

2024-2025



# Annual Report

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# Introduction

This time of year brings the opportunity to look back and reflect on the previous financial year, at the same time as looking forward to the next as part of our annual reporting cycle. With that in mind, it is my pleasure to introduce the latest annual report for the Centre for Medication Safety and Service Quality (CMSSQ) at Imperial College Healthcare NHS Trust. This summarises our work for the period 1 April 2024 to 31 March 2025, and looks ahead to the next year, during which we will mark the significant milestone of our 25<sup>th</sup> anniversary.

At the CMSSQ, we aim to deliver high quality research relating to medication safety that is:

- **Innovative** – providing new contributions to knowledge;
- **Translational** – applying our research findings to the context of service delivery within the NHS;
- **Relevant** to patient care in today's NHS – focusing on medication safety, use of technology, anti-infectives, and the involvement of patients, carers and families in their care.

Highlights from the past year include:

- A clinical decision support system incorporating indication-based prescribing, developed and evaluated with CMSSQ support, is now live in clinical practice across West London Children's Healthcare. Preliminary evaluation data suggests a dramatic reduction in prescribing errors in real life practice, mirroring the findings of our earlier simulation study.
- We published 20 peer-reviewed research papers, 3 other publications, and presented 15 conference abstracts, bringing our cumulative research output to 373 peer-reviewed research papers since our inception.
- Four new grants and fellowships were awarded. Eight funded grants and fellowships reported in previous years are ongoing.

We would love to hear comments and feedback on our work – please do get in touch.



Professor Bryony Dean Franklin, Director

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# Abbreviations

<b>BCMA</b>	<b>Barcode Medication Administration</b>
<b>BMJ</b>	<b>British Medical Journal</b>
<b>CDRF</b>	<b>Clinical Doctoral Research Fellowship</b>
<b>CMSSQ</b>	<b>Centre for Medication Safety and Service Quality</b>
<b>DOACs</b>	<b>Direct Oral Anti-Coagulants</b>
<b>HPRU</b>	<b>Health Protection Research Unit</b>
<b>ICA</b>	<b>Integrated Clinical and Practitioner Academic</b>
<b>ICHT</b>	<b>Imperial College Healthcare NHS Trust</b>
<b>MANADR</b>	<b>Management of patients' reported histories of adverse drug reactions</b>
<b>NIHR</b>	<b>National Institute for Health Research</b>
<b>NMAHPPs</b>	<b>Nurses, Midwives, Allied Health Professionals, Healthcare Scientists, Pharmacy Staff and Psychologists</b>
<b>NWL</b>	<b>North West London</b>
<b>OPAT</b>	<b>Outpatient Parenteral Antimicrobial Therapy</b>
<b>PSRC</b>	<b>Patient Safety Research Collaboration</b>
<b>PPIE</b>	<b>Patient and Public Involvement and Engagement</b>
<b>UCL</b>	<b>University College London</b>

The Centre for Medication Safety and Service Quality (CMSSQ) was set up in June 2000 as a joint initiative between the Pharmacy Department at Imperial College Healthcare NHS Trust (ICHT) and University College London (UCL) School of Pharmacy. At UCL School of Pharmacy, we are linked to the Research Department of Practice and Policy and more specifically, the research cluster for pharmacoepidemiology and medication safety.

We are a partner organisation within the NIHR North West London Patient Safety Research Collaboration (NIHR NWL PSRC) and the NIHR (HPRU) in Healthcare Associated Infection and Antimicrobial Resistance at Imperial College. We work closely with other research groups within ICHT, UCL and Imperial College London. For example, we are part of the Healthcare Professional Academic Group at Imperial College, which seeks to grow the number of clinical academic leaders in nursing, midwifery, pharmacy, healthcare science and the allied health professions. We see ourselves as “embedded researchers” within the healthcare setting providing a unique privilege in linking research and practice.

