohan Elliott^{2,3}, Ms Parnaz Aminian¹, Dr Bonnie Liu¹, Dr Tom Wilsdon¹, Dr David Liew¹

¹Medicines Optimisation Service, Austin Health, Melbourne, Australia, ²Pharmacy Department, Austin Health, Melbourne, Australia, ³Monash University, Melbourne, Australia

The Drug Burden Index (DBI) is a risk-assessment tool that measures exposure to sedative and anticholinergic medications in older adults. ¹ Higher DBI scores have been associated with poorer patient outcomes, including hospitalisation related to falls and delirium. Barriers to using DBI to help hospital clinicians deprescribe potentially inappropriate sedatives and anticholinergics include: time and knowledge required to calculate DBI; time required to prioritise patients with high DBI for medication review; and knowledge required to safely deprescribe medicines with potential withdrawal syndromes.

The Medicines Optimisation Service (MOS) at Austin Health is a collaborative service of the Clinical Pharmacology and Pharmacy departments that aims to improve equity of access and medication safety by enabling innovative and practical interventions in clinical care. To address barriers to implementing DBI as a clinical tool in the inpatient setting, our actions and plans include:

- Developing a computer algorithm that can calculate a DBI score from medicines administered on a patient's Cerner electronic medication chart during the first full day of hospital admission
- Using the electronic medical record (EMR) to display a patient's DBI score and a list of their sedative and anticholinergic medicines, to help clinicians identify patients with high DBI and prioritise potentially inappropriate sedatives and anticholinergics for deprescribing
- Compiling evidence-based deprescribing guidelines to provide guidance to clinicians seeking to safely deprescribe medicines that may provoke withdrawal syndromes, such as benzodiazepines
- Producing EMR medication order sentences that assist prescribers with charting safe deprescribing step-down regimes and documenting monitoring plans

The outcomes of our interventions will be measured through pre- and post- intervention auditing of deprescribing attempts at Austin Health.

Reference:

1. Hilmer SN, Mager DE, Simonsick EM, et al. A Drug Burden Index to define the functional burden of medications in older people. *Arch Intern Med.* 2007;167(8):781–787.



19. A systems-based approach to deprescribing PPIs

Ms Elizabeth Su¹, Dr David Liew¹, Ms Parnaz Aminian¹, Dr Tom Wilsdon¹, Dr Catherine Yu¹, Dr Bonnie Liu¹, Mrs Asmara Jammali-Blasi¹, Dr Chris Leung¹

¹*Austin Health, Melbourne, Australia*

Proton pump inhibitors (PPIs) are commonly prescribed in Australia to manage acid-related gastrointestinal disorders. These medicines can be inappropriately continued long-term, exposing patients to unnecessary pill burden and costs, as well as potential serious side effects. Although it is recommended that PPIs should be regularly reviewed and be reduced to the lowest effective dose or stopped when no longer required, there are barriers to achieving this in the hospital setting. Barriers include: clinician knowledge of appropriate PPI indications and treatment durations; patient willingness to attempt deprescribing; lack of systems support to guide appropriate deprescribing and monitoring; and consistent communication with GPs to facilitate ongoing care.

Austin Health is addressing these barriers by implementing a systems-based approach to tackling PPI overprescribing. Our actions include:

- Developing a PPI deprescribing guideline that provides guidance on appropriate PPI indications and the when and how of deprescribing PPIs
- Producing educational posters to promote recommendations from this guideline and support targeted clinician education
- Integrating NPS MedicineWise patient resources into clinical practice to educate patients about when to review PPIs with their doctor and how to manage reflux and heartburn symptoms
- Creating decision support tools in Austin Health's Cerner electronic medical record (EMR) to help clinicians to identify when to consider deprescribing PPIs and to prescribe appropriate step-down doses or alternative treatments
- Creating EMR decision support tools to help clinicians to identify patients at high risk of upper GI bleeding and provide a plan for PPI prophylaxis
- Improving communication of PPI prescribing plans to GPs by adding indications and monitoring advice to discharge script orders so that documentation is available in the discharge summary

The outcomes of our PPI deprescribing approach will be measured through pre- and post- intervention assessment of PPI prescribing and deprescribing practices across Austin Health.



20. “Please help us!”: Responding to patient requests for information about stem cells and how to counter misleading marketing claims

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¹University of Melbourne, Parkville, Australia, ²Chronic Illness Alliance, Moonee Ponds, Australia

Issue

There are a growing number of clinics in Australia and abroad claiming to use stem cells to treat patients with a wide range of illnesses and conditions. These private clinics use direct-to-consumer marketing, including patient testimonials, in lieu of clinical trial evidence of safety and efficacy. Despite educational resources about current stem cell research being available for patients and healthcare professionals, it can be extremely challenging for patients to determine whether a purported stem cell ‘treatment’ is a legitimate option for them.

Approach

This paper draws on interviews undertaken with over 60 Australians who had contemplated having or who have undergone purported stem cell ‘treatments’ for a range of conditions, as well as 36 professionals who are routinely asked about stem cell treatment, including Australian General Practitioners.

Outcomes

Findings reveal the difficulties for individuals in discriminating between different sources of information on commercially available stem cell ‘treatments’ and the limitations of current healthcare responses. Although scientists, patient support representatives and General Practitioners can potentially play a crucial role in supporting patients in their decision making, all groups felt ill-equipped to do so. Additional approaches are required to better address patients’ needs. We suggest that co-development of readily accessible online resources with key consumer groups is an essential next step. This needs to occur alongside development and dissemination of professional standards by Australian medical specialty colleges and more responsive regulation of therapeutic products. Such an integrated approach would provide better safeguards for Australian consumers and assist them in ‘choosing wisely’ in a context of high hopes, conflicting information and scientific uncertainties.

Conclusion: RPBG has demonstrated a successful first year of the Choosing Wisely initiative. Although outcomes are modest at present, we have high levels of engagement and are embedding Choosing Wisely conversations in the education of our clinical staff and patients.



21. Physiotherapists' views on Choosing Wisely recommendations

Dr Joshua Zadro¹, Mrs Aimie Peek², Dr Rachael Dodd³, Prof Kirsten McCaffery³, Prof Christopher Maher¹

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The issue

Choosing Wisely holds promise for increasing awareness of the need to replace low-value care with high-value care in physiotherapy. However, it is unclear how physiotherapists' view Choosing Wisely recommendations.

Objective

To evaluate physiotherapist's feedback on a draft list of Choosing Wisely recommendations from the Australian Physiotherapy Association.

Design

Content analysis

Sample

Physiotherapist members of the Australia Physiotherapy Association

Data collection

The Australian Physiotherapy Association emailed a survey to all their members in 2015 (~15,000) seeking feedback on a draft list of Choosing Wisely recommendations (only one draft recommendation was later excluded from their final Choosing Wisely list). Participants were first asked whether the 'don't' style of wording was an acceptable method for engaging physiotherapists in discussions about evidence-based practice. Participants could answer 'Yes' or 'No' and provide feedback in a free-text field. The next five questions referred to draft Choosing Wisely recommendations and followed the same format (Yes/No for agreement and a free-text field).

Analysis

We used descriptive statistics (counts and percentages) to report agreement with each question and performed a content analysis on all free-text responses using Framework Analysis. Two researchers developed and piloted a coding framework until agreement on a random sample of 20% of responses was 'almost perfect' (Kappa>0.8). The same researchers applied the coding framework to all free-text responses.

Outcome

There were 274 physiotherapists that completed the survey (response rate ~2%) and 459 free-text responses across the six questions. There were 185 physiotherapists (67.5%) that agreed with the 'don't' style of wording. Agreement with draft recommendations ranged from 55.1% (use of electrotherapy for back pain) to 78.1% (use of validated decision rules for imaging). We have coded all the free-text responses and are currently analysing the data. We will present the full findings from the content analysis at the meeting.

Theme 2: Changing culture through health professional education and training



22. Ask an Informationist – engaging the evidence

Ms Michele Gaca¹, Mrs Helen Baxter¹

¹Austin Health Sciences Library, Austin Health, Heidelberg, Australia

Issue

The Choosing Wisely framework encourages clinicians and patients to ask questions and examine the evidence around the necessity of tests or treatment options. For clinicians today, the amount of information available can be overwhelming. Does emerging evidence question existing practices; or has a previous finding been overturned through new research? These key questions inform evidence-based practice decisions, enabling delivery of the most appropriate level of care.

Objectives

Ask an Informationist is an initiative that translates clinical questions into practice. As a member of the Austin Health Choosing Wisely Steering Committee, the Austin Health Sciences Library brings expertise in evidence-based literature searching. A clinical question, directly related to the evidence for tests, treatments or procedures, is submitted to the Steering Committee. The Library team create an infographic as a visual summary of the available evidence, supported by a written report. When coupled with audit data or local policies and procedures, this provides an evidence-rich foundation for clinicians to initiate change and “Choose Wisely” in their delivery of patient care.

