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Oral Abstract Book

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Building a Community of Practice for SoTL

Schneider C, Lim C

This interactive workshop is designed for pharmacy and pharmaceutical science academics at all career stages to explore the concept of a Community of Practice (CoP) in the Scholarship of Teaching and Learning (SoTL). Participants will engage in collaborative activities, learn about systems for collaboration, and identify dissemination opportunities

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Aged Care On-site Pharmacist: Education, Implementation and Governance

Kosari S

The Aged Care On-site Pharmacist: Education, Implementation and Governance symposium highlights key national initiatives advancing pharmacist integration in residential aged care. The presentations share findings from large scale national research studies funded by the 2022 Medical Research Future Fund (MRFF) under the Quality, Safety and Effectiveness of Medicine Use and Medicine Intervention by Pharmacists initiative. The symposium will also explore the broader implications of these findings for practice, policy, and both current and future research.

The first presentation shares preliminary insights from the OPTIMISER3 study, which investigates the real-world application of the Aged Care On-site Pharmacist (ACOP) model across diverse Australian regions and contexts. It emphasises the importance of local adaptation, interprofessional collaboration, and flexible delivery modes to ensure sustainable pharmacist roles in aged care settings.

The second presentation addresses the training needs of pharmacists through the PROMPT-RC study, which is co-designing and piloting Australia's first aged care-specific Foundation Pharmacy Residency Program to equip pharmacists with the competencies required in this emerging field.

The third presentation focuses on clinical governance, detailing how pharmacists can lead or contribute to Medication Advisory Committees (MACs) to enhance medication safety. Findings from the MEGA-MAC study will showcase system-level strategies using data-driven quality improvement initiatives, aligned with national medication management guidelines.

Together, these presentations underscore the dynamic interplay between clinical practice and research, illustrating how each informs and strengthens the other in a continuous, iterative cycle to advance the role of pharmacists in aged care through education, implementation, and governance.

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The Future of the PBS: Balancing equity, access and affordability in the new world order.

Wilson AO A

Now an icon of the Australian health care system, since its conception the Pharmaceutical Benefits Scheme (PBS) has experienced controversial episodes. In 1993 a world first legislated requirement was implemented that the Pharmaceutical Benefits Advisory Committee (PBAC) must assess a medicine as cost-effective to recommend listing on the PBS listing. The flow on consequences of this include the development of a sophisticated health technology assessment process and complicated arrangements to achieve cost-effective prices.

Later legislated changes requiring statutory price reductions added further challenges because of impact of falling price of comparators. Concerns have always been present about the dominance cost-effectiveness in the decision-making process and the requirement has not always been comfortable for governments. A more general move for greater involvement of informed consumers in decision making and for greater transparency have also impacted on PBS processes as have patient and clinician expectations of faster access to new medicines.

The 2022 National Medicines Policy review followed by the 2024 HTA policy and process review were the first substantive whole-of-systems assessments in over 20 years. The extent to which the response to those reviews can prepare the PBS and its processes to be suitable for stakeholder expectations, new health technologies and their evidentiary support, and the broader international challenges will be the focus of my presentation.

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Medicines management in aged care: evidence, interventions, and policy impact

Sluggett J

Older people living in aged care homes often experience multimorbidity and polypharmacy, and medicines-related problems are common. Optimising medicines management in aged care homes was a key focus of the Royal Commission into Aged Care Quality and Safety and subsequent policy reforms.

This presentation will provide an overview of recent studies examining medicines use, safety and effectiveness in aged care homes. It will highlight the value of real-world data in generating timely evidence to inform aged care policy and practice. The presentation will also explore the evaluation of pharmacist-led services and the impact of novel interventions targeting quality use of medicines and improved health outcomes among residents of aged care homes.

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Biophysical Characterisation of Thermal Stability and Aggregation in Monoclonal Antibody Formulations

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Introduction:
Development of monoclonal antibody (mAb) therapeutics, particularly for subcutaneous administration, often requires highly concentrated formulations. Such conditions can lead to aggregation and increased viscosity, compromising quality and increasing immunogenic risk. Temperature is a major concern in the biopharmaceutical industry due to its potential to trigger aggregation. Despite extensive efforts, a significant gap remains in understanding the molecular events that trigger and propagate aggregation.

Aim:
In this study, we aimed to elucidate the temperature-induced aggregation mechanism of IgG4 mAb, using various biophysical techniques, to monitor aggregation triggered by thermal unfolding of its least stable domain.

Method and Results:
The first thermal transition, corresponding to unfolding of the CH2 domain, was detected at +60°C by Differential Scanning Calorimetry. The hydrodynamic diameter of the mAb remained relatively stable up to +55°C, as determined by Dynamic Light Scattering, suggesting the protein retained its native conformation within this range. Above +60°C, a significant increase in size was observed, indicating the onset of aggregation, which was confirmed to be irreversible upon cooling. Despite this unfolding event, Fourier Transform Infrared Spectroscopy and Raman Spectroscopy revealed minimal disruption to the secondary structure, suggesting that early aggregation is not driven by major secondary structure loss. However, Small-Angle X-ray Scattering (SAXS) demonstrated notable tertiary structural rearrangements and the formation of oligomeric species at elevated temperatures. Synchrotron size exclusion chromatography coupled SAXS further resolved these aggregates, identifying monomers, dimers, and higher-order oligomers with distinct radii of gyration and molecular weights.

Discussion:
These findings highlight the pivotal role of the unfolding of the CH2 domain in initiating aggregation and provide molecular-level insights into the early events that compromise mAb stability under thermal stress. By resolving conformational changes and aggregate species using complementary biophysical techniques, this study establishes a mechanistic framework that can be utilised in understanding mAb aggregation under thermal stress.

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Insights from intravenous drug compatibility studies: excipients, diluents and analytical challenges

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Introduction:
Evidence guiding intravenous (IV) drug compatibility in the context of neonatal intensive care (NICU) settings remains limited, despite the high frequency of Y-site administration.

Aim:
This presentation provides novel insights from physicochemical compatibility studies of IV drugs, highlighting the potential impact of excipients, diluents and analytical challenges.

Methods:
Primary drugs were mixed 1:1 with >40 secondary IV drugs at clinically relevant concentrations for up to 4 hours, to simulate Y-site co-administration. Physical compatibility was assessed by visual observation. Chemical compatibility was evaluated by primary drug concentrations, using validated HPLC assays.

Results:
Caffeine citrate injection was incompatible with six IV drugs, due to citrate buffer excipients, while caffeine base was universally compatible. Dexmedetomidine (1 µg/mL) and alprostadil (20 µg/mL) presented >1,000-fold concentration disparities with several drugs, and problematic assay interference was resolved by modifying the HPLC conditions or applying baseline subtraction. Meropenem-glucose (10-25% w/v) mixtures developed time-dependent discolouration; however, only the meropenem-glucose 25% combination was formally defined as incompatible (ratio <90%).

Discussion:
The majority of IV drug combinations were physicochemically compatible and deemed safe for Y-site co-administration in NICU settings. However, our studies show that excipients/diluents may impact the compatibility of IV drugs and validated HPLC assays are crucial for definitive clinical decisions. These novel, clinically relevant findings highlight the need for evidence-based guidelines applicable to vulnerable NICU populations.

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Nicotine exposure and metabolism during pregnancy among First Nations individuals in Queensland, Australia

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Introduction:
Exposure to cigarette smoke is one of the key factors contributing to adverse pregnancy outcomes. There are higher rates of smoking during pregnancy among First Nations peoples than non-First Nations populations in Australia. The nicotine metabolite ratio (NMR), the ratio between the two major nicotine metabolites, 3-hydroxycotinine and cotinine, indicates the nicotine metabolism rate. Previous studies investigating nicotine metabolism point towards nicotine metabolism becoming faster (NMR becoming a larger value) as pregnancy progresses. An increase in the rate of nicotine metabolism may result in more intensive smoking during the last trimester to compensate for faster nicotine elimination. Previous studies have been conducted in participants with primarily White ethnic backgrounds.

Aims:
This study investigated nicotine metabolism during pregnancy in a primarily First Nations population.

Methods:
A prospective observational study was conducted in Hervey Bay, Australia, with a target sample size of 80 pregnant individuals carrying a baby of First Nations descent. Urine samples collected during pregnancy were analysed for nicotine, 3-hydroxycotinine and cotinine. Nicotine exposure (the molar sum of nicotine and its metabolites) and NMR were calculated and compared across the three trimesters.

Results:
83 participants were enrolled in the study. Among these, 45 participants with urine cotinine values > 0.36 nmol/mg creatinine were included in this analysis, contributing a total of 180 urine samples. Nicotine exposure did not differ across trimesters. Regression modelling indicated that NMR estimates increased by 29% each trimester ($p = 0.002$) and by 2% for each additional week of gestational age ($p = 0.007$).

Discussion:
This study presents the first assessment of NMR in a First Nations population during pregnancy. The NMR increased during pregnancy and the highest NMR values were observed in the third trimester. Their nicotine exposure did not change across trimesters, suggesting that a compensatory increase in nicotine intake did not occur.

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Low dose naltrexone: what is the evidence?

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Introduction:
Naltrexone, an opioid receptor antagonist approved for opioid and alcohol use disorder (50-100mg), exhibits distinct pharmacological properties at low doses (0.5-6mg). Low dose naltrexone (LDN) emerged in the 1980s through off-label use and demonstrates hormetic dose-response characteristics. Despite growing clinical interest across diverse therapeutic areas including pain management, dermatology, gastroenterology, immunology and oncology, LDN remains off-label with limited high-quality evidence supporting its purported therapeutic applications.

Aims:
This review evaluated the current evidence for LDN as a therapeutic intervention across diseases states and identified areas requiring further research to guide clinical practice.

Methods:
A literature search was conducted in August 2025 using PubMed, Embase and Cumulative Index to Nursing and Allied Health Literature databases. The term “low dose naltrexone” was used in title and abstract searches to identify peer-reviewed, English-language publications exploring the therapeutic utilisation of naltrexone at doses ≤12.5mg in humans, yielding 94 studies for full review.

Results:
Evidence predominately consisted of small observational studies and case series. Pain management had the largest evidence base, but with mixed results, due to larger RCTs contradicting positive findings from smaller studies. Dermatology, gastrointestinal disorders and long-COVID showed consistent patient-reported improvement in observational data. Autoimmune conditions demonstrated variable outcomes, while evidence in mental health and oncology was largely inconclusive. LDN demonstrated favourable tolerability across all therapeutic areas with mild sleep disturbances and gastrointestinal effects.

Discussion:
Current literature indicates that LDN is safe, inexpensive and potentially versatile. Most of the evidence pertains to chronic pain and dermatological conditions, while other therapeutic areas have also been investigated, albeit with fewer studies. Although the diversity of conditions studied suggests broad therapeutic potential, the predominance of low-quality evidence and frequent use of concurrent therapies limit definitive conclusions. Large, well-designed, multi-centre RCTs are needed to establish efficacy, optimal dosing and the clinical role of LDN.

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Laboratory simulations in pharmacology education: Educator Priorities for Simulation Design

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Introduction
Ethical, regulatory, and logistical constraints on live-tissue practicals are accelerating adoption of digital and cell-based alternatives in undergraduate pharmacology. Uncertainty remains about the extent to which current simulations support conceptual understanding, practical reasoning, and assessment alignment relative to traditional labs.

Aims
To characterise current practice and perceived effectiveness of laboratory simulations, identify learning gaps, and derive educator-prioritised design requirements for next-generation simulated or blended laboratories.

Methods
A mixed-methods needs analysis was conducted: i) pilot survey with Australian pharmacology educators, then an international pharmacology educator survey callout targeting coordinators and practical leads. Survey domains included purposes of laboratories, tools in use, concepts/skills taught, perceived effectiveness, barriers, desired features, assessment alignment (including OSPE-style tasks), and implementation contexts. A subset volunteered for interviews; quantitative data were summarised descriptively and qualitative responses thematically analysed.