## Our Strategic Objectives

To be an internationally recognised medication safety research centre

To lead inter-disciplinary research related to the quality and safety of medication use

To obtain research grants in collaboration with our partners

To influence patient safety policy and practice

To publish in peer-reviewed journals and disseminate our findings widely

To drive capacity-building in health services research



**Professor Bryony Dean Franklin** is Director of the CMSSQ, Executive Lead Pharmacist for Research at ICHT, Professor of Medication Safety at UCL School of Pharmacy, Visiting Professor at Imperial College and Director of the NIHR North West London Patient Safety Research Collaboration. She has been involved with medication safety research for more than 30 years, and has published widely on methods for studying errors, their frequency and causes. Her clinical background includes being a critical care and antimicrobial specialist pharmacist. She teaches on a variety of undergraduate and postgraduate courses. She is Co-Editor-in-Chief of the journal *BMJ Quality and Safety*.



**Calandra Feather** is Implementation Lead and Clinical Safety Officer at Dosium, an Imperial Innovations spin-out company that has developed and evaluated Touchdose, an indication-based, patient-specific prescribing tool. Calandra passed her PhD viva (pending submission of minor corrections) and continues to hold honorary roles as a health services researcher within the CMSSQ and clinical research fellow at Imperial College London. Her doctoral work used mixed methods to evaluate prescribing practice, indication documentation, and the impact of Touchdose.



**Aseel Mahmoud** is a postdoctoral research fellow and a health services researcher at the CMSSQ. Aseel has joined the CMSSQ team in September 2025. She is leading the impact of Barcode Medication Administration on Patient Safety (BCMAPS) study and supporting pharmacy staff who are interested in being involved in research.



**Shahd Abdelaziz** is an early career research pharmacist and research assistant at the CMSSQ. She led on the MANADR and BCMAPS studies, and supported the ICHT pharmacy department with engaging pharmacy staff in research opportunities, prior to going on maternity leave. We wish her and her family well for their next steps.

Two consultant pharmacists are employed at ICHT: a consultant pharmacist for infectious diseases (**Mark Gilchrist**), and a consultant pharmacist for anticoagulation (**Frances Akor**). A key part of their role is to conduct research into their relevant areas of clinical practice; the CMSSQ is able to support this as needed.

Other research-active pharmacy staff affiliated with the CMSSQ include, among others, pharmacists **Richard Wilson, Daniel Murphy and Neil Tickner**. The number of research-active ICHT pharmacy staff demonstrates our culture of innovation, research and development as part of professional practice. Our students are listed separately on page 11.

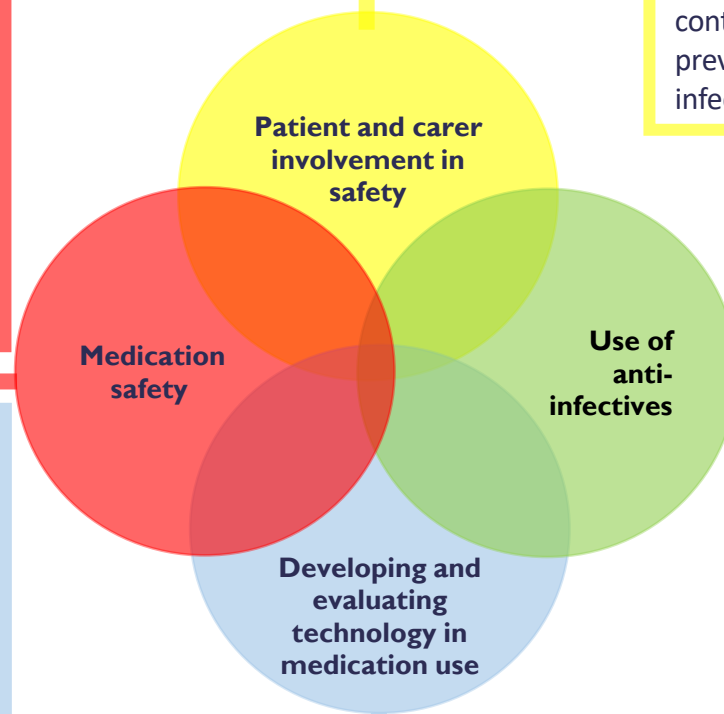
The CMSSQ research team, together with current students, hold a fortnightly online journal club where recent publications relating to patient safety and health services research are discussed, together with peer review of each other's current work. Other members of ICHT and UCL School of Pharmacy staff are very welcome to attend.