Outcomes and impact

To date, six infographics and reports have been produced: intravenous magnesium in atrial fibrillation; continuous intravenous PPIs for acute non-variceal upper gastrointestinal bleed; minimum retesting intervals in microbiology tests; the necessity of opioids for pain management following limb fracture; the management of renal colic; and the use of pregabalin in acute neuropathic pain.

The impact of Ask an Informationist is seen throughout Austin Health. The initiative has: driven change in emergency department practice for intravenous magnesium use; led to delivery of clinical education around PPIs through workshops and media activities; been a catalyst for broader discussion around opioid use throughout the hospital.

Through this collaboration we are engaging the evidence, encouraging critical thinking and shaping the future of our patient care.



23. Asymptomatic Bacteriuria Audit: Armadale Health Service

Dr Joel Tate¹, Mrs Jessica Casado¹

¹East Metropolitan Health Service, Perth, Australia

Background

Antimicrobials should not be used to treat bacteriuria in the absence of specific urinary symptoms, particularly in older adults. Inappropriate antimicrobial therapy contributes to population antimicrobial resistance, places further pressure on a fiscally constrained health care system and exposes the patient to potential side effects, such as increased risk of *Clostridium difficile* infection.

Aims

To review the appropriateness of urine microbiology testing, assess the quality of urine samples collected, review microorganisms isolated, their patterns of sensitivities and resistance and whether antibiotic treatment was initiated appropriately.

Methods

Audit of admitted patients to the Rehabilitation and Aged Care ward over a 3-month period from June to August 2018. Data was collected retrospectively from patient medical records, medication charts and electronic pathology database, then entered into an online Survey Monkey audit tool. Analysis was undertaken in Microsoft Excel.

Results

98 urine samples from 62 patients were analysed. No urinary tract infection (UTI) symptoms were documented for 35/86 (41%) of non-catheterised patients and 6/12 (50) of catheterised patients. Quality mid-stream urine samples were obtained in 21/29 (72%) male and 17/57 (30%) female samples.

In patients without a catheter, 15/86 (17%) had positive urine cultures without any symptoms, consistent with asymptomatic bacteriuria (ASB) and 9/86 (10%) were treated with antibiotics for this ASB. In patients with a catheter, 2/12 (17%) had positive cultures in the absence of symptoms consistent with ASB and both were treated with antibiotics.

The most common isolated organism was *Escherichia coli* (17/40; 43%) and resistance most common to Amoxicillin (8/40; 20%) and Cephalexin (8/40; 20%).

Summary

Urine samples continue to be collected from patients without symptoms of UTI, with a proportion being administered potentially inappropriate antibiotics. Further education and interventions are required to reduce this low quality clinical practice.



24. Supporting junior clinical staff in undertaking Choosing Wisely projects within a tertiary hospital

Dr Sumit Sinha-Roy², Dr Michele Delacretaz², Mrs Jessica Casado¹, Mrs Frances Downey¹, Dr Joel Tate¹, Mr Ryan Shepherd²

¹East Metropolitan Health Service, Perth, Australia, ²Royal Perth Bentley Group, Perth, Australia

Background

As part of a strategy to continue delivering consistent high quality care, Royal Perth Bentley Group (RPBG) has established a Choosing Wisely Support Team (CWST). The CWST have identified junior staff (including medical, nursing, allied health and pharmacy) as a key target group to undertake Choosing Wisely projects to improve an area of clinical service. RPBG has enthusiastic junior clinical staff with fresh insight and who can be a catalyst for long-term culture change. Often the barrier to junior clinical staff undertaking projects is a limited exposure to project management. A need exists for a structured support system to aid junior medical staff and to ensure visibility of current projects.

Aims

To develop a toolkit to support JMOs in project management.

Methods

A needs assessment was undertaken by the CWST to identify areas that JMOs require support and a toolkit was subsequently developed.

Results

- The following resources were developed as part of a Choosing Wisely Toolkit:
- A support guide for completing a Choosing Wisely project – a step-by-step guide to project initiation, execution, developing and introducing recommendations, ensuring the sustainability of a project and report writing.
- Project on a page (POP) template – a one-page summary of the project details and governance structure.
- Submission flowchart – easy to follow instructions for entering the project details into a project governance database.

Next Steps

- To proactively establish a network of junior clinical staff interested in undertaking a Choosing Wisely Project.
- To develop a database of project ideas for junior clinical staff to review.
- Process to measure to outcomes of projects undertaken.

Summary

The Choosing Wisely toolkit is an effective way to provide project management support to JMOs undertaking projects at RPBG by breaking down the barrier to project initiation.



25. Clinician follow-up of elevated glycated haemoglobin results in hospital inpatients

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Background

Diabetes mellitus is prevalent amongst hospital inpatients, and hyperglycaemia is associated with poorer outcomes. An elevated glycated haemoglobin (GHb) level indicates chronic hyperglycaemia and should prompt action to improve glycaemic control.

Objective

To audit clinician response to elevated GHb results in hospital inpatients.

Method: A retrospective audit of inpatient GHb measurements at Royal Perth Hospital over a three-month period. We examined the electronic discharge summary and referral records of inpatients with GHb $\geq 9\%$ to determine if they were referred for specialist diabetes review (inpatient or outpatient), and/or had their diabetes treatment altered.

Results

During the three-month audit period, 764 GHb measurements were performed on 718 RPH inpatients. There were 126 inpatients with GHb $\geq 9\%$; median GHb was 10.6% (IQR 9.7–11.8). Most (84%) were admitted under medical subspecialties; median length of inpatient stay (LOS) was 5 days (IQR 3–9). Of the 126 inpatients with GHb $\geq 9\%$, 74 had inpatient specialist diabetes review, 13 had their diabetes medication independently altered by their treating team, and six had outpatient specialist diabetes review arranged. Therefore, 33 (26%) of the inpatients with GHb $\geq 9\%$, were not referred for specialist diabetes review, nor had their diabetes treatment changed. The median LOS of these patients was significantly shorter than those referred for specialist diabetes review and/or had their diabetes treatment altered (3 vs 7 days, $p=0.001$); most (82%) were admitted under Cardiology (18) and Acute Medicine (9).

Conclusion

There are opportunities to improve the glycaemic control of hospital inpatients by improving clinician follow-up of elevated GHb results and facilitating referral pathways and access to specialist diabetes review, especially for services with a high turnover of short stay patients. There is also potential to save costs by avoiding unnecessary repeat GHb testing, and by not testing those where the result is unlikely to influence management.



26. "Why is a kidney stone like a duck?" Nudging behaviour change to reduce patient radiation from unnecessary renal colic CTU

Mrs Cathryn Dunstan¹, Dr Gabriel Blecher^{2,5}, Dr Melody Hiew³, Ms Angela Melder¹, Prof Diana EgertonWarburton^{4,5}

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Objective

In recent years, despite a 10-fold increase in CTU usage for diagnosing renal colic, neither the proportion of patients diagnosed with urolithiasis nor requiring urological intervention have changed. This increased CTU usage exposes patients to unnecessary radiation and risks of over-diagnosis of incidental findings.

This project aimed to reduce routine computed tomography urography (CTU) for suspected renal colic patients when identified as a low-value test, through a multifaceted education and awareness campaign using a "duck" analogy.

Methods

To achieve this aim an evidence-based clinical guideline was developed. Based on previous locally conducted research, the clinical guideline extended the Choosing Wisely recommendation to define clinical assessment factors, or red flags, where CTU would be appropriate for use in diagnosis.

The intervention

A multi-faceted approach was utilised to implement the clinical guideline. The intervention was targeted to three emergency departments of a large metropolitan hospital network. This included formal education, and 'nudge' interventions; utilised to improve behaviour change reach. The nudge interventions promoted the analogy "If it looks like a duck and quacks like a duck, then it is probably a duck!" to support the questioning of CTU value in the diagnosis of renal colic.

The "Duck" project used a Plan-Study Do-Act approach to refine the implementation process. Impact was assessed monthly by way of diverse pre- and post-intervention implementation measures including CTU order rates for all patients presenting with suspected renal colic.

A pre-intervention baseline median indicated 3.3% of patients with suspected renal colic received a CTU. Suspected renal colic patients were determined by the five top triage presentations aligned with a diagnosis of renal colic.

Results

Post-education results will determine if the multifaceted approach is successful in reducing CTU usage for suspected renal colic and if 'nudge' interventions are an effective alternative to conducting large scale education programs.