Results
Uptake spans institutions and courses, while depth of use varies: common for concept demonstration and pre-lab preparation, used sparingly when outcomes require technical proficiency or professional judgement. Principal deficits were practice of tacit/technical skills (76%), limited real-time physiological behaviour (60%), and weak alignment to performance assessment (55%). Desired capabilities centred on authenticity and student agency: design-and-iterate experimentation under realistic constraints (time, resources, uncertainty) (80%); dynamic responses with variability and noise (66%); embedded feedback/analytics (65%); and LMS integration (52%). Qualitative data indicated simulations support learning but do not replicate real experimental uncertainty, limiting opportunities to exercise professional judgement.

Discussion
Findings support a blended approach rather than chasing strict ‘lab equivalence’. Priorities are lifelike physiological responses, student-led inquiry with iteration, real-world constraints with clear decision points, and built-in assessment with quick feedback. The work also raises practical questions including what skills belong in undergraduate vs later training, and how AI should support (not replace) lab learning. This study was supported by the APSA Education Grant.

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Ionizable lipid effects on mRNA-LNP pharmacokinetics and biodistribution

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Introduction.
Ionizable lipids play a crucial role in mRNA-lipid nanoparticle (LNP) formulations by facilitating mRNA encapsulation, promoting cell uptake, and enhancing endosomal escape of mRNA-LNPs. Despite their importance in mRNA delivery, the specific effects of ionizable lipids on mRNA-LNP in vivo pharmacokinetics (PK) and biodistribution remain underexplored.

Aims.
This study aims to examine the effect of SM-102, ALC-0315, DLin-MC3-DMA (MC3), and 113-O12B ionizable lipids in mRNA-LNP formulations on plasma PK of lipid and mRNA, and biodistribution of expressed protein following SC and IV administration in mice.

Methods.
mRNA-LNP formulations incorporating each ionizable lipid were constructed with nLuc-GFP mRNA and administered via SC or IV injection in mice. Plasma samples were collected over time to assess mRNA and lipid levels using RT-qPCR and LC-MS/MS, while tissue samples were analyzed for protein expression using AMI HT.

Results.
Altering ionizable lipids markedly affected plasma PK of both mRNA and LNP lipids, as well as tissue biodistribution of expressed protein. SM-102 LNPs showed the highest plasma stability and mRNA bioavailability (~3-fold higher than others after SC injection). ALC-0315 LNPs produced prolonged lipid exposure but lower mRNA plasma levels compared to SM-102 across both routes. MC3 LNPs displayed the longest terminal half-life and delayed mRNA expression. After IV dosing, protein expression localized mainly to the liver, whereas SC dosing yielded higher expression in skin and draining lymph nodes.

Discussion.
Despite differences in PK, SM-102 and ALC-0315 LNPs achieved similar overall tissue protein expression, suggesting the mRNA in LNP in plasma at early timepoints is more available for expression. The distinct biodistribution following SC versus IV administration highlights how route and lipid choice jointly shape therapeutic outcomes.

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Leveraging Pharmacists' Scope of Practice to Improve Access to Gender Affirming Care in Nova Scotia

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Introduction
The transgender and gender diverse (TGD) populations are known to be medically underserved. Pharmacists have the potential to assist the TGD populations by leveraging their scope of practice and providing a more accessible avenue for Gender Affirming Care (GAC)

Aims
The aim of this study is to examine pharmacists' experiences and perceptions about providing GAC products and services to TGD people.

Methods
This was a mixed methods concurrent triangulation study using an online survey and semi-structured interviews of pharmacists practicing in Nova Scotia, Canada. A link to the online survey was sent via the provincial regulatory body to any currently practicing pharmacist. The questionnaire consisted of 36 questions mapped to the constructs of the Theoretical Framework of Acceptability of Healthcare Interventions. Participants were able to voluntarily leave their email address if they wished to be contacted for a follow-up interview. Survey data was analyzed descriptively, and interview data was analyzed via thematic analysis.

Results
A total of 162 pharmacists completed the survey and 11 pharmacists completed the interviews. Acceptability was positive across the constructs of Affective Attitude, Ethicality, and Perceived Effectiveness. Mixed acceptability (both positive and negative) was present within the constructs of Burden, Opportunity Cost, and Self Efficacy, with pharmacists not always seeing themselves as GAC providers. Over 65% of surveyed pharmacists did not feel confident in their knowledge to provide GAC services. Interview data aligned with survey responses with some pharmacists refusing to provide GAC based on political or personal reasons.

Discussion
Pharmacists' perceptions of providing access to GAC was overall positive, with some negative perceptions present based on personal values and beliefs or lack of knowledge in the area. Provision of GAC by pharmacists should be paired with continuing education programs to improve pharmacists' acceptability.

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Patient perspectives of a collaborative pharmacist prescribing model: a cross-sectional mixed methods survey

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Introduction:
Collaborative pharmacist prescribing involves pharmacists working with doctors and patients to prescribe medicines in hospitals. While staff have reported positive experiences, little is known about patient perspectives. Partnering with patients is a key healthcare standard in Australia and globally. Understanding patient experiences is essential to support shared decision-making and improve collaborative prescribing practices.

Aim(s):
To evaluate patient perspectives of a collaborative pharmacist prescribing model (intervention) compared to independent medical prescribing (usual care).

Methods:
A cross-sectional, voluntary, anonymous survey was conducted and reported in line with STROBE guidelines. The survey was disseminated across four hospitals between 09/2023-03/2025. Eligible inpatients were aged ≥ 18 years and able to provide informed consent. Descriptive text responses were collated into themes on NVivo, using the Braun and Clark 6-step thematic analysis framework. Likert scale responses were analysed using SPSS and reported as counts and percentages.

Results:
One hundred intervention and 100 usual care responses were received. Intervention patients reported greater satisfaction with decision-making around their medicines, 80% agreed they felt encouraged to have a say in decisions about their medicines vs 69% in the usual care group. When asked about their level of involvement in decisions, 60% of intervention patients felt involved, vs 14% of usual care patients. Qualitative analysis found patients trust pharmacists' medicines expertise and are confident in pharmacists' ability to collaboratively prescribe. They perceive collaborative pharmacist prescribing to facilitate clearer communication, enhance safety, improve understanding of their medicines, and encourage involvement in medication decisions, reinforcing quantitative findings of increased satisfaction and partnership in care.

Discussion:
Patients reported higher satisfaction, increased confidence, and greater empowerment in medication management with collaborative pharmacist prescribing. These results highlight the need for healthcare services to embed pharmacists in prescribing roles to enhance patient-centred care, support shared decision-making, and improve patient outcomes.

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Swab-Rx: Participant acceptability of community pharmacy-based chlamydia and gonorrhea testing and treatment

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Introduction:
The rates of chlamydia and gonorrhea infections are increasing. Robust testing and treatment options are essential to identify diagnoses, treat infections, and prevent transmission. While community pharmacists are playing increasingly larger roles in the delivery of primary care, their role in testing and treating sexually transmitted infections (STIs) is less established.

Aims:
To describe participants' acceptability of chlamydia and gonorrhea testing and treatment in community pharmacies.

Methods:
The Swab-Rx study enrolled participants to evaluate chlamydia and gonorrhea testing and treatment in four community pharmacies in Nova Scotia, Canada from July 2024 to January 2025. Participants from Swab-Rx were invited to participate in an optional semi-structured interview about their experience. Interview questions were underpinned by the Theoretical Framework of Acceptability (TFA). The interviews were completed by two research team members by telephone, audio recorded, transcribed verbatim, and analyzed by thematic analysis according to TFA constructs.

Results:
Of the 97 participants enrolled, 17 participated in an interview. The interviews took place in May 2025 and were approximately 10 to 40 minutes in length. Identified themes included 1) comfortable environment, 2) de-stigmatized testing, 3) reduced burden from other healthcare professionals, 4) desired expansion to other infections, and 5) importance of privacy and discretion. Participants found the pharmacy comfortable for testing and treatment and highlighted that the setting helped to normalize care. Participants noted a desire for more testing services to be offered at the pharmacy, such as HIV and syphilis, including using different modalities including point-of-care testing and phlebotomy. Participants also believed pharmacists offering this service have the potential to free up clinic and hospital appointments for issues of higher acuity.

Discussion:
Overall, participants found community pharmacist delivered STI care acceptable and reported positive sentiments about their pharmacy-based testing experiences, including potential benefits to their individual health, community health, and healthcare system.

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Implementation of a pharmacist-led chronic kidney disease (CKD) screening service in Australian community pharmacies: baseline data analysis

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Introduction:
The pharmacy-led CKD Screening and Quality Use of Medicines (QUM-CKD) trial aimed to improve CKD detection and optimise medication use through screening in Australian community pharmacies.

Aims:
To describe participants' baseline characteristics and compare CKD risk factors with estimates from the National Health Measures Survey (NHMS, 2011–2012).

Methods:
Eligible participants were aged 35–74 years and had ≥1 CKD risk factor. The QKidney® risk tool was used in combination with blood pressure (BP) levels to stratify patients' 5-year CKD risk as low, moderate or high. Point-of-care (POC) test for estimated glomerular filtration rate (eGFR) was performed only in the intervention arm for participants with moderate-to-high overall risk. Data were organised in Excel and analysed in SPSS (version 31 for Windows), using descriptive statistics.

Results:
Of 1485 participants recruited over two years, 1194 were included in the analysis (552 intervention; 642 control). Most participants were from metropolitan areas (61.1%) and female (56.2%); 3.5% identified as First Nations people. Mean age was 61.3 ± 9.7 years and mean BMI 30.5 ± 6.6 kg/m2. Compared with the NHMS estimates, trial participants had a higher prevalence of overweight/obesity (82%, 95% CI 80–84 vs. 60.5%, 95% CI 56.0–65.0), hypertension (70%, 95% CI 68–73 vs. 34.1%, 95% CI 29.8–38.4) and diabetes (38%, 95% CI 35–40 vs. 16.2%, 95% CI 13.5–18.9), with non-overlapping confidence intervals suggesting significant differences. Overall, 68% of trial participants were at moderate-to-high risk of CKD (58.6% by QKidney®; 30.5% by BP). Among 400 moderate-to-high risk intervention participants, 84 (21%) had reduced kidney function (eGFR <60 mL/min/1.73m2) on POC testing, substantially higher than the national estimate (5.2%, NHMS 2022–2024).

Discussion:
This trial demonstrated that pharmacy-led targeted screening effectively identified patients at increased risk of CKD, reinforcing the opportunity to enhance early detection and management.

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Evaluating the Expansion of Pharmacy Services in a South Australian Public Hospital

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Introduction:
In late 2021, South Australian hospitals faced high occupancy and reduced patient flow. To address this, some hospitals increased pharmacy staffing to strengthen medication management and support patient flow.

Aims:
This study evaluated the effects of increased hospital pharmacy staffing on the provision of admission and discharge services, inpatient length of stay (LOS), 30-day unplanned readmissions and 30-day emergency department (ED) visits.

Methods:
A retrospective repeated cross-sectional study was conducted in general medicine units at two South Australian hospitals (one intervention, one control). The intervention hospital increased staffing by 18.8 full-time equivalent pharmacists, enabling after-hours and weekend services. The control site made no staffing changes. Data were extracted from the hospital's electronic medical record for a pre-intervention period (August–October 2021) and an intervention period (March–May 2022). Outcome measures included the percentage of admissions where pharmacy admission and discharge services were provided, inpatient LOS, 30-day unplanned readmissions, and 30-day ED visits.