# Research themes

The CMSSQ has a significant research output, with a focus on medication safety. Our research is therefore closely aligned with the strategic direction of the Research Department of Practice and Policy at UCL School of Pharmacy, the NIHR NWL PSRC, and with national and international research agendas. Our research falls into four overlapping research areas:

In 2017, The World Health Organization identified 'Medication Without Harm' as the theme for its third Global Patient Safety Challenge, and highlighted that everyone, including patients and healthcare professionals, have a role to play in ensuring medication safety. Three key action areas were identified: polypharmacy, high-risk situations and transitions of care; work from the CMSSQ team has been cited in the technical reports produced for each of these.

This includes non-adherence to medication, which may be both the response to, and cause of, errors and other types of medication-related harm. Many patients and carers are also willing and able to contribute to their own safety in relation to preventing errors and healthcare associated infections; our work contributes to this field.



There is ongoing interest in the potential impact of technologies such as electronic prescribing, barcoding, automation, decision support systems, and the use of multiplatform (smartphone/tablet/computer) apps, together with increasing recognition that unintended consequences, and new types of error can also occur. Such technologies also affect how health care professionals work and may increase or decrease efficiency. A significant proportion of our research relates to this area.

ICHT has long been recognised as a leader in this field, in particular with respect to the role of pharmacists and multi-disciplinary teams in improving anti-infective use. Our partnership with the NIHR Health Protection Research Unit (HPRU) in Healthcare Associated Infections and Antimicrobial Resistance at Imperial College London, continues to provide opportunities for collaboration in addressing healthcare associated infections and antimicrobial resistance as patient safety issues.

# Grants awarded

Members of the CMSSQ were listed on three new grants or fellowships awarded this year (Table 1). Eight other funded grants and two fellowships reported in previous years are ongoing or finished in the last year (Table 2). One further grant application has been submitted with the outcome awaited. Four further grant and fellowship applications were submitted during the past year but were unsuccessful.

CMSSQ investigator	Project title	Funder	Date of award	Start date	End date
Bryony Dean Franklin (lead applicant)	Infrastructure/School Pre-Application Support Fund	NIHR	Nov 2024	Dec 2024	May 2026
Frances Akor (lead applicant)	Evaluating the impact of an electronic prescribing and medicines administration system on the quality and safety of anticoagulation therapy	NIHR Pre-Application Support Fund	Dec 2024	Jan 2025	June 2025
Bryony Dean Franklin (supervisor for Dr Jig Patel)	Making heparin safer - developing and implementing an effective intravenous unfractionated heparin dosing and monitoring protocol into clinical practice	NIHR Advanced Clinical and Practitioner Academic Fellowship	June 2024	Jan 2025	June 2027
Bryony Dean Franklin (supervisor for Seetal Jheeta)	Developing a medication safety framework to evaluate medication safety in secondary care	NIHR Pre-doctoral Research Fellowship	Aug 2024	Oct 2024	Sept 2025

**Table 1: New grants and fellowships obtained during the past year.**

CMSSQ investigators	Project title	Funder	Date of award	Start date	End date
Bryony Dean Franklin (Theme lead)	HPRU in Healthcare Associated Infections and Antimicrobial Resistance	NIHR	November 2019	April 2020	March 2025
Bryony Dean Franklin (Co-applicant)	Getting prescription medications right at home, in hospital & hospice: An Activity Theory analysis to improve patient safety and confidence in palliative care	Marie Curie	January 2020	April 2021	March 2025
Bryony Dean Franklin (Director)	NIHR North West London Patient Safety Research Collaboration	NIHR	December 2022	April 2023	March 2028
Bryony Dean Franklin and Calandra Feather (Co-applicants)	Dosium proof of concept study	NHS England	September 2023	September 2023	December 2024
Bryony Dean Franklin (Co-applicant)	NIHR SafetyNet	NIHR	October 2023	October 2023	March 2028
Bryony Dean Franklin (Co-applicant)	Developing a predictive real-time warning system for avoiding patients and healthcare staff harm after medication safety incidents	Academy of Finland	April 2022	April 2022	March 2027
Bryony Dean Franklin (Co-applicant)	NIHR Incubator for the Pharmacy Profession	NIHR	March 2023	April 2024	March 2026
Angela Burgin (Bryony Dean Franklin as clinical advisor)	The ElPresMO Study –Electronic Prescribing and Medicines Optimisation in the hospital setting: What helps and hinders patient conversation?	NIHR CDRF	June 2021	September 2022	August 2025

**Table 2: Ongoing grants and fellowships that remained active during the past year.**

### MPhil, PhD and postgraduate fellowship students

We have nine PhD students linked to the Centre at present, some full time and some part time, conducting a range of studies focused on different aspects of medication safety (Table 3).