27. Whack-a-mole: an innovative approach to evidence-based teaching and assessment of complementary medicines

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The Therapeutic Goods Administration (TGA) defines complementary medicines (known as supplements in other countries) as vitamins and minerals, fish oil, Western herbal medicine, Chinese traditional medicines, Ayurveda (Indian) medicines, indigenous medicines, homeopathic medicines, probiotics and aromatherapy products.

In 2017, the Australian complementary medicines industry was worth \$4.9 billion. Its products are regularly used by one-third of the Australian population.

Students of health sciences and medicine need to understand the limited regulation of these products and be able to initiate conversations about their evidence base, risks and benefits.

The whack-a-mole (WAM) project was devised to enable students to apply evidence-based medicine skills to investigate the promotion and regulation of complementary medicines in Australia.

Biomedical science students worked in small groups to select, document, investigate, critically appraise and identify any breaches of regulation on a complementary medication on sale to the Australian public. Students were required to submit their results via a written report. Data was collected using an online questionnaire.

A total 464 students (119 reports) completed the WAM assessment with an average mark of 52/60 (86%). 116 students (25%) completed the online questionnaire. Of these, 98% found that their product lacked evidence to support the claims made and 92% said the WAM project changed their perceptions of complementary medicines and its regulation by the TGA. A de-identified selection of student reports was submitted to the regulators as formal complaints. All were upheld.

The WAM project was taken up by Bond University in 2018.



28. Confused patients and confused doctors: the role of CT brain in patients presenting to ED with confusion

Miss Aarane Jeyakumar¹, **Dr Emma Cole**, Dr Paul Buntine^{1,2}

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Background

The utility of Computed tomography (CT) of the brain within the emergency department in the setting of patients with delirium, acute confusion or altered conscious state is a topic of ongoing debate. Although the majority of cases are the result of systemic conditions rather than true neurological pathology, the initial workup still frequently encompasses imaging of the brain as a baseline test. We aimed to discover the diagnostic value of CT Brains in patients without trauma or other localising neurological factors, in determining the cause for acute confusion/ altered conscious states within the emergency department.

Method

We performed a retrospective study of all 442 patients who presented to Box Hill Emergency department who underwent a non-contrast CT brain in November 2018. Further categorisation of the data by indication was undertaken to rule in patients who presented with confusion/ altered conscious state, in the absence of recent trauma or new onset focal neurological symptoms. This resulted in 66 patients for inclusion in this study.

Results

Of the 66 non-contrast CT brain scans included, 61 (92%) were normal and 5 (8%) were abnormal. Of the abnormal scans, 2 cases had a past history of cancer, 2 had repeated vomiting suggestive of increased intracranial pressure (ICP) and 1 was extremely obtunded, with a GCS < 8 on presentation.

Conclusion

This small study suggests that CT brain in the setting of new onset confusion is unlikely to be of benefit unless specific risk factors are present. Using this more focused approach had the potential to safely reduce CT scans for confusion by 92% during the audit period and reduce overall CT brain scans by 13%.



29. Reducing low-value care in the Department of Critical Care Medicine

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Aim

To reduce unnecessary testing in 'ward ready' patients located in the Department of Critical Care Medicine.

Background

Due to the high demand for ward beds, critical care patients can wait for extended periods prior to transfer to the ward. (mean \geq 984 total hours per month at St Vincent's Hospital Melbourne). The culture at the hospital is to continue caring for these patients with a high acuity ratio resulting in a number of unnecessary tests being performed.

On average approximately 170 blood gases/month were taken unnecessarily and 80% of all 'ward ready' patients continued to receive hourly clinical observations.

Method

A problem-solving methodology was used to better understand the contributing factors to unnecessary testing. Clinical staff were supported to develop an intervention to address these factors resulting in a 'ward ready' standard.

Implementation of the standard was via an education phase followed by a two-week trial. The standard was reviewed and modified based on clinician feedback.

Education included promoting the benefits of the 'ward ready' standard to staff including improved patient experience, patient care scaled down prior to ward transfer assisting the patient through the transition and empowering nursing staff to reduce the high acuity ratio. One of the key messages was an increase in the amount of time available for value-add activities within the unit.

Outcomes

Over the intervention period the blood gas testing in 'ward ready' patients reduced by $> 60\%$ and $< 10\%$ of 'ward ready' patients continued to receive unnecessary clinical observations. Staff feedback included feeling they have more time, are less rushed when facilitating ward transfers and have an increased ability to assist colleagues.

By introducing a 'ward ready' standard supported by targeted education, the culture in the Department of Critical Care Medicine was challenged and successfully changed.



30. High Value Health Care Collaborative - Galvanising Health in WA Workshop and Choosing Wisely Workstream

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Issue

The Western Australian (WA) High Value Health Care Collaborative (HVHC) engages stakeholders from across the WA health system to enhance the systematic delivery of high-value care. Given the increasing engagement of WA health services in individual Choosing Wisely projects, one of the key components of the HVHC is a Choosing Wisely workstream. To embed this workstream and facilitate knowledge exchange, collaboration and networking, the WA Department of Health held the Galvanising Health in WA Workshop in July 2018. Implementation of the Choosing Wisely Australia® initiative was the key priority.

Objectives

The primary objective of the workshop was to enable staff to gain awareness of implementation strategies as well as address challenges in implementation of activities to promote 'value' in healthcare'. The secondary objective was to provide attendees with the tools for a successful collaborative.

Outcomes

Post-event, 64% and 84% of respondents felt the workshop achieved its primary and secondary objectives respectively. Eighty percent of the responses agreed that they could take the information from the workshop back to their workplace and advance or explore a project that improved care, health and value. The workshop has been a significant step towards developing an effective collaborative for WA Health. The workshop has acted as a catalyst for initiatives under the Choosing Wisely banner, including facilitating discussions with the Child and Adolescent Health Service (CAHS) to join Choosing Wisely Australia® as a member/champion site which will make WA the first jurisdiction in Australia to have representation from all public health services.

Delegates indicated that they would attend another workshop particularly around topics such as 'sustaining quality improvement' and 'leading change'. It is recognised that there is a need to continue the momentum, there is value in working together across the system, and the HVHC is instrumental in facilitating this.



31. Steps towards more effective care: Implementing Choosing Wisely

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¹NPS Medicinewise, Surry Hills, Australia

Background

Choosing Wisely Australia® (CWA) is an initiative that brings the community together to improve the quality of healthcare through considering tests, treatments and procedures where evidence shows they provide no benefit or may lead to harm. Educational outreach visiting (EOV) is a proven and effective intervention to change health professionals' practice.

Aim

NPS MedicineWise developed a multifaceted program, including EOV as a key intervention, to reduce prescribing of pregabalin and gabapentin for pain which does not fulfil the criteria for neuropathic pain (NP) -a CWA recommendation.

Method

The program focused on changing general practitioner (GP) awareness and aspects of practice to implement the CWA recommendation. Evaluation of EOV was conducted using a post-visit online survey. Future Pharmaceutical Benefits Scheme data will be used to evaluate the potential economic impact of behavioural change reflecting the effective Quality Use of Medicines (QUM) and CWA recommendation.

Results

A total of 8237 GPs participated in EOV. The survey response rate was 11.7%. GPs reported a combined actual and intended change in practice of 48.7%, together with specific changes in practice (aligned with the CWA recommendation) including: to use history and clinical examination (sensory testing) to diagnose NP (48.6%) to a probable level before prescribing NP medications (36.9%); to use pregabalin only when the pain fulfils the criteria for NP (35%); to initiate a NP medication at the lowest possible dose with gradual titration and adequate trial to ensure the best outcome (16.2%); and to consider non-pharmacological strategies to address patient expectations, psychological and physical aspects (22.9%).

Conclusion

EOV can be effective in implementing CWA recommendations. GPs reported changing practice and diagnostic approach to avoid prescribing pregabalin if the patient history and examination did not indicate probable neuropathic pain, providing effective QUM and a step towards more effective patient-centred care.



32. Reducing inappropriate telemetry at an academic medical center

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¹*Johns Hopkins University, Baltimore, USA*

Telemetry is an important tool to detect fatal arrhythmias, but evidence has demonstrated it to be frequently misused and knowledge of evidence-based practice standards to be lacking. In addition the Society of Hospital Medicine in its Choosing Wisely list ask providers to use telemetry outside of the intensive care unit only for guideline-based indications.

We sought to answer if systems-based interventions could improve resident physician education on telemetry practice standards while concurrently reducing telemetry use among inpatient internal medicine patients cared for by resident physicians. Interventions included a nurse-initiated telemetry discontinuation protocol as well as a modification to the telemetry order within the electronic medical record (EMR) mandating provider selection of a practice standard-based indication prior to activation.