Results:
Included were 4,776 admissions involving 4,204 patients. At the intervention hospital, provision of admission services within 24 hours rose by 21% and discharge services rose by 20%, while both declined by 9% at the control hospital. Between-site comparisons showed significant differences across all pharmacy service measures ($p<0.001$), most pronounced among weekend admissions and discharges (43% and 48% differences, respectively). LOS decreased at the intervention hospital during the intervention period (RR=0.90, 95% CI: 0.82–0.98, p=0.015) but was unchanged at the control hospital (RR=1.00, 95% CI: 0.93–1.08, p=0.979). No patient outcomes were significantly different between hospitals at the adjusted threshold ($\alpha=0.003$), with the largest difference (RR=0.81, 95% CI: 0.65–0.99, p=0.044) observed in LOS among weekend admissions.

Discussion:
The expansion of pharmacy services resulted in more patients receiving clinical pharmacy services during their hospital stay and sooner at admission, as well as reduced length of stay.

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Trends and patterns of vaccination in community pharmacies in Australia: A retrospective data analysis

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Introduction:
Pharmacists have become integral to vaccination strategies worldwide and Australia's National Immunisation Program. However, little is publicly available about how pharmacist-administered vaccination trends and uptake vary over time, across demographics, and by locations.

Aims:
This study aimed to analyse trends and patterns of pharmacist-administered vaccinations in community pharmacies of an Australian pharmacy group.

Methods:
A census retrospective descriptive analysis of de-identified routine vaccination records was conducted between 1 January 2021 and 2 April 2025. Temporal trends and seasonal patterns, as well as demographic (age, gender) and geographical distributions (Modified Monash Model classification and proximity to general practice (GP) clinics/medical centres) of vaccine uptake were evaluated.

Results:
Of more than 4 million health services delivered during the study period, >1.1 million vaccination records were analysed for 19 vaccine types. COVID-19 accounted for the largest proportion (59.4%), with a sharp peak between late 2021 and early 2022. Influenza vaccination showed consistent seasonal peaks from March to June, with a notable decline in 2024 compared with other years. The proportion of vaccination was lower among those ≤19 and ≥65 years old and concentrated in metropolitan areas and pharmacies near GP clinics/medical centres, with vaccination administration proportionally distributed between males and females.

Discussion:
Community pharmacists played a vital role in delivering vaccinations, especially during the COVID-19 pandemic and for influenza; their involvement in administering other vaccines is gradually increasing. The findings highlight the need for targeted public campaigns to raise awareness of community pharmacists' role in vaccination, and to encourage uptake across diverse populations and locations. Further research should explore ways to improve uptake in all populations and regions and assess the impact of pharmacy co-location with other vaccination providers.

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Prescription opioid discontinuation and mortality due to suicide or unintentional overdose

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Introduction:
There is a growing focus on deprescribing opioid medicines among long-term users; however, there is limited and conflicting evidence about associations between opioid discontinuation and fatal adverse outcomes.

Aims:
To investigate whether opioid discontinuation is associated with suicide or fatal unintentional overdose among Australians using opioids long-term.

Methods:
The study population included 371,048 people prescribed opioids ≥6-months (≥183-days) following initiation in New South Wales, Australia, between 01/07/2003-31/12/2018. Cases were individuals with a suicide (Study 1) or fatal unintentional overdose (Study 2), matched using risk set sampling to ten controls by age, sex, and date of qualifying into long-term use. Opioid discontinuation, versus ongoing use, was measured using time-varying periods of opioid exposure, quantified from linked dispensing records.

Results:
Over the study period, 523 people died by suicide (median age 50-years (IQR 39-66), 70·4% male) and were matched to 5230 controls (Study 1). Compared to people with ongoing opioid use, opioid discontinuation was not associated with increased odds of experiencing a suicide (adjusted OR 0·88, 95% CI 0·72-1·07). Additionally, 671 people experienced a fatal unintentional overdose (median age 42-years (IQR 35, 50), 58·9% male) and were matched to 6710 controls (Study 2). Opioid discontinuation was associated with reduced odds of experiencing a fatal unintentional overdose (adjusted OR 0·44, 95% CI 0·37-0·54), relative to ongoing use, with the magnitude of this effect increasing the longer people remained unexposed to opioids.

Discussion:
In these population-based studies of people using opioids long-term, opioid discontinuation was not associated with suicide and was associated with reduced odds of fatal unintentional overdose. These findings provide evidence that opioid discontinuation is not necessarily associated with adverse mortality outcomes.

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Evaluating the responsiveness and minimum important change of a tool for measuring medicine-related symptom changes over time.

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Introduction:
Monitoring patient-reported symptoms over time may support early detection of medicine-related harms, but none of the existing tools have been validated for longitudinal use.

Aim:
To assess the responsiveness and minimum important change (MIC) of a tool for longitudinal monitoring of medicine-related symptoms.

Method:
A cohort study was conducted among Australian adults (≥18 years) taking medications. Participants completed the Pharmacotherapeutic Symptom Evaluation-20 (PHASE-20–Australian version), which includes 19 medicine-related symptoms, and one open-ended question rated on an 11-point scale from '0' (no symptom) to '10' (worst possible symptom), at baseline and at four-week follow-up. The Global Rating Scale (GRS) was also completed at follow-up. Responsiveness was evaluated by correlating score changes with the GRS and calculating the area under the receiver operating characteristic (ROC) curve (AUC). MIC was estimated using ROC anchor-based and 0.5 standard deviation (SD) distribution-based methods, then compared with the Smallest Detectable Change (SDC).

Results:
A total of 102 participants completed both baseline and follow-up. Strong correlations were observed for overall score changes (rho = 0.815) with the GRS as well as for 84.2% of individual symptoms (rho = 0.701 to 0.897). The tool demonstrated good to strong discriminative ability (AUC = 0.739 to 0.975 for improvement; 0.764 to 0.977 for deterioration). The MIC values ranged from 0.5 to 1.5 points using the ROC method and from 0.9 to 1.8 points using the 0.5SD method. The estimated MIC values exceeded the SDC for 84.2% of symptoms. Limited responsiveness (rho < 0.7, AUC < 0.7) and MIC values below the SDC were observed for three symptoms.

Conclusion:
PHASE-20–Australian version is responsive for most symptoms, with a clinically meaningful change of approximately 2.0 points on a 0–10 scale. The estimated MIC is applicable at the individual level, although caution is needed for symptoms with an MIC below the SDC.

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Providing Sick Day Medication Guidance to People with Chronic Diseases: A Qualitative Exploration with Health Care Professionals

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Introduction:
Sick day medication guidance (SDMG) involves recommending withholding certain medications during acute dehydrating illness to prevent complications such acute kidney injury (AKI) in people with chronic kidney disease (CKD). Some studies have shown that SDMG practices are poor in Australia, but it is not known why.

Aim:
This study sought to explore the knowledge and sick day practices of healthcare professionals (HCPs), including the frequency and content of advice, and potential barriers and facilitators to provision.

Methods:
Semi-structured interviews were conducted with purposively sampled, HCPs including medical practitioners (MPs), nurses, nurse practitioners (NPs) and pharmacists from November 2024 to July 2025. Interviews underwent inductive thematic analysis via NVivo 15 software.

Results:
Twenty-three interviews were conducted with 9 pharmacists, 5 nurses (including clinical nurse consultants [CNCs]), 5 NPs and 4 MPs. Participants specialised in nephrology (n=7, 33.3%), diabetes (n=7, 33.3%), general practice/medicine (n=5, 23.8%) and other areas. Some specialist nurses and pharmacists felt capable of providing SDMG and have more opportunities than their MP counterparts - but are concerned about practicing within their professional scope. All participants believed that providing SDMG is important, but is a lower priority discussion point. When done, SDMG is mostly delivered through verbal counselling, with occasional reinforcement using tailored action plans. HCPs find SDMG provision challenging for people who use dose administration aids, and those with poor health literacy – with many exercising caution to avoid information overload. HCPs emphasised the need for consistent messaging across HCPs, improved integration into care pathways, and better easier access to clinical resources and tailored, patient-friendly resources.

Conclusion:
While HCPs recognise the importance of SDMG, provision is limited by personal, workplace and system-level barriers. Addressing these barriers will be critical for embedding SDMG into routine chronic disease management.

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National state of harm reduction: findings from a representative sample of community pharmacies

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Background:
Drug-related harms are a global public health concern. In Australia, a range of harm reduction strategies have been implemented, particularly in community pharmacies.

Aim:
This study aimed to map the provision of harm reduction services among community pharmacies.

Methods:
Data were collected via an anonymous online survey of Australian community pharmacists, using a nationally representative sampling approach. Participants provided information about pharmacist and pharmacy characteristics, and the scope of harm reduction services provided and explored pharmacy-level characteristics associated with the provision of greater harm reduction services.

Findings:
The sample comprised 730 pharmacists, representing approximately 12% of Australian community pharmacies. Core harm reduction services within community pharmacy settings included stocking naloxone (73.2%, n= 730), providing a needle and syringe program (51.5%, n= 643), offering opioid agonist treatment (46.2%, n= 686) and supplying hepatitis C (55.0%, n= 660) and HIV medications (66.8%, n= 656). We found notable interstate differences in the provision of opioid agonist treatment and needle and syringe programs (New South Wales; 35% vs Queensland; 77.5%). Pharmacies in less densely populated states (i.e. Queensland (Adjusted odds ratio (aOR): 2.80, 95% confidence intervals (CI): 1.85-4.24) and Western Australia (aOR 2.72, 95%CI 1.65-4.50)) had significantly higher odds of providing a broader range of harm reduction services, compared to pharmacies in Australia's most populous state (New South Wales), as were pharmacies located outside of capital cities (aOR 1.48, 95%CI 1.10-2.03).

Conclusions:
This is the first Australian study to comprehensively explore the provision of harm reduction services in community pharmacies, demonstrating high levels of engagement with most services and significant increases over the past decade, particularly take-home naloxone. Findings highlight the impacts of broad harm reduction policies and services, including where more targeted efforts may be needed to increase service uptake.

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Towards Safer Medication Practices: A Retrospective Analysis of Adverse Drug Reactions

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Introduction:
Adverse drug reactions (ADRs) remain a significant challenge in modern healthcare, raising concerns among clinicians and healthcare systems worldwide. Despite advances in medical research and pharmacology, ADR reporting rates among healthcare providers remain low, primarily due to barriers such as limited time and insufficient knowledge.

Aim:
This study aims to examine the patterns and impact of ADR reporting to the Therapeutic Goods Administration (TGA) using an automated reporting tool embedded within the electronic medical records (eMR).

Methods:
This retrospective study was conducted at Blacktown Hospital, where an automated ADR reporting tool was integrated into the eMR in 2022. The tool captured all the necessary information for regulated TGA reporting. Monthly ADR reports were compiled by the hospital's medication safety committee and submitted to the TGA. ADRs were categorised using the Medical Dictionary for Regulatory Activities (MedDRA), and causality was assessed using the World Health Organization-Uppsala Monitoring Centre (WHO-UMC) criteria.

Results:
In contrast to the 13 reports submitted in 2021, over 1,500 ADR reports were submitted to the TGA from Blacktown and Mt Druitt Hospitals between March 2022 and June 2025 using the automated tool. Analysis of 1,181 reports revealed that 11% of patients experienced two or more distinct ADRs. Anti-infectives (39%) and nervous system drugs (17%) were the most frequently implicated drug classes. Dermatological reactions accounted for the highest proportion of ADRs at 33%.

Discussion:
The findings demonstrate that embedding an automated ADR reporting tool within clinical workflows significantly enhances reporting rates. This digital health solution effectively addresses key barriers faced by healthcare professionals, promoting safer medication practices and improved patient outcomes.

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Cardiovascular safety of DPP-4 inhibitors compared to insulin /sulfonylureas among people with diabetes in residential aged care homes

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Introduction
Evidence on the cardiovascular safety of dipeptidyl peptidase 4 (DPP-4) inhibitors is lacking for individuals living in residential aged care homes (RACHs).

Aim
To examine the cardiovascular safety of DPP-4 inhibitors compared to long-acting insulin or sulfonylurea initiation added to metformin in older people with diabetes in RACHs.