Student	CMSSQ supervisor(s)	Project title and University	Dates
Pollyanna Kellett	Bryony Dean Franklin (second supervisor)	Resilience in nurses' use of medication administration technologies (working title) (PhD; University of Leeds)	Started March 2017. Part time. Ongoing
Calandra Feather	Bryony Dean Franklin (second supervisor)	The impact of patient-specific decision support within electronic prescribing systems (PhD; Imperial College)	Started 2019. Full time. Passed viva January 2025
Nouf Alaboud	Bryony Dean Franklin (second supervisor)	The impact of electronic prescribing system factors and data integration on medication-related clinical decision making and prescribing workflow (PhD; UCL School of Pharmacy)	Started September 2020. Full time. Ongoing
Nouf Alsalem	Bryony Dean Franklin (primary supervisor)	Use of handheld medication records to support patient safety (PhD; UCL School of Pharmacy)	Started September 2021. Part time. Ongoing
Tugce Haykir	Bryony Dean Franklin (second supervisor)	Stewardship of high-risk drugs - What can we learn from antimicrobial stewardship programmes? (PhD; UCL School of Pharmacy)	Started January 2022. Full time. Ongoing
Joanna Fraczek	Bryony Dean Franklin (primary supervisor)	Using risk prediction tools to identify inpatients at risk of medication-related harm (PhD; UCL School of Pharmacy)	Started February 2025. Full time. Ongoing
Simisola Fakoya	Bryony Dean Franklin (second supervisor)	Safety of pharmacological interventions in women with menstrual and uterine disorders: does treatment affect thrombosis and cardiovascular risk? (PhD; UCL School of Pharmacy)	Started May 2024; Part time. Ongoing
William Waldock	Bryony Dean Franklin (second supervisor)	Evaluating the application of digital tools to antimicrobial resistant infections (PhD; Imperial College)	Started October 2024. Full time. Ongoing
Aaron Jaswal	Bryony Dean Franklin (second supervisor)	Improving adherence to prophylactic low molecular weight heparin and direct oral anticoagulants following hospital discharge (PhD; Imperial College)	Started September 2024. Full time. Ongoing

*Table 3: PhD students under CMSSQ supervision*

### Postgraduate Masters students

We provide supervision to ICHT staff, UCL School of Pharmacy students, and Imperial College students conducting postgraduate Masters degrees in a range of topics related to medication safety. For example, we last year supervised two MPharm students doing projects relating to sustainability.

## **Medication safety**

Three new PhD students joined the team this year, doing research relating to medication safety. Joanna Fraczek is looking at how we should identify hospital inpatients to prioritise for medication review and who should be seen face-to-face. Simisola Fakoya is exploring pharmacological interventions used in people with menstrual and uterine disorders and how such treatments affect thrombosis and cardiovascular risk. Aaron Jaswal is studying patients' adherence to prophylactic anticoagulants used to prevent venous thromboembolism following hospital discharge

Tugce Haykir's PhD is also ongoing, exploring opioid stewardship interventions in use in English primary and secondary care organisations, and patients and carers' perspectives on their use.

Frances Akor, Consultant Pharmacist for anticoagulation, is supporting the MHRA and Genomics England two-year pilot study known as the Yellow Card Biobank. Using pharmacogenomics, the overall aim of the Biobank is to improve understanding of how a patient's genetic makeup may increase their risk of harm from adverse drug reactions. The pilot study is currently recruiting patients who have experienced severe bleeding associated with direct oral anti-coagulants.

## **Patient and carer involvement in medication safety**

The 'MANADR' study aims to increase understanding on why sometimes patients with known Adverse Drug Reactions (ADRs) still receive the causative medication, and why healthcare staff sometimes believe patients have histories of ADRs when this is not the case, including the role that patients and carers can play in supporting safety. Data collection is almost complete, with analysis to follow.

We continue to support the Helix team at Imperial College in developing and evaluating interventions to support family carers administering medication in end-of-life care at home.

