Pharmacy Department

2020

Despite all of the challenges presented by 2020, the Pharmacy Department maintained its strong publication output, with 32 peer reviewed publications. More than 30 staff members coauthored one or more publications. Despite most conferences moving to an online/virtual format, the department was involved in 19 oral presentations or posters. Phung To submitted her PhD thesis for examination and three staff are nearing completion of their PhD or Masters research programs. [Publication date: February 2021]

Research Report



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Overview

HIGHLIGHTS

Publications

Despite the challenges of 2020 resulting from the COVID-19 pandemic, the department maintained its excellent publication output, with 32 peer reviewed papers. These stemmed from the breadth of our research areas of practice-based research, pharmacovigilance and quality use of medicines.

Conferences

Whilst we missed the opportunity to attend on-site conferences, the virtual format employed by several conferences made it possible for more staff to participate than usually possible within the constraints of rostering and funding. Perhaps the greatest disappointment was for Misha Devchand, who was awarded a travel grant to attend the European Congress of Clinical Microbiology and Infectious Diseases in Paris but it was cancelled due to COVID-19 travel restrictions.

Research training

Several of our staff undertaking research-based post graduate degrees are progressing well and nearing completion. Phung To presented her final PhD seminar and by the year's end had submitted her thesis for examination. Tim Tran completed his body of work towards his PhD and is to present his pre-submission seminar in early 2021. Sharmila Khumra is nearing completion of her work towards her Master of Pharmacy by thesis. Intern and resident pharmacists also completed supervised research projects as part of their training requirements.

Pharmacy Research Forum

In keeping with the 'pivoting' required by 2020, the department held its annual Pharmacy Department Research Forum in a virtual format. The forum began with Rohan Elliott presenting about the importance of social media, including Twitter, to promote and disseminate research. This was followed by oral presentations on recently completed research. Posters were presented online using the Padlet platform and the presentations were delivered on Teams and recorded, making them available to additional staff unable to 'attend' on the day. Once again this was an opportunity for staff, including our interns and residents, to practice their presentations ahead of their external and national presentations. In addition, this was an opportunity to showcase to the department more broadly the range of achievements and the role we have in our organisation's delivery of high quality and safe patient care.

REFLECTING ON 2020 AND AUSTIN HEALTH STRATEGIC PRIORITIES

During 2020, staff necessarily had to focus on the challenges of delivering high quality patient care during a pandemic, in addition to supporting their families and local communities. At the beginning of 2020, discussions were had about whether we would be able to support our interns to complete their Intern Foundation Program projects and which of our best laid plans for 2020 should be put on hold. It was a time when we questioned where our research and research training fitted into the competing priorities that we

faced. Whilst clinical care was prioritised, with our strong research culture we were able to proceed with planned research projects and training for our junior staff. We are fortunate to have staff who are open to change and keen to find new and better ways of doing what we do, hence our focus on practice-based and translational research across the breadth of clinical areas and pharmacovigilance. Our research program makes us well placed to support Austin Health in achieving its strategic priorities in delivering 'reliable, safe, person centred care', having 'talented capable, engaged people', 'digital transformation' and 'community integration and collaboration'. Given the requests from other departments internally and other pharmacy departments nationally to learn about our research program and how we have developed a strong research culture, we are seen as leaders in research and teaching, a further strategic priority for the organisation.

LOOKING FORWARD

As we make our plans for 2021, we are looking forward to welcoming ten Monash University 4th year pharmacy students to undertake Pharmacy Inquiry Projects. One group of five students will undertake work towards a multi-centre project looking at the complexities of medication related continuum of care as patients transition from hospital to residential aged care. The protocol development, ethics and governance approval process for this project has been led by Rohan Elliott and Simone Taylor. This has been a complex process involving many weeks of work but has also been an opportunity to foster collaborations between several hospitals across Melbourne and Geelong. The second project will see five students interviewing our Muslim patients about their medication practices during Ramadan. This has also been an opportunity to develop new collaborations with our Muslim community. Their advice has been invaluable in the development of this pilot project.