Methods
A new-user multiple active comparator retrospective cohort study of the cardiovascular safety of DPP-4 inhibitors compared to long-acting insulin and sulfonylureas when added to metformin was conducted. Individuals aged ≥65 years with diabetes who entered RACHs between 01/01/2009 and 31/12/2018 were included within the Registry of Senior Australians National Historical cohort. Time to hospitalisation for heart failure or major adverse cardiovascular events (MACE) (a composite of stroke, myocardial infarction or cardiovascular mortality) over a five-year follow-up period was compared between matched DPP-4 inhibitor and long-acting insulin or sulfonylurea users. Fine-Gray models were used to estimate sHR.

Results
Among initiators of DPP-4 inhibitors compared to insulin (n=4,414), the risk of hospitalisation for heart failure was 0.98 (95% CI 0.77-1.25), while the risk of MACE was 0.95 (95% CI 0.83-1.10). Among initiators of DPP-4 inhibitors compared to sulfonylureas (n=2,686), the risk of hospitalisation for heart failure was 1.08 (95% CI 0.79-1.49), while the risk of MACE was 0.93 (95% CI 0.77-1.12). Lower risk of hypoglycaemia (sHR 0.36, 95% CI 0.23-0.56) and all-cause mortality (sHR 0.82, 95% CI 0.76-0.90) was observed in DPP-4 initiators compared to long-acting insulin.

Discussion
Initiation of DPP-4 inhibitors has a similar five-year cardiovascular risk to long-acting insulin or sulfonylurea use when added to metformin in residents of RACHs, but had lower risk of hypoglycaemia and all-cause mortality compared to long-acting insulin. These findings support the preferential use of DPP-4 inhibitors over long-acting insulin as add-on therapy to metformin in older people with diabetes in RACHs.

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Generative AI usage and literacy in pharmacy education: development and validation of an assessment tool

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Introduction
Generative artificial intelligence (GenAI) is increasingly used in pharmacy education, offering opportunities but also raising concerns about accuracy, ethics and responsible use. Despite growing use, few studies assess GenAI literacy in pharmacy education, and validated tools to evaluate pharmacy students' ability to use GenAI responsibly remain limited.

Aims
This study developed and validated an instrument to assess GenAI literacy among pharmacy students and examined patterns of use, satisfaction, and links with literacy, usage and demographic factors.

Methods
A cross-sectional online survey was conducted with students in undergraduate and graduate pharmacy courses at a large Australian university. It gathered demographic factors, GenAI usage and satisfaction, and responses to a 20-item quiz assessing human-centred mindset, ethics, techniques/applications and system design. Analyses used descriptive and inferential statistics, and psychometric properties were examined via classical test theory.

Results
The study received 673 responses. GenAI was most often used to simplify complex concepts (89%) and summarise texts (85%); lowest use was for treatment planning (56%) and group tasks (56%). Satisfaction followed a similar pattern, highest for concept clarification (86%) and lowest for practising oral communication (47%). After screening, 592 students were retained for literacy analysis. The mean literacy score was 14.97 (out of 20), strongest in the human-centred mindset domain and weakest in techniques/applications. Domestic students scored higher than international students, and native English speakers outperformed non-native speakers (both $p < .001$). Reliability was acceptable ($\alpha = 0.68$), supporting the measure's preliminary use.

Discussion
GenAI can reduce cognitive burden, improve understanding of complex material and optimise the learning experience for pharmacy students with language barriers. However, gaps in technical knowledge, ethical reasoning and collaborative application, along with risks of inaccurate content, highlight the need for structured learning and validated assessments to guide responsible GenAI use in pharmacy curricula.

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Game-based learning in Pharmacy: Exploring the utility of a counselling flashcard game

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Introduction:
Pharmacists play a vital role in healthcare—not only as medication experts but also as effective communicators. Development of strong communication skills is essential for pharmacy students, and common educational strategies in development of these skills include patient case simulations and role plays. These approaches provide safe, controlled environments to practice communication with peers or faculty. However, designing diverse and engaging simulations is time-consuming, often resulting in a limited number of cases and less engaging learning experiences.
This study addresses these limitations via development of a novel flashcard game. By combining cards from different decks, the game generates unique cases that promote critical thinking and adaptability. This dynamic approach keeps learning engaging and better equips students for the complexities of real-world patient interactions.

Aim:
This study investigates the impact of a flashcard game on pharmacy students' counselling skills.

Methods:
Sixteen third-year pharmacy students participated in the study. Counselling skills were assessed at the beginning and end of the session using flashcard-generated scenarios. Between assessments, students engaged with the flashcards weekly in class to practice counselling. Pre- and post-game recordings were anonymised and evaluated by the same researcher, and scores were analysed to determine the effectiveness of the flashcard game as a teaching tool.

Results:
A paired-samples t-test demonstrated significant increase in scores from pre-test to post-test, with large effect sizes. Specifically, total scores improved from 8.25 to 12.09 ($p<0.001$, Cohen's $d=1.35$). Similarly, significant improvements were found in specific areas such as knowledge ($p<0.001$, $d=1.02$), communication ($p<0.001$, $d=1.94$), and counselling efficiency scores ($p<0.001$, $d=1.05$).

Conclusion:
The findings demonstrate that the flashcard game is an effective tool for improving pharmacy students' counselling skills. The significant improvements and large effect sizes suggest that this game-based approach is a valuable addition to the pharmacy curriculum, with potential for integration into formal assessment processes.

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Five years' experience of simulation-based learning in the therapy of serious infections: student satisfaction and learning outcomes

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Introduction.
Simulation-based learning (SBL) offers pharmacy students an effective learning opportunity to practice and develop their clinical skills, but can be challenging to maintain long-term.

Aims.
To develop authentic video simulations requiring clinical decision-making regarding appropriate antibiotic selection, to enrich the learning experience for pharmacy students; and to evaluate their impact on student learning and satisfaction.

Methods.
Two scenarios (tuberculosis and polymicrobial infection) were developed with expert input and filmed using professional actors and a small film crew. Students enrolled in a second-year pharmacy program in 2019, and 2022-2024 were invited to participate in SBL activities utilising the videoed scenarios. Evaluation was via pre- and post-tutorial questionnaires.

Results.
Over the five-year period, pre- and post-activity questionnaires were completed by 233 students (62.5%; 233/373) for tuberculosis and 275 (54.9%; 275/501) for the polymicrobial infection. A statistically significant difference between pre- and post-tutorial questionnaire scores was observed in all years except for tuberculosis in 2019. A majority of students reported the tuberculosis (80.0 – 98.2%) and polymicrobial infection SBL activities (82.1 – 93.6%) were outstanding or excellent, with little variation across the five years of the evaluation. Most students reported the SBL activities helped them to acquire critical thinking skills (mean: 90.1% for tuberculosis and 93.2% for polymicrobial infection) and that they helped them learn better (mean: 95.2% for tuberculosis and 97.7% for polymicrobial infection). Almost all (93.6 - 95.0%) agreed that they would like more SBL activities to support their learning in the future. Positive outcomes were consistent across the five-year timeframe.

Discussion.
SBL activities involving video simulations were a sustainable approach to enhancing students' learning experience, and supported consolidation of knowledge about antimicrobial agents and practice of clinical decision-making skills in selecting appropriate antibiotics to treat infectious diseases.

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A scoping review of generative artificial intelligence in healthcare simulation training

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Background:
Simulation has long been established as a critical component of healthcare education, providing learners with the chance to practice clinical skills in safe, controlled environments. While highly effective, conventional approaches to simulation can be costly, difficult to scale, and may lack authenticity. Generative artificial intelligence (GenAI) has recently emerged as a possible way to extend the reach and realism of simulation-based training.

Aim:
This review sought to examine how GenAI is currently being used within simulation training in healthcare, with particular attention to the types of applications developed, the training contexts in which they were implemented, and the outcomes reported.

Methods:
A scoping review was conducted using Joanna Briggs Institute guidance and the PRISMA-ScR checklist. Four databases (MEDLINE, Embase, ERIC, and CINAHL) were searched from inception to March 2025. Records were screened systematically. Eligible studies included those that embedded GenAI into simulation activities designed for training of healthcare students or professionals. Key details relating to participants, technology used, and outcomes were extracted and summarised narratively.

Results:
From 1,390 records screened, 15 studies met inclusion criteria. Most were undertaken in nursing and medical education, commonly in undergraduate university settings. GenAI applications were grouped into four main categories: virtual standardised patients, immersive virtual reality scenarios, conversational avatars for communication training, and AI-assisted procedural simulators. Reported advantages included heightened learner engagement, stronger diagnostic reasoning, improved communication skills, and greater flexibility in accessing training. Despite these benefits, challenges were identified,, including inconsistent descriptions of how the AI functioned, occasional inaccuracies in generated content and reliance on self-reported data.

Conclusion:
Current evidence suggests that GenAI is being used to enhance simulation across diverse healthcare settings. While early findings are encouraging, the field would benefit from clearer reporting, validation of AI outputs, and more robust evaluation methods to support safe and effective integration into education.

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Evaluation of a pharmacy student video learning tool utilising humour and negative knowledge errors in pharmacist-prescriber communication simulations

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Introduction:
Negative knowledge is a type of experiential knowledge gleaned from errors, ie. "what not to do" in a situation, and is theorised to contribute to professional expertise. Little has been published on its application with humour in pharmacy student education.

Aims:
1) Evaluate student perception of the learning value of a humourous recorded demonstration of common errors in simulated pharmacist-prescriber phone calls;
2) Evaluate whether this demonstration had a measurable impact on student performance in assessment.

Methods:
Common errors made by past students in simulated prescriber call assessments were identified using nominal group technique by experienced UniSA tutors. An exaggeration parody video demonstrating these errors from the perspective of a prescriber was recorded using lecturers as actors. Students viewed the learning tool between two assessments, and completed a feedback survey on the teaching method for qualitative evaluation. Relevant errors made by students in the assessments were tallied.

Results:
82 students watched the video, and 52 survey responses were received. Ninety-eight percent of respondants felt their understanding improved, and 92% want to see similar tools in other areas of learning. Thematic analysis of free-text responses identified the humour, interprofessional perspective, presentation format and negative knowledge as positive elements of the learning tool, while the humour and lack of a classic demonstration were viewed negatively by some students. The students' performance in assessments was not measurably improved.

Discussion:
The mixed response to the use of humour in teaching aligns with past international education research, where humour improves engagement and retention but is sometimes distracting. The study was limited by small sample sizes, the lack of an identifiable control group and no longer-term follow-up, which could be addressed in future research.

Conclusion:
The combined use of humour and negative knowledge in pharmacy education was well-received and considered desirable by learners.

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First Nations Peoples' contributions to education for healthcare students and workers: Systematic Review Protocol

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Introduction:
First Nations Peoples have been educating and sharing knowledge with Western healthcare workers since colonisation. There is emerging evidence to highlight the impacts of their contributions being acknowledged internationally. Working with First Nations Peoples in the design, delivery and evaluation of education for healthcare students and workers is crucial to ensure a culturally responsive and safe health workforce.

Aims:
To explore the global evidence pertaining to First Nations Peoples' contributions to education for healthcare students and workers, focusing on the nature, extent and impact of their contributions.

Methods:
This protocol is registered with PROSPERO (CRD420251110565). Review processes will be guided by the PRISMA 2020 checklist. A search strategy for CINAHL, ERIC, Embase, Global Health and Medline databases was developed with an academic librarian. Key concepts include 'First Nations Peoples', 'Healthcare', 'Education', and 'Collaboration'. Publication screening will be conducted in Excel and Covidence. One author will lead screening and data extraction, while a second author will independently screen a proportion at each stage (after de-duplication). Discrepancies will be discussed and resolved with two additional authors. Included publications must describe primary research involving First Nations Peoples' contribution to education (e.g. design, development, delivery, and/or evaluation) for healthcare students/workers. Only English language studies will be included, with no geographical or study design restrictions. Quality assessment will be completed using appropriate tool(s), selected based on study design of included publications. Studies will be synthesised narratively and presented in a data extraction table.