Nouf Alsalem's PhD at UCL School of Pharmacy focuses on patient-held medication records to support patient safety at transitions of care. Nouf has completed a systematic review and a series of interviews to explore patients' and staff perspectives on patient-held medication records.

## Development and evaluation of technology

We continue our work exploring the impact of BCMA on patient safety and its use by nurses in hospital inpatients, with a realist evaluation of BCMA in three hospital trusts in London and South West England. We have conducted a rapid realist review of existing evidence and interviews with key-informants from different hospitals local and national. We will start observations of the BCMA use in practice in June 2025.

Calandra Feather's PhD focused on patient-specific decision support within electronic prescribing systems. Calandra published a study of a randomised user testing of Touchdose study in *BMJ Quality and Safety*. Touchdose is now live across West London Children's Healthcare, including two paediatric emergency departments, at least six inpatient wards, and the outpatient department. The system was implemented with support from an NHS England Digital Medicines First-of-Type award granted to Dosium in partnership with Imperial College Healthcare NHS Trust. A multi-site service evaluation is currently ongoing, examining safety, performance, and process outcomes.

## Use of anti-infectives

PhD student Nouf Alaboud's work includes evaluation of a sepsis scoring system as part of an electronic health record at a large London hospital trust, and is now nearing completion.

William Waldock's PhD is exploring use of digital tools to support safe prescribing of antimicrobials and reduction of antimicrobial resistance.

Bryony Dean Franklin continues as theme lead for a research theme on 'practice, design and engineering' within the NIHR HPRU in Healthcare Associated Infections and Antimicrobial Resistance at Imperial College and until February 2025 was Chair of the Centres for Antimicrobial Optimisation Network ('CAMO-Net') Medicines Management Research Theme, supporting researchers internationally.

Professor Mark Gilchrist, co-chair of the UK National Outpatient Parenteral Antimicrobial Therapy (OPAT) programmes, co-authored NHSE Guidance to Integrated Care Boards and providers on developing OPAT.

## Publications and peer review

During the past year, **20** peer-reviewed papers were published, as well as **3** other publications, and presented **15** conference abstracts of which three won prizes. These are listed on page 18; research papers were published in prestigious journals such as BMJ Quality and Safety, The Lancet and the Journal of Antimicrobial Chemotherapy. This brings our cumulative output to **373** peer-reviewed papers, **509** abstracts and **188** other publications since 2000.

Bryony Dean Franklin continues as co-Editor-in-Chief for the journal BMJ Quality and Safety, which receives about 2,000 submissions a year, is on the review panel for NIHR Clinical Doctoral Research Fellowship and Research for Patient Benefit applications, and is a reviewer for MedRxiv. Other members of the team also peer review papers submitted to a wide range of journals.

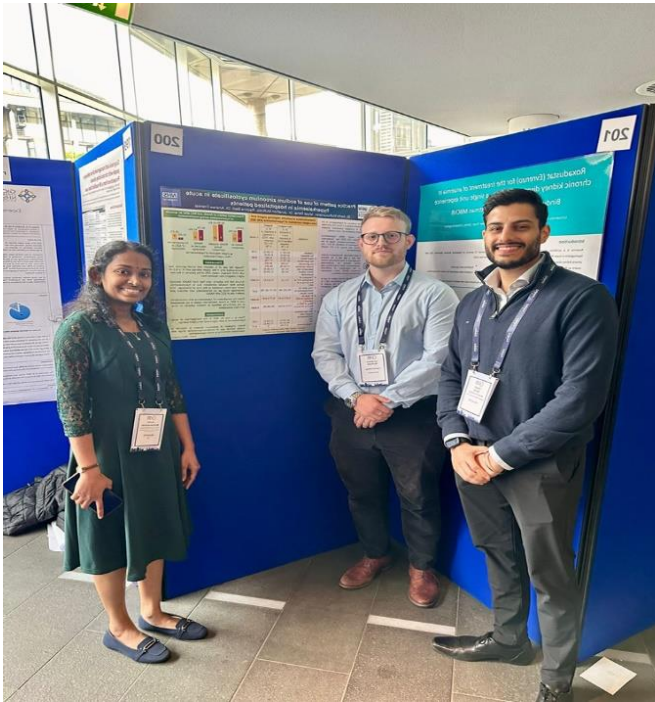
## Awards

### HSJ Partnership Awards – Highly Commended

We are proud to share the news that West London Children's Healthcare, the integrated paediatric services of ICHT and Chelsea and Westminster Hospital NHS Foundation Trust, received High Commendation in the category of Most Effective Contribution to Clinical Redesign at the 2025 Health Services Journal Partnership Awards. The commendation recognised their partnership with Dosium and the Royal Pharmaceutical Society for the development and implementation of Touchdose, an innovative, paediatric-specific, indication-based clinical decision support tool. Being recognised in such a competitive category highlights the impact of this collaboration in improving prescribing safety and redesigning clinical practice through digital innovation.