The study occurred at the Johns Hopkins Hospital between July 2014 through July 2016, with practice standard knowledge assessments and attitudinal surveys given prior to and after the intervention period. Results were notable for a reduction in patients' mean time on telemetry from 86.29 hours to 70.81 hours ($p < 0.01$ statistic) and an improvement in knowledge assessment scores on post-intervention testing compared to baseline ($44 \pm 0.33\%$ correct from $33 \pm 0.35\%$ correct, $p < 0.01$).

We conclude that, among patients admitted to internal medicine, guideline-based telemetry orders combined with nurse-driven discontinuation protocols safely reduce average patient time on telemetry while concurrently serving as a valuable educational tool on telemetry practice standards within academic hospitals.



33. Sensible test ordering practice in the emergency department of a NSW district hospital

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¹Mona Vale Hospital, Sydney,

Description of a QI project run at a district hospital emergency department in Sydney, to attempt to rationalise pathology and radiology test ordering in line with current evidence and guidance from the Choosing Wisely campaign. We targeted a 20% reduction in line with Emergency Care Institute Sensible Test Ordering Project of 2007.

Involved multi-modal education of nursing and junior medical officers, followed by audit of the frequency of test ordering over the 3-month study period, compared to same 3-month period in the two preceding years, and a follow up at one year. We looked at the breakdown by pathology areas (haematology, biochemistry, microbiology) and radiology (plain films, ultrasound, CT).

Allowed us to look for a change in behaviour and evidence of a sustained response at one year.

We demonstrated a significant reduction in test ordering behaviours during the study period and at one year. There was a clear reduction in certain expected domains of overuse in line with much of the Choosing Wisely teaching. These reductions included microbiology (FLOQ 70%, Urine MCS 35%, blood cultures 40%, skin swabs 45%), haematology (clotting 60%), biochemistry (drug levels 50%), POC blood gases 45%.

No adverse outcomes to patient care or flow were identified, though limited mechanisms were in place to capture these.



34. Over-testing and over-treatment of asymptomatic bacteriuria (ASB): A multidisciplinary intervention to improve management in the subacute setting

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Background/Objectives

Over-testing and over-treatment of ASB is a focus area, supported by three Australian colleges in their Choosing Wisely recommendations. Engagement, environmental change, structured decision-making approaches and education to highlight current evidence and promote awareness is necessary to drive culture change and sustained improvement.

This study assesses the impact of a multi-disciplinary education campaign in six rehabilitation/geriatric wards, to reduce unnecessary testing and treatment of asymptomatic patients.

Method

A prospective review of 229 urine cultures was performed to monitor the impact of interventions across 3 project phases. Interventions included:

- New guideline for the investigation of suspected Urinary Tract Infection (UTI)
- Education of medical/nursing staff by an infectious diseases physician/pharmacist
- Knowledge and attitudes survey of nurses pre and post education
- Weekly feedback on audit results
- Removal of Full Ward Test Urine (FWTU) products from wards

Results

A FWTU preceded 26% of cultures and while 92% of nurses felt confident to initiate testing, only 47% could correctly identify UTI symptoms. This demonstrated the importance of engaging nurses in interventions. Following education, recognition of risks of unnecessary testing improved (19% to 69%) and there was a 48% reduction in the number of FWTU performed.



35. Analysis of oxycodone prescribing on patient discharge at a Victorian Tertiary Hospital

Mrs Mays Solomon¹, Dr Rumes Sriamareswaran², Dr Navin Amarasinghe²

¹*Department of Pharmacy, Peninsula Health, Frankston*, ²*Department of Medicine, Peninsula Health, Frankston*,

Opioid use in pain management is increasing in Australia. Over prescribing opioids in an opioid-naive patient can result in misuse, diversion and abuse of opioid medications. The Victorian Coroner's report shows a 21-fold increase in oxycodone-related deaths from 2000 to 2009. Risk factors for persistent opioid-use include male sex, age above 50 years, pre-operative pain, medical comorbidities, depression, and a history of drug, alcohol or tobacco abuse.

The aim of the study was to quantify the number of opioid-naïve patients discharged with oxycodone immediate release (IR) without a titration plan, and to identify if these patients were at risk for persistent opioid use.

A retrospective study was conducted on opioid-naive patients discharged from Frankston Hospital with a prescription for oxycodone IR in June 2018. Oxycodone IR use 24-hours prior to discharge, number of tablets prescribed, documentation of a discharge plan for oxycodone IR as well as risk factors for persistent use were analysed.

A total of 447 patients were prescribed oxycodone IR, of which 73% were opioid naive. Of these patients, there were 123 males and 203 females, with an average age of 47 years. 60% of patients were prescribed 20 tablets of oxycodone and 69% of these patients used 5mg or less of oxycodone IR in the 24 hours prior to discharge. 39% of patients who were prescribed 20 tablets of oxycodone IR, used 5mg or less of oxycodone in the 24 hours prior to discharge and had at least one risk factor for persistent opioid use. Only 2% of discharge summaries had an opioid titration plan.

In conclusion, most opioid-naive patients are discharged with 20 tablets of oxycodone IR without a weaning plan despite using minimal opioid use prior to discharge. This study has resulted in the commencement of an opioid stewardship committee.



36. Raising the bar on cancer screening

Ms Catherine Spiller¹, Kathy Lowry¹

¹*PHT, Hobart, Australia*

Background

Primary Health Tasmania's (PHT) publication Needs Assessment 2017/18 asserts that while Tasmanian cancer screening rates exceed the national rate in each of the 3 national programs, there are populations within Tasmania where rates are sub optimal.

Strategies

PHT developed 4 key strategies:

- Understand cancer screening environment
- Collaborate with key stakeholders
- Develop resources for primary health providers (PHP)
- Provide educational opportunities for PHP

Activity that supports our strategies

- a) Events: In February 2019 PHT and Tasmanian Health Service Population Screening and Cancer Prevention unit partnered to deliver education event, Early detection of breast cancer – the role of the GP. More than 100 PHPs attended the events in Launceston and Hobart, with a third event planned for Devonport. 81% of GPs and 92% of nurses reported that their learning needs were fully met. 19% of GPs and 8% of nurses reported that their learning needs were partially met.
- b) New look website: PHT created a webpage dedicated to cancer screening, to house revised content and helpful links.
- c) Disseminate information: During 2018/19 PHT disseminated information to PHPs and the community via e-newsletters and social media channels, e.g.:
 - Resources to support increased screening, e.g. for people with an intellectual disability
 - Breast bus location schedule
 - Health week messages
 - Update to National Cancer Screening Register
 - Updated Tasmanian Health Pathways
- d) Develop cancer screening toolkit: PHT developed a resource designed to help general practices increase patient participation in Australia's three national cancer screening program. It includes general information around cancer screening, quality improvement, standards, and data; and program-specific resources e.g. CAT4 recipes, data tips and links to Tasmanian Health Pathways.

Launched in February 2019

- Promotion plan includes education and networking events, including those of key stakeholders, provider support teams, uploading to Tasmanian Health Pathways.
- Work collaboratively with practices in areas of low screening.



37. Deprescribing- Supporting medication management

Ms Catherine Spiller¹, Mrs Angela Baker¹

¹Primary Health Tasmania, Hobart, Australia

Background

For older members of the community, taking multiple medications (polypharmacy) can cause problems such as falls and different effects from when originally prescribed. Deprescribing is a process of withdrawing medicines in an attempt to improve a person's health.

Resources for health professionals

Primary Health Tasmania contracted a group of pharmacists and medical practitioners to develop a suite of Deprescribing resources for their peers.

Eight resources were created in June 2015. The medications covered were

- Antihypertensives
- Antiplatelet agents
- Antipsychotics
- Benzodiazepines
- Biphosphonates
- Statins
- Vitamin D and Calcium

as well as a General Information document and a Quick Reference Guide.

Education events

Between June 2015 and June 2016, eleven workshops educated general practitioners, pharmacists and community-based nurses on deprescribing options.

Positive feedback from the initial package, and the training, led to more medications being included, as below;

- Allopurinol
- Cholesterinase inhibitors
- Glaucoma eye drops
- NSAIDS
- Opioids
- Proton pump inhibitors
- Sulphonureas

The full suite of resources was sent to every general practice in Tasmania.

Resources for consumers

A consumer brochure and card called "Rethinking Your Medications" were developed, to help people to understand why talking with their GP or pharmacist about the medications they are taking is a conversation worth having.

Consumer education events

A partnership with Council on the Ageing (COTA) led to a series of education sessions being delivered to hundreds of older Tasmanians and their families between July 2016 and March 2017. The purpose of these events was to empower consumers to ask the right questions about the medicines they use.