We also welcome another seven intern pharmacists to the department, and look forward to supporting them, along with our residency pharmacists, and others to undertake research projects across our priority research areas. Medical Research Futures Fund (MRFF) grant opportunities will be offered during 2021 focused on medication related transitions of care. As this is an area of particular strength in our department, several of our staff will be involved in multi-centre collaborations leading to grant submissions in aged care, opioid stewardship and pain management and emergency medicine. Such grant submissions will draw upon the knowledge developed in several single site and multi-site pilot studies lead by pharmacists within our department.

Dr Simone Taylor Senior Pharmacist – Emergency Medicine and Research

Dr Rohan Elliott Senior Pharmacist – Research and Aged Care Manager, Victorian Poisons Information Centre.

February 2020

Publications

Papers, editorials and letters published in peer reviewed journals in 2020. Publications that were also included in the 2019 Pharmacy Department Research Report as an 'online early' or 'E-pub' publication are indicated with an asterix.*

1. QUALITY USE OF MEDICINES

Aged Care

Elliott RA, Boutris Y, Tran T, Taylor S. A prospective study of medication management during transitions from hospital to residential care: a 10-year follow-up to the MedGap study. *Journal of Pharmacy Practice & Research* 2020; 40: 308-15

Cross AJ, **Elliott RA**, Petrie K, Kuruvilla L, George J. Interventions for improving medication-taking ability and adherence in older adults prescribed multiple medications. *Cochrane Database of Systematic Reviews* 2020, Issue 5. Art. No.: CD012419. DOI: 10.1002/14651858.CD012419.pub2.

Cross AJ, George J, Woodward MC, **Elliott RA**. Deprescribing Potentially Inappropriate Medications in Memory clinic patients (DePIMM): a feasibility study. *Research in Social and Administrative Pharmacy* 2020; 6: 1392-7.

Elliott RA, Chan A, Godbole, Hendrix I, Pont LG, Sfetcopoulos D, *et al.* Standard of practice in geriatric medicine for pharmacy services. *Journal of Pharmacy Practice & Research* 2020; 50: 82–97.

Cross AJ, Le VJ, George J, Woodward MC, **Elliott RA.** Stakeholder perspectives on pharmacist involvement in a memory clinic to review patients' medication management and assist with deprescribing. *Research in Social and Administrative Pharmacy* 2020;16: 681-688.

Elliott R, Criddle D, Godbole G, Hendrix I. Hospital pharmacists can support improved transitions to aged care [letter]. Australian Pharmacist; published online 18 June 2020. https://www.australianpharmacist.com.au/opinion-supporting-improved-transitions-into-aged-care/

Mouchaileh N, Hughes AJ. Pharmacological management of Parkinson's disease in older people. *Journal of Pharmacy Practice & Research* 2020; 50: 445-54

Emergency Medicine

Anderson BJ, Harding AM, Taylor SE, O'Keefe C. Thunderstorm asthma medication management during an external emergency (Code Brown): An observational study of the impact of electronic prescribing and clinical documentation. *Australasian Emergency Care* 2020; 23: 259-264

Elmi H, Pisasale D, Taylor S, Kebire O, Abbott L. Ketamine - is the current 200 mg product fit for purpose in the emergency department? *Emergency Medicine Australasia* 2020; 32: Online ahead of print

S Taylor, E Mitri, A Harding, D Taylor, A Weeks, L Abbott, P Lambros, D Lawrence, D Strumpman, R Senturk-Raif, S Louey, H Crisp, E Tomlinson, E Manias. Comprehensive identification of medication-related problems occurring prior to, during and after emergency department presentation: An Australian multicentre, prospective, observational study. *Emergency Medicine Australasia* 2020; 32, 457-465.*

Nguyen JP, Harding AM, Greene SL Estimating the proportion of patients who transition to long-term opioid use following oxycodone initiation in the emergency department. *Emergency Medicine Australasia* 2020 Sep 30 doi: 10.1111/1742-6723.13644. Online ahead of print.

Infectious Diseases

Chua KYL, Vogrin S, **Bury S**, Douglas A, Holmes NE, Tan N, Brusco NK, Hall R, Lambros B, Lean J, Stevenson W, **Devchand M, Garrett K**, Thursky K, Grayson ML, Slavin MA, Phillips EJ, Trubiano JA. The Penicillin Allergy Delabeling Program: A Multicenter Whole-of-Hospital Health Services Intervention and Comparative Effectiveness Study. *Clin Infect Dis* 2020 Aug 5:ciaa653. doi: 10.1093/cid/ciaa653. Online ahead of print.