*The Touchdose team at the HSJ partnerships awards 2025*



Poster presented at the Hospital Pharmacists Association of Ireland 2024 Conference. Dublin, Ireland. **Winner of the first poster prize for the Research category.**



Cally Feather presenting her winning presentation at the North West London NMAHPPS Research Symposium, October 2024.

## Education and training

The CMSSQ plays a key role in the provision of education both at UCL School of Pharmacy and within ICHT, at both undergraduate and postgraduate levels, and for both taught and research-based higher degrees.

As well as bringing specific expertise in research and medication safety, other teaching at UCL School of Pharmacy utilises the skills and experience of qualified pharmacy staff at ICHT for both undergraduate and postgraduate students. For example, we provide teaching each year to

the MSc in Clinical Pharmacy, International Practice and Policy, and for the MPharm degree, teach an options module on Medication Safety and Anti-infectives and a course on 'systems, safety and practice' running throughout the four-year MPharm degree. Bryony Dean Franklin is also the Sustainability Lead for the MPharm degree.

## Patient and public involvement

We involve patients and the public in our research whenever possible and are recognised as leaders in this area. Our work on lay involvement in data collection and in the analysis of qualitative data has been shared as examples of good practice locally, nationally and internationally. Most of our projects include members of the public on an advisory group or similar. Bryony Dean Franklin remains academic champion for patient and public involvement and engagement (PPIE) for the NIHR NWL PSRC, which involves promoting PPIE and engagement, providing expertise in PPIE in the context of patient safety research and co-chairing the PPIE advisory board.

## Collaboration with organisations

During the last year we have built on existing collaborations plus developed new links. As well as internal collaborations within UCL School of Pharmacy, ICHT and Imperial College, our external collaborators over the last year have included Beckton Dickinson, Deenova, NHS England, Radboud University Medical Centre, Monash University, University of Bath, University of Manchester, and University of North Carolina.

Bryony Dean Franklin also travelled to China in August 2024 to explore research links with teams studying the quality and safety of patient care and to deliver a series of workshops on writing for publication. The trip was made as part of her role as Co-Editor-in-Chief at the journal BMJ Quality and Safety, together with her co-Editor-in-Chief Eric Thomas from Houston, USA. They visited teams in several hospitals and universities in Beijing, Guangzhou and Hong Kong.



The photos show Bryony and Eric with some of the research team at National Cancer Centre in Beijing, and in the traditional Chinese medicine pharmacy, which functions parallel with a pharmacy department providing Western-style medication.

# Reflections and considerations for the future

**We are delighted to report that the CMSSQ's objectives are all being achieved. Specifically, we are recognised internationally as a leading medication safety research centre, and are conducting funded interdisciplinary research related to the quality and safety of medication use. We are increasingly influencing patient safety policy and practice, and have an impressive ongoing publication record. We are building capacity in health services research within pharmacy and beyond, and are partnering with patients and the public at all stages of our research.**

**Our outputs remain strong, with numbers of peer reviewed papers and conference abstracts remaining high.**

**Over the next year we will continue to pursue further grant applications in order to maintain future income, as well as working to translate our research findings into practice and policy. We will also be continuing to support capacity building in research both locally and more widely, and celebrating our 25<sup>th</sup> anniversary.**

# Publications

## PEER REVIEWED PAPERS

Chaudhry NT, Benn J, **Franklin BD**. Secondary uses of electronic prescribing and pharmacy data in UK hospital care: a national survey. *BMJ Open Quality* 2024;13:e002754. doi: 10.1136/bmj-oq-2024-002754

Arslan M, **Franklin BD**, Murdan S. Modelling pharmacy and pharmaceutical students' intentions to learn about their roles in environmental sustainability, *Sustainable Chemistry and Pharmacy*, Volume 40, 2024,101639, ISSN 2352-5541, <https://doi.org/10.1016/j.scp.2024.101639>.