Discussion:
Anticipated findings include impacts on educational outcomes, service delivery and self-reported constructs of healthcare students/workers. Impacts on First Nations Peoples receiving health care services from the students/workers (e.g. health outcomes) may also be reported. Findings are expected to highlight First Nations Peoples' contributions and inform educators in supporting a culturally safe and responsive healthcare workforce.

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Implementing AI into Clinical Practice: Opportunities and Challenges for Clinicians

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Artificial Intelligence (AI) is transforming healthcare, and there are increasing number of machine learning models that have been developed and evaluated for clinicians in hospitals. However model development and implementation in practice presents ethical, practical, safety and regulatory challenges. This symposium will explore AI's current and future role in Australian healthcare and pharmacy practice. Drs Falconer, La Caze and Barras will explore the current landscape with regards to AI implementation, as well as ethical considerations, modelling with patient data and frameworks for evaluation and implementation to ensure safe and effective integration in practice.

Dr Falconer is a lecturer in pharmacy and lead for the Clinical Pharmacy Program Suite at The University of Queensland. Her research interests include risk prediction modelling, and use of AI to improve patient medication outcome.
Session overview:
Successfully integrating AI into clinical practice requires alignment with national guidelines and frameworks. There are numerous high-value use cases of AI for use in clinical practice which are emerging. This presentation will outline pre-implementation considerations. Drawing from our recent studies we will discuss barriers and enablers to AI implementation as well as discussion of a roadmap for the safe implementation of AI in clinical practice.

Professor Michael Barras is the Director of Pharmacy at Princess Alexandra Hospital and a research conjoint at The University of Queensland, with expertise in PK/PD modelling, risk prediction, and machine learning to optimise dosing of high-risk medications.
Session overview:
Michael's presentation will discuss real world applications where Machine Learning models have been developed and are being evaluated to enhance clinical decision making and reduce patient harm. We will focus on two recent local use cases – one for predicting dose of IV unfractionated heparin and another for predicting risk of medication related hospital acquired complications. The cases will illustrate the journey from algorithm development, the importance of a collegial approach, ethical dilemmas, and learnt practical considerations for implementation.

Adam La Caze is an Associate Professor at the University School of Pharmacy. His work focuses on medical ethics, evidence interpretation, and the philosophical foundations of clinical and pharmacy practice. He leads research that examines how ethical reasoning and scientific evidence inform medication safety and quality use of medicines
Session overview:
AI-driven clinical decision making raises issues including bias, transparency and accountability. This presentation will examine the ethical landscape of AI in the Australian Healthcare, focusing on equitable patient outcomes, ethical frameworks and regulatory frameworks needed to ensure responsible AI adoption in pharmacy practice.

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Inclusive Healthcare: Quality Care for Every Community

Chan V, Lim C

Everyone has the right to receiving optimal healthcare to improve their health and wellbeing. It is well documented that health disparities exist in certain vulnerable population groups, including those with the greatest economic and social needs, such as the culturally and linguistically diverse (CALD), Aboriginal and Torres Strait Islander peoples, and those who are LGBTIQA+. Reducing health inequalities and providing care to these groups requires understanding and addressing their unique needs and challenges, as they often face barriers to accessing care through existing services and settings.

This proposed symposium hopes to bring together researchers to share their experiences in helping address the health inequalities in these specific population groups, by helping with the understanding of their needs, or by investigating interventions that addresses these challenges and barriers.

The speaker panel reflects diversity in both career stage and institutional representation. Speakers include a PhD candidate (Speaker 2), an early career academic (Speaker 1), and a senior academic (Speaker 3). They are affiliated with institutions across three states: Victoria, New South Wales, and Queensland. The presentations address various dimensions of cultural diversity, including LGBTIQA+ communities (Speaker 1), Arabic-speaking migrants and refugees (Speaker 2), and Aboriginal and Torres Strait Islander peoples (Speaker 3). The session also demonstrates a commitment to gender equity through balanced chairing roles

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One shot to beat depression: The Future of Mental Health Treatment

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Introduction:
Depression is a prevalent mental health disorder with a significant impact across all age groups, with 42.9% of young Australians experiencing at least one episode during their lifetime. While depression is primarily psychological, its pathophysiology involves imbalances in key neurotransmitters such as serotonin, norepinephrine, and dopamine, classifying it as a neurological condition. Currently available oral antidepressants are limited by poor bioavailability and fluctuating plasma concentrations, resulting in suboptimal therapeutic efficacy and low remission rates.

Aims:
The study aims to develop a single-dose injectable antidepressant (SSRI) formulation with an extended drug release profile, reducing dosing frequency, improving patient adherence, and enhancing treatment outcomes.

Methods:
A polymeric in situ gel was prepared using poly(lactic-co-glycolic) acid (PLGA) as a carrier matrix, using polyethylene glycols and plant-based oils as solubilizers and depot formers. Selective serotonin reuptake inhibitors were chosen as a model drug due to their widespread clinical use. In vitro drug release studies were conducted in phosphate buffer saline (pH 7.4) at 37°C, and drug quantification was performed using a validated HPLC method. Formulation parameters such as viscosity, gelation time, and injectability were also evaluated to ensure clinical feasibility.

Results:
The formulation was optimized to achieve a sustained drug release lasting up to 10 days, based on in vitro release profiling. It demonstrated a sol-gel transition close to physiological temperature and pH, facilitating injectability and rapid depot formation. In vitro release studies revealed a biphasic pattern with initial burst release followed by controlled and extended release for 10 days.

Discussion:
Polymeric in situ gels provide a minimally invasive, sustained-release strategy for managing depression, potentially improving adherence and therapeutic efficacy. While in vitro results are encouraging, further in vivo studies are essential to validate pharmacokinetics. If successful, this long-acting injectable could transform depression management by replacing daily oral dosing with extended therapeutic effect.

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Dual Targeting of Prostate Cancer Cells with Engineered Nanoparticles

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Introduction:
Prostate cancer is a heterogeneous disease that frequently metastasises to bone, lymph nodes, and liver, with recurrence often driven by chemoresistance. Targeted nanomedicine offers a promising strategy to improve drug specificity and reduce off-target effects.

Aims:
This study investigates a dual-targeting approach using ligand-decorated liposomes to deliver synergistic drug combinations directly to prostate cancer cells.

Methods:
Differential gene expression analysis of publicly available RNA sequencing data was conducted to identify G-protein-coupled receptors co-overexpressed in prostate cancer. RT-qPCR and flow cytometry validated their co-expression in the PC3 cell line. Receptor-specific ligands were identified and assessed for binding affinity. Ligand-functionalised liposomes were synthesised to co-deliver two synergistic therapeutic agents via these receptor pathways.

Results:
GRPR and F2R were identified as highly co-expressed receptors in prostate cancer cells, confirmed by RT-qPCR and flow cytometry. Selected ligands showed strong receptor binding affinity. Liposomes functionalised with these ligands are expected to be successfully synthesised.

Discussion:
This study introduces a novel dual-targeting nanomedicine strategy for prostate cancer, utilising liposomes engineered to engage two distinct receptors—GRPR and F2R—co-expressed on cancer cells. Dual-targeted liposomes are expected to outperform single- or non-targeted formulations by enhancing cellular uptake and improving therapeutic outcomes. The identification of GRPR and F2R as viable molecular entry points supports the broader potential of receptor-guided nanomedicine. By decorating liposomes with specific ligands, this approach aims to increase treatment precision while minimising off-target effects. These findings highlight the promise of dual-receptor targeting in advancing more effective and selective cancer therapies.

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Liquid crystal lipid nanoparticles enable synergistic antibiotic and enzyme therapy against E. coli biofilms

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Introduction:
Biofilm infections are significantly more pathogenic and tolerant (up to 1000×) to antimicrobials than planktonic bacteria[1]. Biofilm-dispersing enzymes degrade extracellular polymeric substances (EPS), disperse microbial communities, and enhance antibiotic susceptibility[2]. Clinical translation of these enzymes is limited by degradation, denaturation, and rapid clearance.

Aim:
This study aimed to develop and compare a liquid crystal lipid nanoparticle (LCNP) system for co-delivery of gentamicin (GEN) and rhDNase with conventional liposomes, to enhance biofilm penetration and eradication.

Methods:
LCNPs were formulated using monoolein via hydrotrope dilution, while liposomes were prepared using 1,2-dipalmitoyl-sn-glycero-3-phosphocholine (DPPC) and 1,2-dipalmitoyl-sn-glycero-3-phosphoglycerol (DPPG) via microfluidic NanoAssembler. Antimicrobial efficacy of GEN and rhDNase, both in solution and encapsulated, was evaluated using MBEC, crystal violet, and Alamar Blue assays against strong biofilm-forming E. coli ATCC 25922. LCNP cytotoxicity was assessed on HaCaT cells at therapeutic and 5× doses.

Results:
LCNPs and liposomes were ~170 nm with slight negative zeta potentials, increasing upon drug loading. Cryo-TEM confirmed intact structures. LCNPs sustained gentamicin release and retained rhDNase. Co-loaded LCNPs achieved a 10^5-fold CFU reduction against E. coli biofilms. GEN+rhDNase LCNPs were non-toxic, showing ≤30% reduction in HaCaT cell viability at 5× therapeutic doses.

Discussion:
LCNPs outperformed liposomes due to tight lipid packing and Pluronic F127 shielding, protecting rhDNase from degradation. The synergistic activity highlights their potential as an effective biofilm-targeted therapy with minimal cytotoxicity.

Conclusion:
LCNPs represent an effective platform for co-delivering antibiotics and biofilm-dispersing enzymes. By enhancing enzyme stability and biofilm penetration, this approach overcomes key translational challenges, supporting the clinical potential of LCNP-based therapies for persistent biofilm infections.

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Optimizing Intramuscular In-Situ Forming Implants for Controlled Drug Release in Parkinson's Disease Treatment

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Introduction:
Parkinson's disease is a debilitating neurodegenerative disorder. Conventional therapies available for Parkinson's disease are associated with limitations such as the wearing-off effect, on-off period, episodes of motor freezing, and dyskinesia. Reports suggest that such side effects are mainly due to the fluctuation in the plasma concentration of the drugs, which necessitates multiple doses to attain the therapeutic concentration. The available marketed formulations include oral tablets and capsules, which require multiple administrations due to the short half-life and extensive metabolism of the drug after administration, which becomes inconvenient to older patients. Our current hypothesis is to develop a long-acting injectable gel, which will release the drug for 7 days, avoiding fluctuations in plasma concentration and reducing the dosing frequency.

Method
Formulation involves the preparation of a polymeric solution first. Polymeric solutions were prepared by dissolving PLGA and Eudragit L 100 in the organic solvent N, N-dimethylacetamide at 70°C, with constant stirring at 700 RPM. Once the clear solution was formed, a measured volume of PEG 400 was added until a homogenous solution was obtained. Once a homogenous solution was formed, heating was stopped, and weighed an amount of Levodopa and Carbidopa (4:1 ratio) was added to these solutions under continuous stirring for 30 minutes.

RESULTS AND DISCUSSION

- In-vitro drug release showed less initial burst release of levodopa followed by a sustained release for up to 144 hrs.
- A good correlation was observed between the in-vitro drug release data and ex-vivo drug release, with a correlation coefficient of 0.91 for levodopa.
- The average force required for the formulation was found to be 32.98± 0.72 N by 22G gauge, indicating an acceptable injection force.
- The predicted AUC 0-∞ h for the in-situ forming implant was 22168.43 ng/ml with Cmax, 375.83 ng/ml, and Tmax 24 hours, assuming 100% bioavailability.