Khanina A, **Urbancic KF**, Haeusler GM, Kong DCM, Douglas AP, Tio SY, Worth LJ, Slavin MA, Thursky KA. Establishing essential metrics for antifungal stewardship in hospitals: the results of an international Delphi survey. *J Antimicrob Chemother* 2020 Oct 14:dkaa409. doi: 10.1093/jac/dkaa409. Online ahead of print.

Walker ST, Grigg S, Kirkpatrick C, **Urbancic K**, Cohen E, Grigg A, Trubiano J. Nurse-initiated pre-prescribed antibiotic orders to facilitate prompt and appropriate antibiotic administration in febrile neutropenia. *Support Care Cancer* 2020; 28(9): 4337-43.

Rawlins M, Cairns K, Avent M, **Devchand M**, et al. COVID-19: The end of the beginning. *Pharmacy GRIT* 2020 (Autumn): 12-17. https://www.shpa.org.au/sites/default/files/uploaded-content/website-content/Fact-sheets-position-statements/grit-content/autumn2020_the_end_of_the_beginning.pdf

Oncology

Coutsouvelis J, **Siderov J**, Tey A, Bortz H, O'Connor S, Rowan G, Vasileff H, Page A, Percival M. The impact of pharmacist-led strategies implemented to reduce errors related to cancer therapies: a systematic review. *J Pharm Pract Res* 2020; 50: 466-80

Coutsouvelis J, Adams J, Bortz H, Chau M, Chiang K, Foo J, Ibrahim K, Kerr K, O'Connor S, Powell M, Rowan G, **Siderov J**, Tey A, Tran J, Vasileff H, Munro C. Standard of practice in oncology and haematology for pharmacy services. *J Pharm Pract Res* 2020; 50: 528-545.

Australian Commission on Safety and Quality in Health Care Safety and Quality In Cancer Care Treatments Resources Working Group: Calver T, Campbell D, Carrington C, Harrup R, Keefe D, Kenny L, King L, Lowrey P, Malcolm H, Martinello R, Platt V, **Siderov J**, Thomas R. *NSQHS User guide for medication management in cancer care*. April 2020 Available at: https://www.safetyandquality.gov.au/sites/default/files/2020-04/nsqhs_standards_user_guide_for_medication_management_in_cancer_care_april_2020.pdf

Gregory G, Carrington C, Cheah C, Hawkes E, Irving I, **Siderov J**, Opat S. A consensus statement on the use of biosimilar medicines in hematology in Australia. *Asia Pac J Clin Oncol* 2020; 16:211-221 - https://doi.org/10.1111/ajco.13337

Frazer M, Bubalo J, Patel H, **Siderov J**, et al. ISOPP global position on the use of biosimilars in cancer treatment and supportive care. *J Oncol Pharm Pract* 2020; 26: 3(suppl) 3-10

Chan A, Patel H, **Siderov J**, Bubalo J, Foreman E. Assessing biosimilar education needs among oncology pharmacy practitioners worldwide: An ISOPP membership survey. *J Oncol Pharm Pract* 2020; 26: 3(suppl) 11-21

Foreman E, Patel H, **Siderov J,** Harchowal J, Bubalo J, Chan A. A survey of global biosimilar implementation practice conducted by the International Society of Oncology Pharmacy Practitioners. *J Oncol Pharm Pract* 2020; 26: 3(suppl) 22-32

2. MEDICATION SAFETY AND PHARMACOVIGILANCE

Willcox A, **Ho L**, Jones D. Implications of direct oral anticoagulation and antiplatelet therapy in intensive care. *Critical Care and Resuscitation* 2020;22(3):181-8

Keith C. Sourcing medicines information about international pharmaceutical products – practical tips and tricking when looking outside of the Australian context. *Pharmacy GRIT* Spring 2020: 189-91. Available at: https://v3au.zone-secure.net/drive/21696/1263179/#page=28

Wong A, **Keith C**, Gregory H, **Liew D**. Palliative and supportive care prescribing considerations around QT prolongation risk in the context of COVID-19 (Coronavirus Disease 2019) management. *Journal of Pain and Palliative Care Pharmacotherapy* 2020; Sep 22: 1-3

3. PHARMACY SERVICE DESIGN AND DELIVERY (HEALTH SERVICES RESEARCH)

Anderson BJ, Carroll ME, Taylor SE, Chow A. Perceptions of hospital pharmacists and pharmacy technicians towards expanding roles for hospital pharmacy technicians: a cross sectional survey. *Journal of Pharmacy Practice and Research*, 29 December 2020; Online ahead of print.