Wolie ZT, Roberts JA, **Gilchrist M**, McCarthy K, Sime FB, Current practices and challenges of outpatient parenteral antimicrobial therapy: a narrative review, *Journal of Antimicrobial Chemotherapy*, 2024;, dkae177, <https://doi.org/10.1093/jac/dkae177>

**Abdelaziz S**, Amigoni A, Kurttila M, Laaksonen R, Silviri V, **Franklin BD**. Medication safety strategies in European adult, paediatric, and neonatal intensive care units: a cross-sectional survey. *European Journal of Hospital Pharmacy* Published Online First: 04 June 2024. doi: 10.1136/ejhpharm-2023-004018

Grailey K, Brazier A, **Franklin BD**, et al. Raising the barcode: improving medication safety behaviours through a behavioural science-informed feedback intervention. A quality improvement project and difference-in-difference analysis. *BMJ Quality & Safety* Published Online First: 20 June 2024. doi: 10.1136/bmjqs-2023-016868

Koldewey C, Kleuskens M, Litjens C, **Franklin BD**, Scheepers HCJ, de Wildt SN. Perceived barriers and facilitators for model-informed dosing in pregnancy: a qualitative study across healthcare practitioners and pregnant women. *BMC Med.* 2024 Jun 18;22(1):248. doi: 10.1186/s12916-024-03450-8. PMID: 38886762; PMCID: PMC11184760.

**Wilson RC**, Riezk A, Arkell P *et al.* Towards pharmacokinetic boosting of phenoxymethylpenicillin (penicillin-V) using probenecid for the treatment of bacterial infections. *Sci Rep* **14**, 16762 (2024). <https://doi.org/10.1038/s41598-024-67354-6>

**Hire AJ**, **Franklin BD**. Potentially inappropriate prescribing (PIP) in older people and its association with socioeconomic deprivation—a systematic review and narrative synthesis. *BMC Geriatr* **24**, 651 (2024). <https://doi.org/10.1186/s12877-024-04858-w>

Koskiniemi S, Syyrilä T, Hämeen-Anttila K, Mikkonen S, Manias E, Rafferty AM, **Franklin BD**, & Härkänen, M. (2024). Patient safety incident reporting software: A cross-sectional survey of nurses and other users' perspectives. *Journal of Advanced Nursing*, 00, 1–13. <https://doi.org/10.1111/jan.16364>

Koldewey CJM, Dibbets AC, Ceulemans M, de Vries LC, **Franklin BD**, Scheepers HCJ, de Wildt SN. Willingness-to-use and preferences for model-informed antenatal doses: a cross-sectional study among European healthcare practitioners and pregnant women. *Frontiers in Pharmacology*. 15: 2024. <https://www.frontiersin.org/journals/pharmacology/articles/10.3389/fphar.2024.1403747> DOI10.3389/fphar.2024.1403747

Koldewey C, Dibbets C, **Franklin BD**, Scheepers HCJ and de Wildt SN (2024), A User-Driven Framework for Dose Selection in Pregnancy: Proof of Concept for Sertraline. *Clin Pharmacol Ther.* <https://doi.org/10.1002/cpt.3429>

Kellett PL, **Franklin BD**, Pearce S *et al.* Resilience in nursing medication administration practice: a systematic review with narrative synthesis. *BMJ Open Quality* 2024;13:e002711. doi: 10.1136/bmj-oq-2023-002711

Koldewey C, Jans VAAM, Waitt C, Greupink R, Auweele KLHE, **Franklin BD**, Scheepers HCJ, de Wildt SN, Striving for balance in decisions on

antenatal pharmacotherapy, *The Lancet*, 2024; 404, 1779-1782, [https://doi.org/10.1016/S0140-6736\(24\)02069-5](https://doi.org/10.1016/S0140-6736(24)02069-5). Striving for balance in decisions on antenatal pharmacotherapy.