What's next?

Primary Health Tasmania is updating the 16 Deprescribing resource, soon to be available on our website, in addition a video and education event is currently being planned to support prescribers.



38. Using the behaviour change theory to create sustainable culture change

Mrs Carla van Waart¹

¹Peninsula Health, Frankston, Australia

Peninsula Health is one the 11 Health Services participating in the Choosing Wisely Collaborative coordinated by Better Care Victoria. Our main focus so far has been on reducing the number of unnecessary lumbar-spine CT scans and X-Rays in non-traumatic lower back pain.

We recognised early in the project that diagnostic ordering patterns are a form of human behaviour – so applying behaviour change principles would be key to achieving sustainable outcomes. As a result, we have adopted the Behaviour Change Wheel (BCW) framework to conduct a behavioural diagnosis of ordering behaviour and to design a comprehensive behaviour change intervention. The BCW, developed at University College London, is a synthesis of 19 behaviour change frameworks and provides a practical guide to designing and evaluating behaviour change interventions.

Following the BCW method, focus group discussions were held with three groups of emergency physicians of different seniority to identify barriers and facilitators to appropriate ordering of imaging. 25 themes were identified and coded in the Capability, Opportunity, Motivation framework (COM-B). The outcomes of the behavioural diagnosis were used to identify appropriate intervention functions, and effective behaviour change techniques (BCTs) were chosen from a taxonomy of BCTs. Six interventions were designed: establish guidelines, deliver training, raise awareness, build a decision-support system), establish a feedback loop, and increase access to MRI.

This approach has helped us to identify and address the main drivers of ordering behaviour. Engagement from clinicians has been high due to the evidence-based nature of the approach, and Executive Directors have also embraced the method for its broader potential to change organisational culture. Implementation is currently underway, and results are expected by the end of 2019.



38.1 An epidemic of pain: why we need to act to reduce opioid misuse

Ms Priyanka Rai¹, Carol Bennett¹

¹*Pain Australia, Deakin, Australia*

It is indisputable that Australia is caught in an epidemic of prescribed opioid misuse. With nearly all opioid prescribing having its origins in efforts to manage acute or chronic pain, we need to refocus the discussion around better pain management.

New research indicates that 3.24 million Australians today live with chronic pain, with a majority currently unable to access best-practice pain assessment and management. The vast majority of people with pain are supported through primary care. Evidence suggests clinicians' practice in responding to common pain conditions like low back pain, is outdated, and that many clinicians would benefit from targeted training to deliver better assessment and care for people with pain. Currently, there is heavy reliance on pharmaceuticals for pain management, with over 68% of GP attendances for pain resulting in a prescription.

Over-reliance on opioids to manage pain is a particular concern that is most likely to occur when GPs are unfamiliar with alternative care pathways or because GPs know that, in cities, access to pain clinics can take years. Outside of cities pain centres are simply unavailable.

It is estimated that more than 60 lives could be saved each year from a nationwide GP education program addressing chronic pain and opioids, delivering a benefit: cost ratio of more than 6:1. Problems with opioid misuse need to be considered in the broader context of pain management. Evidence shows that people with chronic pain who are engaged in active approaches to managing their pain have less disability than those who rely on medication or surgery.

Challenging beliefs about pain treatment, including beliefs about the need for opioids and other pain medications, scans and surgery, helps build consumer resilience and produce better health outcomes.

Theme 3: Evidence of practice change: Achievements and lessons learned from primary to tertiary care



39. Families tell us about terrifying cortisone stories - Optimising FTU with TCS

Ms Stephanie Dowden¹

¹NursePrac Australia, SUCCESS, Australia

In our nurse practitioner-led paediatric clinic, we combine healthcare with child and family education and self-management. Our special interest is non-communicable diseases of childhood, with approximately 40% of our patients having eczema.

Eczema affects 1 in 4 Australian children under 5 and results in itchy skin, lost sleep and high levels of child and parent distress. Despite its prevalence, eczema is often poorly managed by health professionals.

In the first two years of clinical practice, we have noticed high rates of parental topical corticosteroid (TCS) phobia, poor understanding of eczema and low knowledge of best practice treatment for eczema. In addition, many parents report the source of their information as health professionals.

This paper will present an audit of 2 years of eczema clinic data, parent TCS knowledge, usage and prior education at first clinic visit and eczema severity score at initial and final visit.

Most parents reported low use of TCS at first visit and elevated anxiety about the safety of TCS. The majority of parents reported they had not been educated about using TCS or been given any written information.

Our approach is to first identify areas of misinformation, then educate accordingly to empower parents to self-manage their child's eczema. The results of this method are very positive with statistically significant outcomes achieved. Recommendations to optimise eczema care will be discussed.



40. The impact of changes to choice architecture on GP Diagnostic requesting patterns: UK case studies

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Change theory demonstrates that behaviour change models are necessary to change requesting patterns in primary care. Our results demonstrate the effective nature of simple choice architecture and nudge theory to significantly alter requesting patterns and reduce unnecessary testing.

Throughout the UK, demand optimisation is usually undertaken as part of local initiatives. National guidance on demand optimisation is still in development. Since 2012 the UK healthcare economy has a purchaser-provider split, with primary care 'commissioning groups' (CCG) acting as purchasers of services and responsible for payment of these services. Tariffs vary considerably throughout the UK. Pathology represents approximately £2.5 billion spend in the UK, (4% of UK healthcare budget).

Evidence suggests a third of primary care consultations result in pathology requests, and of these a third are either unnecessary or inappropriate. Most strategies are primary care led and it is rare for primary care, tertiary care and laboratories to work together to drive down unnecessary testing. This differs from the Australian model where the onus is on the providers to reduce demand to fit with their remuneration models.

This paper demonstrates UK case studies where different approaches to demand optimisation and their effect on activity levels:

- Education only – short term effect and weak return on investment
- Education, audit +/- incentive schemes – resource intensive and reduces savings.
- Changes to architecture, education and audit
- Changes to choice architecture and education built into ordering systems

For example, removal of ESR from the main screen and adding an advisory comment resulted in a 65% reduction. More examples and contrasts in the full paper.

In summary, simple changes in choice architecture allow a fast, effective return-on-investment for demand optimisation projects. However long-term strategy needs to include a more integrated approach including whole system (primary and secondary care) diagnostics redesign.



41. How hospital-based order sets can help drive practice change and significantly reduce harm and costs associated with unwarranted variation

Mrs Lis Herbert¹, Mr Colin McNeil¹

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Unwarranted variation means people can be exposed to harm from not receiving the care they need, or potential harm from receiving care they do not need and cannot benefit them. A key contributor of unwarranted variation is inappropriate ordering of medications and diagnostic tests.

A study conducted at an adult major referral hospital in metropolitan Melbourne revealed 61.5% of patients had at least one medication error, while the Australian Atlas of Healthcare Variation found the rate of cardiac stress testing and imaging varies up to 10-fold across Australia. Aside from the clinical and patient safety risks, clinically unnecessary practices like over-ordering diagnostic tests and prescribing inappropriate medications is estimated to cost our health system more than \$15 billion a year. Order Sets have been proven to significantly improve both the quality and cost of healthcare by supporting clinicians with evidence-based guidance around appropriate orders at the point of ordering.

Order Sets are a pre-defined, conveniently grouped set of orders relating to a condition or procedure that can be tailored to individual clinician and organisation preferences, with evidence-based guidance provided. Clinical Leadership and a rigorous governance process for development and maintenance of Order Sets is critical to successful implementation. When this is done, not only can Order Sets deliver reductions in medication errors, inappropriate ordering and therefore patient harm and overall cost, but organisations see increased clinician satisfaction and compliance with evidence-based guidelines, as well as improvements in clinician productivity.

Ultimately, there are multiple studies to show implementing an EHR is not sufficient to drive improvements in quality and cost of healthcare – in order to support clinicians to Choose Wisely, clinical decision support in the form of Order Sets should be implemented.



42. Identifying alternative models of healthcare delivery to increase value: A scoping review of systematic reviews and a Delphi study

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¹Monash University/Cabrini Institute, Melbourne, Australia, ²Bond University, Robina, Australia, ³The University of Adelaide, Adelaide, Australia

Alternative care delivery arrangements aimed at improving sustainability are often introduced without evaluating whether they deliver similar or greater benefits for patients at less cost.

The overall objective of our work is to identify promising models for further evaluation in the Australian setting.

- The specific aims of our study were to conduct:
- a scoping review of systematic reviews (SRs) synthesising effectiveness and cost-effectiveness of alternative health care delivery arrangements
- a Delphi study to seek input and consensus on a list of alternative arrangements that are promising for improving the sustainability of the Australian healthcare system.