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New Horizons in Antimicrobial Drug Development:

A Multidisciplinary Approach from In Silico to In Vivo Validation

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Introduction:
Infectious diseases are a leading cause of death globally, particularly in low-income countries, with antimicrobial resistance (AMR) posing a significant challenge. Microbial pathogens, including the ESKAPE pathogens (Enterococcus faecium, Staphylococcus aureus, Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa, and Escherichia coli/Enterobacter species), lead to over 700,000 deaths annually, a figure projected to exceed 10 million by 2050. My project focuses on developing NCL195, a novel small molecule derived from robenidine (NCL812), to combat multidrug-resistant bacterial infections.

Aim:
To develop NCL195 formulation by addressing its limitation of poor aqueous solubility and limited bioavailability.

Methods:
The development of a Supersaturable Self-Emulsifying Drug Delivery System (OSMEDD, where “O” stands for optimized), inclusion complex, and Lipid dispersion formulations, to enhance solubility. In silico characterization via Marvin predicted greater precipitation of NCL195 at higher pH levels, guiding the development of this formulation. Furthermore, In silico Drug Design tools like SWISS ADME and ADMET LAB 3.0 tools were used to explore Quantitative Structure Bioavailability Relationship (QSBR) for better solubility and bioavailability predictions.

Results:
In vitro studies showed a promising antimicrobial effect against S. aureus, and in vivo pharmacokinetic studies in dogs for OSMEDD indicated an 8-fold increase in bioavailability (Area Under Curve or AUC) when compared to a control formulation.

Discussion:
OSMEDD has demonstrated effectiveness in enhancing the solubility and absorption of NCL195, along with promising antimicrobial activity. In silico predictions, including Marvin, SWISS ADME, and ADMET LAB 3.0, provided critical insights into precipitation behaviour and potential analogues, offering a foundation for further optimization to improve therapeutic outcomes in AMR management.

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“Not just labelling medicines”: Pharmacists’ Perspectives on Their Potential Roles within Youth Mental Health Services

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Introduction:
Youth mental illness is a major global health concern, with rising rates of psychological distress and unmet care needs. Despite their expertise in psychotropic medication management, pharmacists remain underutilised in youth mental health services, leaving their potential contributions to multidisciplinary care largely unexplored.

Aims:
This study explored pharmacists’ perspectives on medication use among young people and their potential roles in youth mental health services.

Methods:
Semi-structured interviews were conducted with Australian pharmacists from a range of practice areas. Interviews were transcribed verbatim and analysed using reflexive thematic analysis.

Results:
Eighteen pharmacists shared their insights, generating four key themes: (i) "The Struggle for Equitable Access", highlighting systemic barriers to health service access; (ii) "Medication as a Pillar, Not the Panacea", advocating for balanced psychotropic medication use alongside psychosocial interventions; (iii) "Breaking the Dispensing Box", revealing pharmacists’ aspirations to expand their roles beyond dispensing through greater clinical involvement; and (iv) "Navigating Trust and Stigma," discussing the challenges of building trust with young people amid stigma.

Discussion:
Pharmacists are well positioned to support youth mental health care through their knowledge of medicines and accessibility across health systems. However, role ambiguities, professional hierarchies, and stigma may restrict their contributions beyond “just labelling medicines”. Greater clarity in role definitions, supported by collaborative frameworks and targeted education, is essential to enable pharmacists to engage meaningfully within multidisciplinary youth mental health teams. Addressing entrenched systemic barriers, including fragmentation of care and inequities in service access, is equally critical if pharmacists are to move from peripheral roles to active contributors in delivering safe, holistic, and person-centred support for young people.

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Codesigning a patient-reported measure of medicine experiences and medication-related harm in hospital inpatients

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Introduction:
Person-centred care is fundamental to effective healthcare, yet no existing tools with symptom checklists capture patients' medicine-related outcomes and experiences during hospitalisation. A context-specific patient-reported measure offers a strategy to address this gap.

Aims:
To codesign a patient-reported outcome and experience measure, incorporating a symptom checklist, for evaluating potential medication-related harm and medicine experiences in hospital inpatients.

Methods:
A participatory design approach was applied, encompassing an iterative process comprised of two rounds of workshops with a consumer reference group, and semi-structured interviews with clinicians – both pharmacists and medical officers - and piloting with hospital inpatients. The focus of the codesign process was to ensure the questionnaire was easily understood by consumers and was applicable and feasible to use in an acute inpatient setting. Feedback was analysed using reflexive thematic analysis and incorporated into questionnaire revisions.

Results:
Six consumers participated in the reference group workshops, seven clinicians were interviewed, and 13 inpatients were involved in piloting. The main themes identified across workshops, interviews and piloting included: (1) language used must be unambiguous and patient centric; (2) visual aids with verbal administration could improve patient understanding and engagement; (3) diverse patient voices must be included during development; (4) the measure should contain a comprehensive list of self-reportable symptoms and capture feedback on coordination and responsiveness of care; (5) patients require an opportunity to advocate for high-quality care if they report suboptimal experiences; (6) scales should be consistent and have a neutral midpoint; and (7) questionnaire logistics should balance feasibility with research aims. The complete patient reported measure will be presented at the conference. Consumers reported feeling appropriately included in development of the measure.

Discussion:
The multi-faceted participatory design process meaningfully integrated consumer perspectives to ensure the questionnaire was fit-for-purpose and addressed the needs of key stakeholders.

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Data fields and interface design priorities in a consumer-focused adverse drug event reporting platform: insights from multiple stakeholders

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Introduction:
Underreporting of adverse drug events (ADEs) remains a challenge in pharmacovigilance. While digital tools may help, their design must reflect user needs and priorities.

Aims:
To identify user preferences for data fields, their sequence, and interface features in a digital ADE reporting platform.

Methods:
Three co-design workshops (November 2023) and two rounds of online user testing (April–May 2025) were conducted. Workshops used card sorting exercises with Australian consumers, healthcare professionals, and regulators. Online testing, involving consumers (Australia, US, UK), evaluated two prototype interfaces, a 'hybrid' design (combining familiar user interface patterns with modern visual enhancements) and a 'novel' storytelling-based interactive approach. Participants selected preferred layout and navigation options and gave structured feedback on usability, clarity, and functionality. Analyses included frequency counts and thematic analysis.

Results:
Workshop participants (n=24; 13 consumers, 9 healthcare professionals, and 2 regulators; 16 female) prioritised reporting fields into four tiers. Tier 1 (highest priority) included patient demographics, suspected medication, ADE characteristics (type, severity, timing)—foundational for report initiation. Tier 2 included reporter contact details and perceived causality—important for follow-up. Tier 3 comprised dosing and comorbidities—valuable but not mandatory. Tier 4 contained ancillary items like images and outcomes.
Online users (n= 199; 23 Australia, 142 US, 34 UK; 100 female) preferred the hybrid design (60%), citing more intuitive structure and organisation and easier navigation, task completion, and engagement. Visually rich layouts (76%), icons (64%), and larger text (73%) improved readability and engagement. Pink (56%) was preferred over healthcare blue.

Discussion:
Co-design can guide the development of digital ADE reporting tools that align with users' mental models. Prioritising essential fields early and offering flexibility through tiered structures may reduce burden, improve data quality, and support more timely pharmacovigilance responses. Users valued designs that balanced usability, clarity, and functionality with engaging visuals—over more novel but less intuitive alternatives.

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Exploring Australian Early Career Pharmacists' sources of stress and their coping strategies

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Introduction:
High levels of workplace stress have been shown to be inversely correlated with job satisfaction and, when left unmanaged, can manifest as burnout. Prior research has shown that pharmacists under the age of thirty years, as well as Early Career Pharmacists (ECPs) are at a significantly higher risk of burnout compared to their older and more experienced peers.

Aims:
This study aimed to: (i) explore the experiences of ECPs dealing with stress, (ii) determine the sources of stress and joy experienced by ECPs, and (iii) to explore strategies used by ECPs to reduce stress.

Methods:
ECPs were recruited through social media. Following informed consent, semi-structured interviews based on Critical Incident Technique were conducted in January and February 2025. This interview technique allowed for participants to describe workplace incidents where they felt particularly stressed or pressured.

Results:
The average age of the twenty-four participants was 29 years with an average of four years in the profession, and 75% were female. Eighty critical incidents were identified from the interviews. Notable events triggering critical incidents reported by participants included: 1) feeling unsupported by pharmacy management, 2) placing unrealistic expectations on themselves and 3) not feeling listened to as professionals. The participants sought the feeling of belonging in a community, and shared experiences as a means of stress mitigation.

Discussion:
Many ECPs in the study found the transition from internship to full registration stress, particularly due to increased responsibilities and accountability. The study findings have emphasised a need for more structured support during this transitional period, both to assist with workplace operations and professional isolation. The wellbeing and retention of pharmacists is paramount to an effective healthcare workforce and optimal patient care. These results have highlighted the areas requiring attention for pharmacist wellbeing, career retention and workforce sustainability.

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Development of the OPTMED-D trial digital intervention to support transfer of medicine information from hospital to community settings

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Introduction:
Poor transfer of medicines information from hospital to primary care after discharge contributes to medicine-related harm (MRH). The OPTimising MEDicine information handover after Discharge (OPTMED-D) trial aims to improve medicine handover and reduce MRH through a multi-faceted digital intervention to facilitate communication and information transfer between hospital clinicians, community pharmacists and general practitioners (GPs).

Aim:
To describe the development and engagement process used to produce the digital intervention.

Methods:
OPTMED-D, a pharmacist-led trial, is being conducted across seven public hospitals in Southeast Queensland with plans to recruit 2200 patients at risk of MRH. Design of the digital intervention and accompanying implementation strategies for the trial occurred through key steps: co-creation with stakeholders, system-walkthroughs, and feasibility testing. Through all steps, we focused on feasibility, scope, and contextual factors to ensure implementation success. Results of this process are presented descriptively.

Results:
Between March 2024 and August 2025, 69 clinicians (23 primary care; 46 hospital-based) and 23 consumers participated in a workshop. Fourteen stakeholders participated in consultations. Key findings regarding digital medicine handover included: the need for integration with existing workflows, minimisation of duplication, and adaptability across hospital and primary care settings. Using these data, two patient pathways were devised for high and medium risk patients, and a community pharmacy software vendor was engaged to adapt their platform to support MedsCheck (in-pharmacy medicine review) and communication of MedsCheck results to GPs. System walkthroughs of the digital intervention identified some minor and moderate usability issues which were addressed on subsequent iterations. Feasibility testing confirmed acceptability, while also identifying potential implementation barriers (e.g., time pressures, varying digital literacy, competing clinical priorities).

Discussion:
Engagement with clinicians and consumers throughout design and testing was critical to ensure the OPTMED-D digital intervention was feasible, acceptable, and integrated with existing workflows in both hospital and primary care settings.

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Co-designing medication management resources for people living with dementia in the community and their carers

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Introduction:
People living with dementia (PLWD) in the community are at increased risk of harm from limited guidance and support in medication management. Existing medication management resources for this population lack comprehensiveness in content and have not been collaboratively designed.

Aims:
This study aimed to apply a robust co-design approach to develop medication management guidance resources – one for PLWD and one for carers.

Method:
This multi-methods study was conducted over two sequential phases. During Phase 1, focus groups, interviews and a modified-Delphi study with PLWD, carers and healthcare professionals in Australia were conducted. Phase 1 informed resource content and generated resource prototypes. During Phase 2, additional focus groups, two with carers and two with PLWD, were conducted to evaluate the prototypes to ensure they were user-centred. Feedback was provided on content and design, and resources were updated accordingly.

Results:
In phase 1, four content areas were identified: 1) question prompts and check-list to address information gaps; 2) information about decision-making and informed consent; 3) risk and benefits of common medications; 4) strategies to address complexities in medication management. In Phase 2, PLWD and carers noted that the resource was informative, easy to understand and would be useful following dementia diagnosis. According to PLWD, the question prompts and check list was clear, concise and included questions to facilitate communication with healthcare professionals.