Elliott RA, Tan Y, Chan V, **Richardson B, Tanner FE,** Dorevitch MI. Pharmacist-physician collaboration to improve the accuracy of medication information in electronic medical discharge summaries: effectiveness and sustainability. *Pharmacy* 2020; 8(1): 2; https://doi.org/10.3390/pharmacy8010002

Tran T, Castello J, Taylor SE, Hardidge A, **Cannizzaro S,** George J, **Elliott RA.** Opioid use and appropriateness of supply after total knee or hip arthroplasty: an Australian perspective. *Journal of the North American Academy of Orthopaedic Surgeons* 2020; 28: e980-9 DOI: 10.5435/JAAOS-D-19-00789.

Tran T, Taylor SE, George J, **Pisasale D, Batrouney A, Ngo J**, Stanley B, **Elliott RA**. Evaluation of communication to general practitioners when opioid-naïve post-surgical patients are discharged from hospital on opioids. *Australian and New Zealand Journal of Surgery* 2020; 90: 1019-24.

Tyedin AE, Taylor SE, Than J, Al-Alawi R, O'Halloran E, Chau AH. Impact of proactive pharmacist-assisted warfarin management using an electronic medication management system in Australian hospitalised patients. *Journal of Pharmacy Practice & Research* 2020; 50: 144-51

4. TOXICOLOGY

Huynh A, Cairns R, Brown JA, Jan S, **Robinson J,** Lynch A, et al. Health care cost savings from Australian Poisons Information Centre advice for low risk exposure calls: SNAPSHOT 2. *Clinical Toxicology* 2020; 58: 752-7. DOI: 10.1080/15563650.2019.1686513

Bourke EM, Greene S, **Macleod D, Robinson J**. Iatrogenic Medication Errors reported to the Victorian Poisons Information Centre. *Internal Medicine Journal* 2020 Jun 15. doi: 10.1111/imj.14940. Online ahead of print.

Conference/Seminar Oral Presentations and Posters

Research papers and posters, and continuing professional development lectures/workshops, presented externally in 2020

Further details and selected posters are available at: https://padlet.com/simonetaylor1/b49e0pb0pl0rgl4u

1. QUALITY USE OF MEDICINES

Aged Care

Ngo J, Reid O, Su E, Elliott R. Paracetamol dosing in frail and low-weight older people: a retrospective audit. *The Society of Hospital Pharmacists of Australia Virtual Conference* 2020 (November 21-22)

Marsom E, Tong E, Yip G, **Elliott R,** Dooley M. Reducing the reintroduction of hospital-ceased medication on return to residential care: multi-site evaluation. *The Society of Hospital Pharmacists of Australia Virtual Conference* 2020 (November 21-22)

Elliott R. Geriatric medicine practice in Australia: a pharmacist perspective. *Guest Lecture, JNMC Medical College & KLE College of Pharmacy,* KLE University Belgaum, India 2020 (January 7)

Emergency Medicine

Nguyen J, Harding A, Greene S. Proportion of patients who transition to long-term opioid use following oxycodone initiation in the ED. *The Society of Hospital Pharmacists of Australia Virtual Conference* 2020 (November 21-22) and SHPA Resident of the Year presentation.