For the scoping review, we considered all SRs published in PDQ from between 2012-2017, and relevant to high income countries, that assessed the effects of alternative care delivery arrangements (lower cost providers, locations and/or formats of service delivery), and reported on at least one patient, quality, equity, or resource use outcome. Results showed that while most studies (93% of 532 in total) have considered patient-relevant benefits and harms, few (32%) have considered the cost-effectiveness of alternative delivery arrangements.

Informed by a scoping review, a modified e-Delphi survey with 2 rounds (open round followed by scoring round) was conducted among field experts and consumer representatives (n=72). Of 106 alternative delivery arrangements included considering input from the first round, 14 were rated as (very) high priority by over the 70% of the panel. Of the three top-rated arrangements, two constitute different forms of co-location and coordination of care for nursing home residents, and one was concerned with the provision of multidisciplinary care for a range of chronic conditions. The Delphi study has been an essential step from extensive review of systematic reviews in this field towards translating and using this evidence to improve the Australian health care system.



43. Collaborating to achieve change

Dr Joanna Lawrence¹, Ms Lauren Andrew¹, Mr Tim Marshall¹, Dr Gabriel Akra², Ms Jennie Fisher²

¹Royal Children's Hospital, Parkville, ²Albury-Wodonga Hospital, Albury-Wodonga, Australia

Bronchiolitis is a viral infection causing respiratory symptoms infants under the age of 1 year. Current international guidelines recommend against the routine use of chest x-rays (CXR) **due to difficulties in interpretation and the likelihood that CXR findings will contribute to unnecessary antibiotic use.** ¹ Avoiding CXR use in children with clinically diagnosed bronchiolitis, has become a Choosing Wisely recommendation endorsed by the Royal Australasian College of Physicians, Paediatric and Child Health Division.

In 2018, Albury-Wodonga (AWH) and the Royal Children's Hospital (RCH) analysed rates of CXR use in bronchiolitis. RCH is a specialised tertiary paediatric hospital, and AWH is a mixed adult-paediatric regional hospital. The numbers of infants presenting with bronchiolitis between November 2017 and April 2018 were 38 in AWH and 451 in RCH. Despite the significant difference in number of presentations, initial CXR rates were found to be similar, 12.1% (RCH) and 13.1% (AWH).

Tackling the same issue has allowed significant collaboration between the 2 sites, with identification of appropriate target rates (4%) and interventions. AWH instituted their intervention over the last few months, including education strategies, inclusion of Choosing Wisely project in medical handover regularly, consumer facing information, an intranet article and mandated senior staff review prior to ordering a CXR. These strategies have resulted in AWH almost meeting target rates with a drop in CXR use to 5.2% in infants with bronchiolitis. RCH have designed an audit and feedback tool for frontline clinician driven behaviour change which is planned to roll out over winter when patient numbers are expected to increase.

This work has shown that similar rates of CXR use in bronchiolitis existed in both a tertiary paediatric teaching hospital and a regional centre, and that collaboration and sharing of ideas across sites has proven a useful resource for both sites.



44. Is Northern Health Choosing Wisely in ordering CT pulmonary angiogram for pulmonary thromboembolism in the emergency department?

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Background

Choosing Wisely Australia was launched to reduce unnecessary investigations and treatments. This project is evaluating the change of practice at Northern Health Emergency Department (ED) related to the Choosing Wisely recommendation published by The Royal Australian and New Zealand College of Radiologists:

“Don’t request any diagnostic testing for suspected pulmonary embolism (PE) unless indicated by Wells Score (or Charlotte Rule) followed by PE Rule-out Criteria (in patients not pregnant). Low risk patients in whom diagnostic testing is indicated should have PE excluded by a negative D dimer, not imaging.”

Methods

Records of all 360 patients who had computerised tomography pulmonary angiography (CTPA) at Northern Health ED were collected from July to October 2017 as pre-implementation data. A clinical decision flowchart, following a protocol validated at Melbourne Eastern Health, published by Buntine et al., that included Wells score, PERC and D-dimer was applied retrospectively to justify the use of CTPA in these patients. In February 2019, the same flowchart was implemented as hospital protocol for adult non-pregnant patients presenting to ED where CTPA was considered by clinician. This implementation involved staff education, weekly monitoring of compliance and change of CTPA radiology request pathway. Post-implementation data will be collected from March to April 2019 inclusive to evaluate changes in CTPA imaging rate and yield.

Results

Pre-implementation CTPA imaging rate was 14 per 1,000 presentations, with a yield (CTPA positive for PE) of 7.2%. The flowchart showed 104 CTPAs were appropriate, 52 were inappropriate, 9 were borderline based on D-dimers near cut-offs, and the remaining 195 did not follow the flowchart, thus undetermined appropriateness. Post-implementation data will be presented.

Conclusion

CTPA imaging rate is high with low yield at Northern Health ED. The use of a flowchart incorporating Choosing Wisely recommendation should significantly reduce CTPA imaging rate and increase yield.



45. Identifying patients at high risk of opioid-related harm in a busy tertiary hospital: where do we start?

Ms Parnaz Aminian¹, Ms Emily McCormack¹, Ms Samanta Lalic¹, **Dr David Liew¹**, Ms Elizabeth Su¹, Dr Tom Wilsdon¹, Dr Bonnia Liu¹, Ms Asmara Jammali-Blasi^{1,2}, Prof Albert Frauman¹, Mr Kent Garrett¹

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With the increasing prevalence of opioid misuse and harm in our communities, there is a need to take a systematic approach to identifying patients at risk of misuse. Patients that may benefit from an opioid review are those that have had quick dose escalation, lack of effectiveness with rising doses, an oral morphine equivalent daily dose (oMEDD) greater than 100mg a day, neuropathic pain features, primary indication for opioid no longer applicable or high risk of respiratory depression (e.g. comorbidities, polypharmacy).

The busy environment of an acute hospital gives limited opportunity for the identification of these patients to occur. At our institution, patients are often seen by a pharmacist within 72 hours of admission and a thorough medication history is obtained. The medication history interview presents a great opportunity for information about a patient's opioid history to be elucidated.

We are conducting a retrospective audit on medication history forms for 100 patients admitted to our hospital with an oMEDD greater than 100mg, to assess whether enough information is gathered at the interview to identify risk factors for opioid related harm. The patient cohort has been obtained through a clinical data warehouse and information on medication history obtained through scanned medical records. The results presented at this meeting will provide a baseline picture of current practice and foundation for the development of a screening tool to identify high risk patients and in turn, a pathway for early intervention.



46. An organisational approach to Australia's opioid epidemic

Ms Parnaz Aminian¹, **Dr David Liew¹**, Ms Elizabeth Su¹, Dr Tom Wilsdon¹, Dr Bonnia Liu¹, Ms Asmara Jammali-Blasi^{1,2}, Prof Albert Frauman¹, Mr Kent Garrett¹

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Inappropriate opiate use in the community has given rise to a new epidemic in Australia. Studies suggest that about 10% of opioid naïve patients receiving opioids on discharge from hospital become long term users (1). In response to this growing public health issue, Medicines Optimisation Service (a joint Austin Health Pharmacy and Clinical Pharmacology initiative) has developed a framework for implementing concepts of opioid stewardship to the hospital setting. The framework critically assesses each stage of a patient's journey, from outpatient to inpatient and through to community, unveiling areas that could benefit from optimisation.

Our framework provides the tools on how to identify and approach problems surrounding opioid misuse at our organisation, whilst also highlighting existing services and successful initiatives. Through our engagement of specialist physicians, physiotherapists, nurse practitioners, outpatient nursing staff, community carers and pharmacists, we have aspired to achieve an accurate depiction of challenges faced by both clinicians and consumers throughout the patient journey. This organisational approach has inspired the creation of our hospital's common aspirations to reduce opioid misuse by improving consumer education, improving documentation as patients transition into community care, providing the hospital system with tools to identify high risk patients and empowering health professionals to support best use of opioids.

Our framework allows for replicability by other institutions and could be a powerful tool in helping them achieve their goals of providing optimal opioid care. The Austin Health Opioid Roundtable being held in April 2019 will give forum to addressing the issues identified through this process and assist in building the foundations of the improvements that we intend to make in the coming year.

1. Stark N, Kerr S, Stevens J. Prevalence and predictors of persistent post-surgical opioid use: a prospective observational cohort study. *Anaesthesia and Intensive Care* 2017;45(6):700-06.