Discussion:
Two new user-centred resources were successfully developed from this study. By working alongside PLWD and carers to determine resource content and refine the resource prototypes, we were able to ensure the resources were tailored to their needs and user-centred. These resources directly address the National Dementia Action Plan indicators, specifically available appropriate resources for people with dementia, information on access to services and supports and increasing medication reviews.

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Psychotropic medication use and review outcomes among older adults in Australia aged care homes: a retrospective study

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Introduction:
The use of psychotropic medications among older adults is widespread, despite concerns regarding their safety and appropriateness.

Aims:
To examine the profile of psychotropic use, medication reviews, and the review outcomes among residents in aged care homes, and to analyse factors influencing the review practice.

Methods:
A retrospective study was conducted using data from 21 aged care homes across Australia. Inclusion criteria were residents aged 65 years and older who had been prescribed psychotropics for a minimum duration of six months. Descriptive analysis was used to determine the profile of psychotropic use, medication reviews, and associated outcomes. Chi-square tests were performed to assess differences in review practices based on resident characteristics, medication classes, and facility profiles.

Results:
Of 1,658 residents, 1,274 (76.8%) were prescribed psychotropic medications. A total of 780 residents met the inclusion criteria, with a mean age of 83 ± 8.4 years. Among 1,560 psychotropic medicines, 1,385 (88.8%) were used simultaneously with other psychotropics. The most used class was antidepressants (530; 34%). Regular use accounted for 1,316 medicines (84.4%). Psychotropics were used as chemical restraints in 208 cases (13.3%), while 201 (12.9%) had a behavioural support plan, and 178 (11.4%) received behavioural monitoring. Medication review implementations ranged from 44.7% to 100%. Most reviews resulted in no change to therapy (1,365; 95.5%), and only 32 (2.2%) led to positive changes. Chi-square analysis revealed significant differences in the practice of review based on the presence of chemical restraint, behavioural support plans, monitoring, and facility characteristics such as size, location, and type ($p<0.05$).

Discussions:
The high prevalence of psychotropic use among older adults in aged care homes warrants attention. The variability in medication review practices across facilities reflects differences in implementation approaches, despite the critical role of reviews in ensuring therapeutic effectiveness and minimising harm associated with psychotropic medications.

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Exploring the activities and clinical contributions of onsite pharmacists in aged care settings: early insights from OPTIMISER3 study

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Introduction:
Medication-related issues in residential aged care homes (RACHs) continue to impact care quality and safety. On-site pharmacists (OSPs) in aged care model shows promise in addressing these challenges. Evidence from PiRACF study conducted in Australian Capital Territory supports pharmacist-led interventions, prompting further study in rural, remote, and regional areas across Australia. This prospective observational study examines OSPs' activities across varied settings and their contribution to medication safety.

Aims:
This study aims to evaluate the types of activities conducted by the OSPs at urban, regional, rural, and remote RACHs.

Methods:
Four pharmacists were employed in urban, regional, rural, and remote RACHs for 12 months as part of phase 1 of the OPTIMISER3 study. A REDCap survey captured the type and nature of OSPs' daily activities.

Results:
Over the initial three months of service at each site, OSPs documented a total of 334 activities across four RACHs. These included medication reviews (n=71,21.3%), education and training (n=30,9.0%), clinical audits (n=7,2.1%), quality improvement initiatives (n=20,6.0%) and medication management-related activities (n=64,19.2%). Notably, 35.0% (n=117) of OSPs' activities involved communication, including interactions with prescribers, other healthcare team members, and residents. Excluding communication-related activities conducted by OSPs, medication reviews accounted for the highest proportion of activities among OSPs working in urban (n=29/90,32.2%) and regional (n=31/109,28.4%) RACHs, compared to OSPs working in rural (n=3/94,3.2%) and remote (n=8/41,19.5%) sites. In contrast, medication management-related tasks comprised a larger share of activities performed by OSPs working in rural (n=28/94,29.8%), remote (n=9/41,22.0%) and urban (n=18/90,20.0%) RACHs, compared to regional (n=9/109,8.3%) sites.

Discussion:
Pharmacist activities varied across urban, regional, rural, and remote RACHs. The observed variation highlights the need for further exploration into the drivers behind such disparities. Despite these differences, pharmacists delivered effective services across all settings.

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A scoping review and environmental scan of models of care to optimise medicine use for First Peoples

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Introduction:
Models of care to optimise medicine use in First Peoples are represented in the literature. Yet a synthesis of culturally appropriate models of care has not been undertaken.

Aim:
To synthesise and examine the implementation and evaluation of international models of care that optimise medicine use among First Peoples in Australia, Canada and New Zealand.

Methods:
A scoping review and an environmental scan using JBI methodology and PRISMA-ScR guideline was conducted. A comprehensive literature search was conducted in CINAHL, EMBASE, and PubMed (2014-2024) using the keywords: 'First Nations', 'models of care', 'medication review', 'transitions of care'. A deductive analysis using an adapted Consolidated Framework for Implementation Research (CFIR) framework and the Strengths-based Approaches (SBA) taxonomy was conducted.

Results:
A total of 2274 references were identified and screened, 78 manuscripts related to 53 models of care were included: 35 from Australia (54 studies), 8 from Canada (10 studies), 10 from New Zealand (14 studies). Of the 53 models of care, 27 (50.9%) employed decolonisation methodology and 40 (75.5%) were co-created with First Peoples/researchers. Holistic care models co-designed in partnership with First Peoples were found to improve First Peoples' physical and mental health.

Discussion:
According to the CFIR-SBA framework, the identified gaps were related to a lack of effective engagement of First Peoples in the shared decision-making process about medicines, limitations of communication strategies employed and limited policy adoption. Effective models of care were built on relationships with trust and empowered patients, their families and communities to engage in collaborative decision-making. The SBA depicted in most studies were decolonisation methodologies, cultural appropriateness, social determinants of health and ecological approaches, holistic care, asset-based approaches and wellness and wellbeing. Overall, implementing a strengths-based approach would improve models of care that optimise medicine use.

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Performative or purposeful? LGBTQIA+ perspectives on Pride symbol displays in community pharmacies

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Introduction:
Community pharmacies occupy a unique space at the intersection of healthcare and commerce. Pride symbols, such as the Pride Flag, are widely recognised as representations of acceptance and inclusion for the LGBTQIA+ (Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual) community, but community members may interpret these displays differently, especially when they appear performative, seasonal, or disconnected from genuine allyship. Understanding how these symbols are interpreted in the community pharmacy context is essential.

Aims:
This study aimed to explore how LGBTQIA+ community members perceive Pride symbol displays in community pharmacies, and to identify how these perceptions influence their comfort, trust, and engagement with pharmacy services.

Methods:
Thirty semi-structured interviews were conducted with LGBTQIA+ individuals aged 18+ residing in four Canadian provinces. Participants were recruited via social media, email, and community organisations. Interviews were transcribed and analysed using open inductive coding by two independent researchers. Themes were developed collaboratively and supported by anonymised quotes.

Results:
Two overarching themes emerged: Experiences and Expectations.

- Experiences included varied encounters with Pride symbols, with responses ranging from appreciation and comfort to scepticism and discomfort. Symbol characteristics (e.g., location, size, form, timing) influenced perceptions and behaviours, including openness in communication and pharmacy choice.
- Expectations encompassed desires for pharmacist knowledge (e.g., gender-affirming care, inclusive language), meaningful actions (e.g., advocacy, diverse hiring), and thoughtful symbol display.

An incidental theme revealed systemic barriers, including corporate restrictions, societal norms, and lack of inclusive spaces, which hinder the effectiveness of Pride symbol displays.

Discussion:
Pride symbols may foster inclusive care in pharmacies, but only when paired with informed, intentional practice. These findings suggest that pharmacies should engage directly with LGBTQIA+ communities to ensure that symbol displays are authentic, sustained, and supported by inclusive policies and training.

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Temporal dynamics of anticholinergic burden in older adults: a six-year longitudinal study

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Introduction:
Anticholinergic burden in older adults is associated with falls, cognitive decline, and hospitalisation. Anticholinergic burden is not static; prescribing changes over time, and factors such as healthcare utilisation may shape these trajectories. Few studies have accounted for temporal changes or examined subgroup variation, limiting opportunities to identify when medication review and deprescribing may be most effective.

Aims:
To evaluate temporal changes in anticholinergic burden and the influence of general practitioner (GP) visit regularity, while exploring subgroup differences by morbidity and demographics.

Method:
We analysed a cohort of 66,269 older adults aged 65+ in Western Australia (WA) 2012-2019. Data were obtained from the WA Hospital Morbidity Data Collection, the Medicare Benefits Schedule, Pharmaceutical Benefits Scheme, and WA Death Registrations. Anticholinergic burden was calculated annually with validated burden scales, and GP visit regularity was derived for each year. Random-Intercept Cross-Lagged Panel Models were applied to separate stable between-person differences from within-person temporal changes. Multigroup analyses assessed variation by multimorbidity and demographic subgroups

Results:
Anticholinergic burden was highly consistent over time, with individuals maintaining similar levels across years (autoregressive coefficients: 0.522–0.629, $p<0.001$). Between individuals, those with more regular GP visits also had slightly higher average burden ($r = 0.070$, $p<0.001$), possibly reflecting greater healthcare needs. However, when examining changes within person over time, we observed the opposite: greater-than-usual regularity in early years predicted lower anticholinergic burden the following year (year 2 to year 3, $\beta=–0.010$, $p<0.01$), though reverse effects were not observed. Multigroup models indicated stronger temporal associations in males, those living outside major cities, socioeconomically disadvantaged groups, and those with higher multimorbidity.

Conclusion:
Regular GP visits may help reduce anticholinergic burden, especially in early stages of care. Subgroup differences suggest prescribing patterns are more modifiable in some groups, underscoring the need for tailored deprescribing strategies.

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The use of psychotropic medications in autistic and non-autistic children and adolescents in Western Australia

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Introduction:
Autistic children and adolescents are prescribed psychotropic medication at a higher rate than non-autistic children. Prescribing often occurs without clear prescribing guidance. Data about the appropriateness of psychotropic medication prescribing in neurodiverse populations is lacking.

Aim:
This study investigated the usage patterns of psychotropic medications among autistic and non-autistic children and adolescents in Western Australia.

Methods:
A cross-sectional questionnaire collected data through community pharmacies in Western Australia (May 2019 to February 2020), from participants aged <21 with a repeat prescription for a psychotropic medication. The self-report questionnaire assessed demographic characteristics, medication details and severity of anxiety, depression and stress using the Depression, Anxiety and Stress Scale (DASS-21).

Results:
Of 111 completed questionnaires, the mean age was 14.7 years, 33 were self-reported autism spectrum disorder (ASD) and 78 non-autistic respondents. More males had an ASD diagnosis (n=22/33, 66.0%, p= 0.054). Participants with an ASD diagnosis had higher total DASS-21 scores (M=56.2, SD =22.90) than those without an ASD diagnosis (M=46.51, SD =23.51), p = 0.048. Those with an ASD diagnosis had higher stress severity scores than those without an ASD diagnosis (M=23.39, SD=7.34, M=17.15, SD=7.95). Antidepressants were the most prevalent medications prescribed for anxiety and depression. Higher average defined daily doses (DDD) of psychotropic medicines were prescribed to autistic children compared to non-autistic children aged 0-12years. Higher DDDs of antipsychotic medications were prescribed to autistic children/ adolescents compared to non-autistic children/adolescents. Although overall, there was no statistically significant difference in the mean DDD between ASD and non-ASD groups.

Discussion:
Despite higher average daily doses of psychotropic medications, autistic individuals in this study reported higher severity of anxiety and stress than non-autistic peers. This may be indicative of unmanaged behaviours. Further research is needed for the development of effective strategies to optimise mood disorders in autistic and non-autistic children and adolescents.