**Sharma S and Buckley D.** Paediatric arrhythmias: pathophysiology, types and pharmaceutical management. *The Pharmaceutical Journal*, July 2024, Vol 313, No 7987; 313(7987), DOI:10.1211/PJ.2024.1.323346

Blank M, **Wilson RC**, Wan Y, Peters J, Davies F, Tyszczuk L, Pichon B, Riezk A, Demirjian A, Brown CS, **Gilchrist M.** Exploring real-world vancomycin target attainment in neonatal intensive care in the context of Staphylococcal infections: a retrospective observational cohort study. *Journal of Infection*. 2024 Aug 1;89(2).

Wolie T, Roberts JA, **Gilchrist M**, McCarthy K and Sime FB, Current practices and challenges of outpatient parenteral antimicrobial therapy: a narrative review, *Journal of Antimicrobial Chemotherapy*, Volume 79, Issue 9, September 2024, <https://doi.org/10.1093/jac/dkaf177>

**McLeod, M.**, Campbell, A., Hayhoe, B. et al. How, why and when are delayed (back-up) antibiotic prescriptions used in primary care? A realist review integrating concepts of uncertainty in healthcare. *BMC Public Health* 24, 2820 (2024). <https://doi.org/10.1186/s12889-024-20248-8>

**Feather C**, Clarke J, Appelbaum N, Darzi A and **Franklin BD.** Comparing safety, performance and user perceptions of a patient-specific indication-based prescribing tool with current practice: a mixed methods randomised user testing study. *BMJ Quality & Safety* doi: 10.1136/bmjqs-2024-017733

Naicker S, Roberts JA, Cheng V, Parker SL, Seaton RA, **Gilchrist M**, Sime FB, A review of antimicrobial stability testing guidance for outpatient parenteral antimicrobial therapy programmes: is it time for global harmonization of testing frameworks?, *JAC-Antimicrobial Resistance*, Volume 6, Issue 6, December 2024, dlaf186, <https://doi.org/10.1093/jacamr/dlaf186>

Abu Bakar A, Payne H, **Tickner N**, Muhd Helmi MA, Jacobs TG, Lyall H. Dosing, Toxicity and Drug Concentrations for Ganciclovir/Valganciclovir in

Preterm and Low Birthweight Infants Treated for Cytomegalovirus. *Pediatr Infect Dis J*. 2025 Apr 1;44(4):319-325. doi: 10.1097/INF.0000000000004605.

## EDITORIALS

**Franklin BD** Book review: a useful handbook on quality improvement in healthcare. *BMJ Quality & Safety* Published Online First: 22 February 2025. doi: 10.1136/bmjqs-2025-018547

R A Seaton, **M Gilchrist**, Making a case for outpatient parenteral antimicrobial therapy (OPAT), *Journal of Antimicrobial Chemotherapy*, Volume 79, Issue 8, August 2024, Pages 1723–1724, <https://doi.org/10.1093/jac/dkaf183>

## CONFERENCE ABSTRACTS AND PRESENTATIONS

Howlett M, McCarthy S, Silvani V, **Franklin BD**, Laaksonen R, on behalf of the EAHP Special Interest Group for the Investigation of Medication Errors in Intensive Care Units. Development and Prioritisation of Policy Recommendations for Medication Safety Improvement for Intensive Care Units – A European Association of Hospital Pharmacists Special Interest Group Delphi Study. Poster presented at the Hospital Pharmacists Association of Ireland 2024 Conference. 19<sup>th</sup> – 21<sup>st</sup> April 2024. Dublin, Ireland. **\*\*Winner of the first poster prize for the Research category\*\***

Ma Q, **Abdelaziz S**, Haykir T, **Franklin BD**, Garfield S. Healthcare professionals' views on opioid stewardship interventions in postoperative, opioid-naïve patients: a qualitative service evaluation. Oral presentation at Health Services Research and Pharmacy Practice Conference 25–26 April 2024. University College Cork, Ireland.

**Wilson RC, Gilchrist MJ**, Cele R, D'Arc S, Mills E, Ndhlovu C, Balancio B, Arkell P, Read L, Bayliss M, Noel AR, Macgowan A, Hope WW, Holmes AH, Rawson TM. Evaluation of therapeutic drug monitoring (TDM) in an outpatient antimicrobial therapy (OPAT) service: a prospective observational study. Poster presented at the European Society of Clinical Microbiology and Infectious Diseases (ESCMID) 2024 Global Congress. 27<sup>th</sup> – 30<sup>th</sup> April 2024. Barcelona, Spain

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