Theme 4: Innovative ideas to measure or evaluate impact of Choosing Wisely



47. “Pill-O-Talk”: Engaging a panel of people with diabetes in the development of a new, safety-oriented, augmented reality app in Australia

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Introduction

Medication packages typically have ‘static’ consumer medicine information brochures, which are challenging to read or understand. New communication technologies on smartphones provide more opportunities for improving people’s understanding of their medications. Leveraging upon the information available from NPS MedicineWise, we introduced a novel technology, augmented reality (AR), to people living with type 2 diabetes mellitus (T2DM) in Australia. With AR, the participants could scan the packages of their medications using an app, and visualise ‘dynamic’, safety-related information from NPS MedicineWise on top of their medications to improve health literacy.

Method

We conducted a nationally-representative consumer panel survey on Australian adults aged ≥ 18 years with T2DM, to gather data on demographics, diabetes control, smartphone usage, and knowledge of AR. Then, two case scenarios for daily use of a custom-designed AR app (MedAugment) were presented: 1) for a newly-prescribed medication at pharmacy; 2) for a previously-prescribed medication at home/work. Based on technology acceptance model (TAM), participants’ beliefs, attitudes, and intentions to use the app were analysed using structural equation modelling.

Results

Analysis of 185 validated responses showed that the participants were very interested in MedAugment as a novel solution. Perceived ‘usefulness’ and perceived ‘ease of use’ of the app significantly correlated with individuals’ attitudes towards, and intention to use AR to improve medication safety. Also, materials from NPS MedicineWise were well-received by the participants. Statistically, the results were consistent between men and women and TAM fit the data.

Conclusion

TAM provided a sound explanation for individuals’ intention to use the new AR app. Two important factors affected individuals’ intention, i.e. perceived usefulness and ease of use of the solution. Thus, to improve health literacy using AR, these factors should be taken into consideration. The research outputs were used in informing the development process of MedAugment in a follow-up study.



48. Providing clinical leadership for proactive, targeted patient care and reduced healthcare costs by unlocking the power of your data

Kathleen Frost¹

¹*LTS Health UK, London,*

Evaluating the impact of Choosing Wisely initiatives can be a difficult task. Health economists should no longer rely on outdated measurement techniques such as overall spend and/or activity as a measure of effectiveness. Statistical measures of "best practice" are required. As well as tracking impact of current schemes, clinicians require tools to actively explore opportunities for further improvement. These tools need to provide accurate information without being a resource or financial burden. They need to be quick, intuitive and easy to understand.

LTS Health UK has worked closely with clinicians to develop tools to complement their optimisation initiatives. IlytixTM analyses both the clinical and financial impact of clinicians requesting patterns and therefore provides a single platform for all stakeholders. IlytixTM analyses requesting patterns to provide insight on potential areas for improvement. Opportunities include identifying areas of:

- Overuse – unnecessary testing/repeat testing
- Underuse – follow-on testing not complete
- Screening opportunities missed

The filters within the tool allow comparison of data at varying levels:

- a. Category – Inpatient, Outpatient, Primary care
- b. Department/practice level
- c. Clinician level
- d. Test level
- e. Population measurement

The data can be split to give meaningful feedback on clinician behaviour.

IlytixTM is also a powerful tool to track the effectiveness of any changes implemented as a result of the insights gathered. Measuring change and providing feedback to clinicians is an integral part of behaviour change and learning.



49. Ensuring Choosing Wisely does not widen health inequalities

Dr Belinda Loring¹, Dr Derek Sherwood¹, Ms Sue Ineson¹

¹*Choosing Wisely New Zealand, Wellington, New Zealand*

The Choosing Wisely campaign seeks to reduce harm from unnecessary and low-value tests and treatment. However, we know that unless explicit efforts are taken, new health care interventions or campaigns have the tendency to widen inequities, as they are taken up first by those in society with the most resources and the least need. So how can we ensure that Choosing Wisely does not fall into this trap?

This presentation will raise some considerations for Choosing Wisely in relation to equity, and describe the process Choosing Wisely New Zealand has initiated to avoid widening health inequities.

1. Inadequate access to health care is a significant driver of health inequities. Even within health services, certain groups receive less tests, fewer prescriptions and less treatment. The Choosing Wisely campaign needs to make sure that messages to reduce unnecessary care do not further exacerbate undertreatment.
2. There is international evidence that disadvantaged groups experience a double burden of undertreatment and overtreatment. We need Australasian research to understand how the issue of low-value and inappropriate care coexist for different groups.
3. Some Choosing Wisely recommendations designed for the majority population may exacerbate health inequities for certain groups. Colleges need to take equity into account when developing lists recommendations and communicate clearly when recommendations should not be applied for all population groups.
4. Choosing Wisely depends on shared decision-making, which requires good communication and understanding between health professionals and patients. The quality of this communication is not the same for all groups, indicating that cultural competence needs to be improved for shared-decision making to become a reality.

Choosing Wisely has initiated an approach in partnership with Maori health professional groups, to assess the impact of the campaign on health inequities, and to identify practical steps to ensure that inequities are not inadvertently worsened.



50. Lessons from Choosing Wisely implementation in New Zealand

Dr Belinda Loring¹, **Dr Derek Sherwood**¹, Ms Sue Ineson¹

¹*Choosing Wisely New Zealand, Wellington, New Zealand*

In addition to making the case for why we should reduce unnecessary care, Choosing Wisely needs to provide clear guidance on how this can be done. The international evidence-base is still lacking, highlighting the crucial importance of evaluating the impact of Choosing Wisely initiatives to build the evidence base on effective (and ineffective) strategies to reduce low-value care.

Choosing Wisely New Zealand has been funding summer studentships for medical students, to evaluate a Choosing Wisely initiative or question.

This presentation will describe the process used to promote evaluation and share key results from some of these recent evaluations of Choosing Wisely initiatives.

Since 2016, 8 summer studentships have been completed. Research topics or initiatives in need of evaluation are identified by hospitals or district health boards, and the student is supervised by senior doctors at these institutions. This approach has enabled evaluations of Choosing Wisely initiatives to be performed in a timely and low-cost manner, and findings have been shared through conferences and peer-reviewed journals. Added benefits include raising awareness of Choosing Wisely amongst the medical student population.

The results from the following evaluations will be shared:

- Does staff education and removing urine dipsticks from wards reduce unnecessary urine testing and overdiagnosis of urinary infections?
- Scoping the safety of just using CT scans, without lumbar puncture, for the diagnosis of subarachnoid bleeds.
- Do posters and guidelines work to reduce unnecessary pre-op chest x-rays?
- Do patients read and understand Choosing Wisely pamphlets sent to them before medical appointments?



51. To scan or not to scan: Is Box Hill Hospital emergency department Choosing Wisely in cases of head injury?

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¹Monash University, Clayton, Australia, ²Eastern Health, Box Hill, Australia

Background

Choosing Wisely in conjunction with ACEM and RANZCR recommend; "Don't request computer tomography (CT) head scans in patients with a head injury, unless indicated by a validated clinical decision rule". We chose to audit our department's compliance with this recommendation.

Aim

To determine whether Box Hill Hospital ED CT brain ordering complies with Choosing Wisely recommendations.

Method

Electronic Medical Records of all patients who had a non-contrast CT brain scan in November 2018 were reviewed, of these 191 were for confirmed or possible head strike. A validated clinical decision rule (Canadian CT head rule) was applied retrospectively. Those scored as high or medium risk were considered as needing a scan, in addition to all patients on an anticoagulant/antiplatelet agent.

Results

74 of the 191 scans (39%) were deemed unnecessary on application of the rule. 60 (31%) of these were done on patients who didn't qualify for application of the rule (they had no concussion symptoms and were not on an anticoagulant/antiplatelet agent) and 14 qualified for application of the rule but scored low risk. No acute intracranial pathology was found in any of these 74 patients. Of the 114 scans deemed to be necessary, 7 had acute intracranial pathology; 3 of these were on an anticoagulant/antiplatelet agent and 4 scored high risk on application of the rule. A further 2 patients were excluded due to age <16 and 1 due to baseline GCS <13.

Conclusion

39% of scans during the audit period did not follow recommendations, despite longstanding local knowledge of the Canadian Head CT rule. This is most likely due to poor patient selection and careless application of the rule. It is likely that these findings are similar in other Australian EDs. Now that this gap has been identified, interventions to address this will be specifically targeted.



52. Harnessing electronic medical record interventions to reduce low-value care in a Paediatric Centre

Dr Joanna Lawrence^{1,2}, Prof Harriet Hiscock^{1,2}, Mr Pavan Swamy¹, Miss Alice Voskoboynik¹,
Ms Lauren Andrew¹

¹Royal Children's Hospital, Parkville, Australia, ²Murdoch Children's Research Institute, Parkville, Australia

The Royal Children's Hospital, Melbourne is committed to reducing low-value care. We have implemented a unique Choosing Wisely campaign harnessing our Electronic Medical Record (EMR) capability to provide major interventions in two areas: bronchiolitis and iron studies, as well as to measure and evaluate impact. The success of these interventions has been heavily reliant on widespread clinician consultation and collaboration in the design of the clinical decision supports, ensuring that EMR alerts will be effective and not contribute to alert fatigue. Below we outline two interventions designed to reduce low-value care.