Harding A, Mitri E, Wells G, Wellington D An innovative electronic anticoagulation alert system to improve continuity of patient care on discharge from an Emergency Department. *National Medicines Symposium* 2020 (NPS MedicineWise), 7 December 2020

Joules E, Taylor S, Harding A. Partnering to Improve safety with Patients' Own Medications in the Emergency Department - pharmacy and nursing collaboration. *National Medicines Symposium 2020* (NPS MedicineWise), 7 December 2020

Zaynah A, Joules E, Harding A, Taylor S. Implementation of a pragmatic Emergency Department patients' own medicines procedure to improve medication safety. *The Society of Hospital Pharmacists of Australia Virtual Conference* 2020 (November 21-22)

Walker K, Taylor D, **Cheung S, Garrett K, Harding A.** Meds gone missing? Misappropriation of Medications at Austin Health. *University of Melbourne, MDRP student presentation, 2020*

Manias E, **Taylor S, Mitri E, Harding A,** Taylor D, Tomlinson E Identifying risk factors for medicine-related problems across the continuum of emergency department care: A multicentre Australian study. *National Medicines Symposium 2020* (NPS MedicineWise), 7 December 2020

Infectious Diseases

Khumra S, Mahony A, Bergen P, **Elliott R.** Coaching ward pharmacists in antimicrobial stewardship to improve antimicrobial prescribing. *The Society of Hospital Pharmacists of Australia Virtual Conference* 2020 (November 21-22)

Batrouney A, Devchand M, Khumra S, Simbert L, Trubiano JA. Evaluation of a pharmacist-led review of antimicrobial prescribing in suspected and proven SARS-CoV-2 infections. *The Society of Hospital Pharmacists of Australia Virtual Conference* 2020 (November 21-22)

Batrouney A, Trubiano JA. Antimicrobial stewardship contribution to a diabetic foot service: pre- and post-intervention outcomes on antimicrobial prescribing. *The Society of Hospital Pharmacists of Australia Virtual Conference* 2020 (November 21-22)

2. MEDICATION SAFETY AND PHARMACOVIGILANCE

Keith C, McLachlan G, Wood C, Liew D, Frauman A. Adverse Drug Reaction reporting in the hospital setting and the consumer – delve, deliberate, document and disseminate. *National Medicines Symposium* (NPS Medicine Wise), 7 December 2020.

McMaster C, Liew D, Keith C, McLachlan G, Wood C, Aminian P, Garrett K, Frauman A. Real-world implementation of artificial intelligence to improve adverse drug reaction reporting in an Australian hospital. *National Medicines Symposium* (NPS Medicine Wise), 7 December 2020.

3. PHARMACY SERVICE DESIGN AND DELIVERY (HEALTH SERVICES RESEARCH)

Anderson B, Mitchell S, Verde A, Taylor S, Carroll M, Chow A, Droney J, El-Katateny E, Than J, Hilley P, Trajceska L, Spencer K. Evaluation of a novel advanced pharmacy technician role - Medication Education Technician (MEdTech), *The Society of Hospital Pharmacists of Australia Virtual Congress* (November 21-22, 2020).

Verde A, **Anderson B, Taylor S,** Maggs K. Educating the support level pharmacy workforce – culture change that is a win-win for all. *Accepted for National Allied Health Conference.* (postponed until 2021)

Hilley P, Gilmore R, Li Wai Suen C, Hine K, Boyd K, Choy M, Srinvasan A, de Cruz P. A managed switch programme from originator to biosimilar infliximab in inflammatory bowel disease: an opportunity for proactive therapeutic optimisation using a treat-to-target approach.

- The Society of Hospital Pharmacists of Australia Virtual Conference 2020 (November 21-22)
- Australian Gastroenterology Week (AGW 2020)

4. TOXICOLOGY

Macleod D, O'Connor J. If the sea is red you could be dead. TAPNA clinical meeting, October 2020.

Li Wai Suen CFD, Hey P, **Aminian P.** N-acetylcysteine for non-paracetamol acute liver failure: a systematic review of randomised controlled trials. *The Society of Hospital Pharmacists of Australia Virtual Conference* 2020 (November 21-22)

AUSTIN HEALTH RESEARCH FEST 2020 POSTERS

The following posters were presented at the Austin Health Research Fest 2020, October.

Taxane-induced neuropathy: how serious is this problem for patients with early breast cancer? [Robert Nicolae, Belinda Yeo, **Jim Siderov**, Vanessa Wong]

Educating the support-level health workforce - culture change that is a win-win for all. [Andrea Verde, **Brett Anderson, Simone Taylor,** Kathy Maggs]

N-acetylcysteine for non-paracetamol acute liver failure: a systematic review of randomised controlled trials. [Li Wai Suen CFD, Penny Hey, **Parnaz Aminian**]

A managed switch programme from originator to biosimilar infliximab in inflammatory bowel disease: an opportunity for proactive therapeutic optimisation using a treat-to-target approach. [Patrick Hilley et al.]

Grants and awards

Simone Taylor, Daisy Pisasale, Kyle Booth, David Taylor. 'Regular medication use by active scuba divers and victims of scuba and snorkelling-related fatalities.'

\$6,264.20 The DAN AP Foundation/Australasian Diving Safety Foundation Research Grant Scheme.

Jennie Nguyen. Finalist National Resident of the Year, Society of Hospital Pharmacists of Australia. Presentation title: Proportion of patients who transition to long-term opioid use following oxycodone initiation in the ED. The Society of Hospital Pharmacists of Australia Virtual Conference 2020 (November 21-22)

Misha Devchand. Travel grant to present at European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) 2020, Paris.

Research degree involvement

1. PHD CANDIDATES

Phung To

Medication management during periods of restricted oral intake, University of Melbourne (part-time, 2015 - 2020). Seminar presented in November 2020 and thesis under examination.

Karen Urbancic

Antifungal stewardship in immunocompromised patients including solid organ transplant and haematology patients, University of Melbourne, National Centre for Antimicrobial Stewardship (part-time, 2016 - ongoing)

Tim Tran

Expanding pharmacists' roles in medication management for surgical inpatients. Monash University (part-time, 2014 - ongoing)

2. MASTER OF PHARMACY CANDIDATES

Sharmila Khumra

Enhancing pharmacists' roles in antimicrobial stewardship. Monash University (part-time, 2016 - ongoing)

3. HIGHER DEGREE RESEARCH SUPERVISION

Rohan Elliott

Sharmila Khumra. Enhancing pharmacists' roles in antimicrobial stewardship. *MPharm*, Monash University (part-time, 2016 - ongoing)

Tim Tran. Expanding pharmacists' roles in medication management for surgical inpatients. *PhD,* Monash University (part-time, 2014 - ongoing)

Simone Taylor

Tim Tran. Expanding pharmacists' roles in medication management for surgical inpatients. *PhD*, Monash University, (part-time, 2014 - ongoing)

4. RESEARCH DEGREE PANEL MEMBERS

Rohan Elliott

Laura Dowd. Promoting the safe and effective use of opioids and other analgesics in residential aged care facilities. PhD, Monash University (2020 – ongoing)

Simone Taylor

Elizabeth Doran. Risk assessment of poisoned patients by non-expert clinicians. *PhD,* University of Queensland (part-time 2020 – ongoing)

Charicilia Paradissis, Medication harm in patients after acute myocardial infarction (AMI). *PhD*, University of Queensland (full-time 2019 – ongoing)

Intern Foundation Program Projects

Zaynah Ali

Implementation of a pragmatic Emergency Department patients' own medicines procedure to improve medication safety

Supervisors: Simone Taylor, Emily Joules, Andrew Harding

Jasmine Lau

Impact of e-prescribing Powerplans on the appropriateness of antipsychotic dosing in patients with delirium

Supervisors: Rohan Elliott, Elizabeth Su

Janet Ngo

Paracetamol dosing in frail and low-weight older people: a retrospective audit.

Supervisors: Rohan Elliott

Lauren Randell

Evaluation of wastage and effectiveness of alteplase to manage CVAD occlusion

Supervisors: Melisa Wan, Simone Taylor

Monica Tran

A comprehensive assessment of the full cost of parenteral iron products to the pharmacy department for hospitalised inpatients: iron polymaltose compared to ferric carboxymaltose

Supervisors: Melisa Wan, Simone Taylor

Ongoing and recently completed projects

1. QUALITY USE OF MEDICINES

Aged Care

Elliott R, et al. Better Health North East Melbourne – Frail Aged Project, Medication Review Workstream: Implementation of an integrated pharmacist Home Medicines Review within a geriatrician-led frailty clinic at Banyule Community Health Service, to address polypharmacy and other medication-related problems in older people with mild to moderate frailty.