Bronchiolitis is a viral infection causing respiratory symptoms in infants < 1 year. Current international guidelines recommend against the use of bronchodilators, as side effects outweigh potential clinical improvement. Data extracted from our EMR over a 2.5-year period (April 2016 – June 2018) demonstrated rates of 9.3%, peaking at 40% in the 11 to 12-month cohort. After consultation with clinicians, we introduced an alert, programmed to fire if a clinician attempted to order a bronchodilator in a child < 1 year of age. To proceed, a clinician was asked to justify the rationale. We then monitored the rate of the alert firing as well as the number of times this was accepted vs over-ridden and the reasons for over-riding.

Iron studies include 4 separate tests to diagnose iron deficiency. However, generally only one test (ferritin) provides reliable information. It is possible to order ferritin on its own at half the cost with less blood draw required. Our baseline data extracted from the EMR demonstrated 400 ferritin tests and 600 iron studies ordered per month. After hospital wide consultation, we introduced a simple intervention whereby upon requesting iron studies, a clinical decision support alert redirected ordering clinicians to ferritin.

Results of both interventions will be presented.



53. Gamification and Digital Technologies (Mobile Apps) in Patient Care Journey: Cost-Benefit Analysis

Associate Professor Gillian Vesty¹

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1. Digital immersive technologies with gamified elements have the capacity to engage patients in their care pathway. This offers potential benefits beyond providing traditional paper-based information or even e-health initiatives. Mobile applications provide interactive-real time engagement between patients and their clinicians for specialised and tailored care. While the gamified elements can mobilise patients toward achieving their designated recovery goals, the Mobile App also makes transparent the clinical pathway that aligns with Choosing Wisely initiatives. Digital solutions help shape the healthcare system for improved clinical outcomes but also support the development of new business models.
2. The objective of this study is to compare the use of gamified elements using a specially designed digital mobile application (App) with traditional paper-based and e-Health initiatives for pre- and post-operative patient education. The transparency of the gamified system in achieving administrative outcomes is examined along with cost-benefit analysis of using digital solutions. Time-driven activity-based costing techniques are used to review the savings provided by the digital solution. The outliers and deviations from the proposed care pathway are captured to signal and measure Choosing Wisely initiatives.
3. A protocol for a randomized controlled trial has been developed. Patients undergoing first time hip and knee arthroplasty in Finland are being recruited. All patients are over 60 years of age and have online access to clinicians and immediate care providers through password-protected mobile app. The app will be piloted without being integrated in the hospital system and has been built following both US and European regulations and standards. The app data is securely stored by the hospital where the pilot is being conducted, using Amazon cloud service. Direct observation and app data will allow for efficiency measures, appropriate care, as well as measurement of patient choices and responses to gamified elements within the application for clinical effectiveness.



54. In addition to process endpoint indicators, does backend data support decision making to refine practice to reach project goals and influence clinical decision making?

Dr Manny Geaboc¹, Dr Priyanka Gahlot¹, **Dr Anil Xavier¹**, Mr Jeremy Fowler¹, Mr Adrian Walker¹

¹*Goulburn Valley Health, Shepparton, Australia*

Introduction

GV Health benchmarking indicated we were ordering approximately 30% more CT scans 'after hours' (6PM - 8:30AM) to a comparable hospital. We have a large transient medical workforce, with many new to Australian practice. Emergency department is the primary point for CT ordering, with high acuity and radiology access is not 24/7. To sustainably improve resource management and support staff, structured interventions were implemented such as for CTPA ordering. Software backend data algorithms were constructed to gather data on eOrdering tool usage to inform us of cultural and logistic elements requiring refinement which is not evident when looking at endpoint indicators alone.

Methods

A Clinical Practice Guideline was developed incorporating Wells, PERC and age adjusted D-Dimer to guide medical staff in determining the need for CT investigation. A key sustainability measure was to incorporate CDR's into the CT eOrdering platform which provides the clinician with a recommendation based on their inputs, rather than ongoing education alone. Allowance for professional autonomy was included in the CTPA eOrdering as long as clinically justified. Baseline data (Sept-Nov 2017) and post intervention data (Oct-Dec 2018) including backend data were collected and analysed.

Results

Post intervention audit showed a 7.3%, 7.9% and 6.3% absolute reduction in 'after hours' ordering month by month compared to the baseline period (endpoint indicator); CPG compliance was 88%, 100% and 73% respectively and clinical Indication to scan based on the clinical pathway was 94%, 100% and 93% respectively. The post intervention yield is 17% (up from 11%) which is comparable to the original study (16.5%). Backend data analysis and retrospective clinical review revealed a larger proportion of scans were not clinically indicated.

Conclusion

The introduction of a structured pathway and CDR's reduces 'after hours' CTPA investigations and in our study the reduction directly correlates to CPG compliance as an endpoint indicator. Backend analysis showed a more detailed profile of risk adverse practices.

Further gains towards high value care are being sought through education regarding clinical decision making and appreciating clinician decision making factors versus local risk profile.



55. The effectiveness of a deprescribing guideline on reducing inappropriate PPI use in a tertiary hospital

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Proton pump inhibitors (PPIs) are commonly prescribed in Australia to manage acid-related gastrointestinal disorders. These medicines can be inappropriately continued long-term, exposing patients to unnecessary pill burden and costs, as well as potential serious side effects. Although it is recommended that PPIs should be regularly reviewed and be reduced to the lowest effective dose or stopped when no longer required, there are barriers to achieving this in the hospital setting.

At Austin Health, we have begun addressing this problem through the publication of a PPI deprescribing guideline. The guideline provides a framework for assessing the appropriateness of PPI indications, as well as providing guidance on how to deprescribe PPIs and how to communicate medication changes clearly to GPs and patients. The guideline is available to prescribers through the hospital intranet.

We conducted a pre- and post-intervention audit assessing the number of potential PPI deprescribing opportunities and whether deprescribing took place during an acute hospital admission. We evaluated the appropriateness of PPIs prescribed to all patients admitted under acute hospital units (excluding emergency department and direct palliative care admissions) on a single time point before and after the guideline was made available. There were 196 patients prescribed PPIs in the pre-guideline time-point, and 212 patients prescribed PPIs in the post-guideline time-point. Where deprescribing was attempted, the communication of medication changes to the GP and patient was also assessed. The results of the audit will be presented in further detail.



56. Is physiotherapy evidence-based? A systematic review of physiotherapy treatment choices for musculoskeletal conditions

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The issue

Physiotherapy scope of practice includes treatments that are recommended in evidence-based guidelines for musculoskeletal conditions, as well as some that are not recommended. At present it is unclear to what extent physiotherapy treatment choices align with the evidence.

Objective

To determine what percentage of physiotherapy treatment choices for musculoskeletal conditions are high-value, low-value or of unknown value.

Design

Systematic review

Approach

We performed searches in MEDLINE, EMBASE, CINAHL, CENTRAL, AMED, Scopus and Web of Science combining terms synonymous with “practice patterns” and “physiotherapy” from the earliest record to April 2018. We included studies that quantified physiotherapy treatment choices for musculoskeletal conditions through surveys, audits of clinical notes, and other methods. Treatments recommended in guidelines or systematic reviews were considered ‘high-value’ and those recommended against were considered ‘low-value’. Treatments were ‘unknown-value’ if evidence was inconclusive. We summarised the percentage of physiotherapists who chose treatments that were high-value, low-value, or of unknown value using medians and interquartile ranges. Results were stratified by how treatment choices were assessed.

Outcome

We included 94 studies. Physiotherapy treatment choices were investigated for low back pain (n=48 studies), knee pain (n=10), neck pain/whiplash (n=11), foot/ankle pain (n=5), shoulder pain (n=7), pre or post knee/hip arthroplasty (n=6), and other conditions (n=18). The median percentage of physiotherapists who chose high-value treatments across all musculoskeletal conditions ranged from 54% (n=23 studies; surveys to physiotherapists) to 63% (n=8 studies; audits of clinical notes). For low-value care, the range was 27% (n=20; audits) to 40% (n=36; surveys). For care of unknown value, the range was 45% (n=31; audits) to 80% (n=38; surveys). There is considerable scope to increase the frequency with which high-value care is provided by physiotherapists. This data will act as a baseline to evaluate whether Choosing Wisely can improve the value of physiotherapy practice.