Cross A, **Elliott R**, George J, Woodward M. <u>Deprescribing Potentially Inappropriate Medication in Memory clinic patients (DePIMM).</u>

Emergency Medicine

Taylor SE, Mitri E, Harding AM et al. Development and validation of screening tools for medicine-related problems at patient presentation and after discharge from the emergency department.

Pollack K, Griffith N, **Balassone J, Bui C, Taylor SE,** Taylor DMcD. Hyperkalaemia in the emergency department: epidemiology, management and monitoring of treatment outcomes.

Taylor SE, Joules E, Verde A, Ali Z. Management of Patient's Own Medications brought into the Emergency Department and Short Stay Unit.

Verde A, Joules E, Harding A. Emergency Department warfarin discharge plan audit.

Hodgson S, Greene S, **Harding A**, Taylor DM. A prospective, randomised, double-blind trial of intravenous chlorpromazine versus intravenous prochlorperazine for the treatment of acute migraine in adults (STELAR).

Harding A, Mitri E, Wells G, Wellington D. An innovative electronic anticoagulation alert system to improve continuity of patient care on discharge from an Emergency Department.

Harding A, Zhanming Liang. Warfarin discharge plans – what are their place in ED?

Ferma M, **Harding A**, Green S. Oxycodone use in ankle injury.

Lu G, **Taylor SE**, **Harding A**, Green S. Interventions to optimise prescribing of strong oral opioids to be taken following emergency department discharge: a systematic review.

Infectious Diseases

Khumra S, Mahony A, Bergen P, **Elliott R**. Evaluation of the practice of early switch from intravenous to oral antimicrobials in hospitalised patients.

Urbancic KF, Kong DCM, Johnson PDR, Slavin MA, Thursky K. Antifungal stewardship in Australian hospitals: defining the current scope and future targets

Trubiano J, **Urbancic K**, Grigg A, Cohan E, Fong C, Wong E. Posaconazole plasma concentrations in haematology patients and the utility of therapeutic drug monitoring with the oral tablet formulation (multisite project – RMH, Austin)

Urbancic K, Khanina A, Slavin M, Haeusler G, Douglas A, Johnson P, Kong D, Thursky K. Development of essential metrics for monitoring antifungal use in hospitals – an international modified Delphi study

2. MEDICATION SAFETY AND PHARMACOVIGILANCE

Elliott R, Taylor S, Koo M, Fodera M, Nguyen A, Loh G, Liu E, Nguyen B, Vong V. MedView evaluation.

Aminian P, Dayment J, McCormack E. Identifying patients at high risk of opioid-related harm in a busy tertiary hospital; where do we start?

Uzunbay Z, Elliott R, Taylor S, Joules E, Ferraro E, Sepe D. Accuracy of labels on community pharmacy prepared dose administration aids (DAA) labels.

3. PHARMACY SERVICE DESIGN AND DELIVERY (HEALTH SERVICES RESEARCH)

Tran T, Ford J, Hardidge A, **Antoine S, Veevers B**. Evaluation of a Medication Management Pharmacist review for patients who have undergone a total knee replacement.

Research Collaborators

AUSTIN HEALTH DEPARTMENTS

- Aged Care
- Clinical Pharmacology
- Emergency
- General Medicine
- Infectious Diseases
- Liver Transplant Unit
- Oncology
- Orthopaedics
- Victorian Poisons Information Centre

UNIVERSITIES

- Deakin University
- La Trobe University
- Monash University
- RMIT University
- University of Melbourne
- University of Queensland

AUSTRALIAN HOSPITALS

- Barwon Health
- Casey Hospital
- Dandenong Hospital
- Monash Medical Centre Clayton
- Northeast Health Wangaratta
- Royal Melbourne Hospital
- Flinders Medical Centre (SA)
- Prince of Wales Hospital (NSW)
- Princess Alexandra Hospital (QLD)
- The Prince Charles Hospital (QLD)
- The Townsville Hospital (QLD)
- St Vincent's Hospital (VIC)

OTHER ORGANISATIONS

- Banyule Community Health
- North Western Primary Health Network
- Eastern Melbourne Primary Health Network