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Current status of pharmacy law education in Australia: Australian educator perspectives

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Introduction:
An understanding of relevant laws underpins pharmacists' everyday practice; delivery of pharmacy law content shapes students' future practice. Educators are a key influence on development of legal decision-making skills, both through the educational activities they use to train students on this topic and by 'modelling' best practices. However, little research to date has examined educators' views and experiences.

Aim:
This qualitative study explored the views and experiences of Australian educators in teaching law to preregistration pharmacy students to inform future educational practice.

Methods:
Semi-structured interviews were conducted with 15 Australian pharmacy law educators from August to October 2025. These were transcribed verbatim and analysed thematically.

Results:
Most educators had a pharmacy rather than a legal background and described both integrating pharmacy law content throughout the degree and covering this in standalone units, depending on the specific program. Teaching and assessment techniques such as simulations, analysis of real-life cases, didactic lectures, and written and oral exams are utilised. Key themes include greyness (debate as to whether content is black and white or there are areas of ambiguity), relevance to pharmacy practice (efforts to create and emphasise links to real life practice and their own practice informing what and how they teach), and blue sky thinking ("wish list" for teaching and assessing this content). Misalignment between educators' views of optimal legal practice and how students were taught and assessed was seen. A range of challenges—including perceptions that content is dry, boring or irrelevant and competition for limited curriculum space—were identified.

Discussion:
This is the first focussed inquiry into pedagogy used to teach pharmacy law and has produced a rich description of educators' everyday educational practices and experiences. Future research examining how pharmacists' resolve legal dilemmas in practice and the profession's perspectives on adequacy of pre-registration pharmacy law training is warranted.

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Teaching approaches to delivering pharmacy law content to pre-registration pharmacy students: a global scoping review

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Introduction:
An understanding of pharmacy laws underpins everyday practice of pharmacists and the way that this content is covered within pharmacy programs will shape pharmacy students' future practice. While there is a growing literature on pedagogical approaches used in pharmacy education which pharmacy law educators can draw upon, dedicated resources on best practice in pharmacy law education are not available. Therefore, there is a need to systematically explore research on the various teaching approaches used to deliver pharmacy law content and their influence on students' learning to help inform teaching methods used in pharmacy programs.

Aims:
This global scoping review aimed to identify various teaching approaches currently utilised by pre-registration pharmacy programs to teach pharmacy law.

Methods:
Using a scoping review method, a comprehensive search was conducted in the databases Scopus, Medline, Embase and ERIC, using a defined search strategy. The Preferred Reporting Items for Systematic reviews and Meta-analyses extension for Scoping Reviews (PRISMA-ScR) guidelines were adhered to.

Results:
Twenty-five papers were included out of 1146 screened papers. Teaching formats included case scenarios with legal issues in pharmacy practice (n=6), mock hearing simulations (n=3), answering questions testing pharmacy law knowledge and skills (n=3), class discussions (n=3), MyDispense simulations (n=3), suggesting modifications to current laws (n=2), watching videos (n=2), roleplaying in a community pharmacy setting (n=2), and creative approaches such as writing stories (n=1), drawing (n=1) and playing charades (n=1). Commonly reported outcomes after implementation of these teaching approaches include improved knowledge, improved ability to apply content, increased engagement and involvement and improved content recall.

Discussion:
There is variability in the approaches used to teach pharmacy law in pharmacy programs. This review thus highlights the need for further research investigating how teaching approaches affect long-term knowledge and practice and explore educators' characteristics, views and experiences to inform educational practice here.

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Assessing critical thinking in pharmacy curricula

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Introduction:
Critical thinking skills are essential for pharmacy practice. Pharmacy programs must therefore support the development of students' critical thinking skills throughout the curriculum. However, it is currently unclear how effectively pharmacy curricula teach and evaluate critical thinking skills. While general tools to measure critical thinking exist, none are specifically designed for assessing pharmacy curricula. Addressing this gap will support development of critical thinking skills in future pharmacists.

Aims:
Develop a tool to evaluate the range and depth of cognitive skills assessed in an undergraduate pharmacy curriculum. Test the applicability and reliability of the developed tool.

Methods:
Criteria were developed drawing on frameworks such as the American Philosophical Association (APA), Bloom's revised taxonomy and the University of Queensland's Critical Thinking Project (UQCTP). The developed tool, called "PharmCritThink", was used to evaluate the assessments from six second-year courses in an Australian university's undergraduate Bachelor of Pharmacy (Honours) program. Each course was rated independently by two assessors, and the results of these evaluations were compared to determine the consistency and reliability of the criteria across different evaluators.

Results:
PharmCritThink provides criteria and guidance for evaluating the cognitive skills assessed within a pharmacy program. PharmCritThink effectively identified the cognitive skills assessed across the second-year courses in the Bachelor of Pharmacy (Honours) program. Explain and recall were the most frequently assessed cognitive skills, with the majority of skills evaluated being of high complexity. Inter-assessor reliability testing showed a high percentage of agreement among evaluators

Discussion:
PharmCritThink helps to identify the types and complexity of cognitive skills assessed as well as highlight possible areas for improvement, ensuring that students are well-prepared to meet contemporary healthcare challenges. The findings suggest that Year 2 of the undergraduate program assesses a diverse range of critical thinking skills.

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Exploring the mental health literacy of healthcare professionals: a systematic review

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Introduction:
Healthcare professionals (HCPs) with generalist training play a key role in identifying and managing mental illness, especially in settings with limited access to specialised psychiatric care.

Aim:
This review aimed to examine the mental health literacy (MHL) of general HCPs with a focus on (a) their ability to recognise common mental disorders, (b) their knowledge of treatment, intervention and support options, and (c) their attitudes that influence recognition and help-seeking recommendations. Differences across professional groups and regional contexts were also explored.

Method:
A systematic search was conducted across five databases to identify studies reporting MHL outcomes among general HCPs and were included if they contained a quantitative measure of MHL.

Results:
Twenty-nine articles met the criteria for inclusion, with most studies using vignette-based questionnaires to assess MHL. Doctors, pharmacists and nurses were the only HCP groups assessed, and most studies were conducted in China, Turkey, the United Arab Emirates, and Singapore. Recognition of depression was generally high across HCP groups and settings, while much poorer for anxiety disorders, psychotic disorders and post-traumatic stress disorder. Mental health specialists were commonly identified as appropriate support options. Psychological therapies such as cognitive-behavioural therapy and counselling were widely endorsed, while medication was less frequently recommended as a first-line intervention in several studies – except among pharmacists, where both were similarly recommended. MHL was influenced by different cultural models of care across contexts and was also consistently identified to be inversely correlated with stigma.

Discussion:
Gaps in recognition and treatment knowledge for non-depressive disorders highlight the need for condition-specific training, while professional and cultural differences underscore the importance of tailoring MHL interventions to local contexts and roles. Integrating anti-stigma education may also be a key strategy for optimising the MHL of HCPs and promoting best practice and outcomes in mental health care.

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Barriers, enablers and perceived outcomes of post-registration education for pharmacists in Australia: a qualitative descriptive study

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Introduction:
The experiences of pharmacists undertaking post-registration education in Australia remain unclear. To develop high-quality training programs and encourage participation, it is essential to understand the barriers, enablers, and perceived outcomes of education in this context.

Aim/Objective(s):
To identify the perceived barriers, enablers, and outcomes of post-registration education for pharmacists in Australia.

Methods:
A qualitative descriptive study design was employed to remain close to participant experiences. Australian pharmacists who have completed or nearly completed post-registration education programs were recruited using purposive and convenience sampling. Semi-structured one-on-one interviews were undertaken. Inductive and deductive thematic analysis, performed by two researchers followed by discussion and refinement with a third researcher, was employed to collaboratively identify patterns in participant experiences.

Results:
Interviews were undertaken with 19 pharmacists and lasted a mean of 46 minutes. Four overarching themes regarding barriers and enablers to education predominated throughout the interviews: learners benefit from experiential education, through authentic examples and practical experience; learners are supported through mentorship and social supports; learners are intrinsically motivated but require extrinsic mechanisms, supports, and clarity of expectations; and learners require flexibility for their diverse needs.
Reported outcomes for learners included clinical and non-clinical skills, an evolved professional identity, confidence, pride, and a holistic understanding of health systems and person-centred care.

Discussion:
This research reflects existing principles of andragogy (the study and practice of adult learning), most notably cognitive constructivism and social learning. Findings expand on existing criticisms of the common presupposition (popularised by Malcolm Knowles) that adults are not motivated by externalities; although learners are indeed intrinsically motivated, many benefit from external structures and 'lines in the sand'. Acknowledgement of self-determination theory (positing that the dialectic between intrinsic motives and extrinsic forces can facilitate motivation) may support the design of successful educational programs in the future.

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CORE Leadership: Embedding Student Leadership Development into International Engagement Programs

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Introduction:
International students often face challenges in building confidence, leadership capacity, and social connections when transitioning to study abroad. A strong sense of belonging has been shown to support student motivation, engagement, and retention (Pedler et al., 2021). Recognising this, the Parkville International and Exchange Students (PIES) program was reinvigorated in 2025 with a dedicated leadership pillar to strengthen opportunities for connection and recognition.

Aims:
To design and implement the CORE Leadership Program - a structured initiative enabling international students to earn digital badges in four domains: Connection, Organisation, Reflection, and Example. The program aims to empower students to develop leadership skills, enhance their confidence, and strengthen their sense of belonging within the faculty community.

Methods:
The CORE program was launched mid-year through an interactive event. Before learning about the program and badge requirements, students were invited to draw their own representation of “what leadership looks like,” sparking conversation and peer connection. Students then engaged in workshops and activities aligned with the four CORE domains, including networking events, reflective exercises, and peer-led initiatives.

Results:
Early feedback indicated strong engagement with the program. Students reported that the activities enhanced their confidence, created opportunities for authentic leadership practice, and encouraged connections across year levels and disciplines. Events such as these demonstrate the ripple effect of leadership capacity building.

Discussion:
Embedding the CORE leadership pillar into the PIES program has provided international students with accessible and meaningful opportunities to develop and showcase leadership skills. By framing leadership through the CORE model, the program supports both personal growth and community belonging. This initiative demonstrates how student engagement programs can be expanded to integrate leadership development, offering a transferable model for other faculties and disciplines seeking to support international student success.

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Trends in psychoactive substance use in Australia by wastewater analysis and injecting paraphernalia

Gerber C

Wastewater-based epidemiology has become a common approach to demonstrate chemical exposure and infectious disease marker load excreted by a catchment population. Consumption of psychoactive substances is of particular interest due to the abuse potential of many pharmaceutical drugs. Illicit drugs and lifestyle markers such as tobacco and alcohol pose specific risks as well.

This presentation will show the scale of use of various substances from the South Australian drug monitoring program, the longest continuous project of its type globally, as well as the Australian drug monitoring program. Wastewater samples have been collected bimonthly up to a 13-year period. Excreted loads were determined using daily flow rates from wastewater treatment plants covering capital cities and main regional centres of Australia. Using catchment populations and pharmacokinetic data, daily loads of excreted target drug residues were back-calculated and expressed as drug consumption to scale drugs of different potencies.
Most pharmaceutical substances were detected in every sample, except fentanyl (>90%), while heroin was measured less frequently in regional centres compared to the capital cities. More recently, the highly potent nitazenes, a pharmaceutical class of drugs which never made it to market due to their potency and side effects, have been detected in 5% of samples. Findings show how wastewater surveillance provide a suitable measure of the success of various intervention programs to minimise harm.

One limitation of wastewater analysis is that polydrug use cannot be determined. Results from a drug residue analysis in paraphernalia and syringes program conducted in Adelaide over a 1-year period will be presented to show the extent of illicit use of pharmaceuticals and other drugs and combinations detected over the course of the study.

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Consumer voices in research: strategies and success stories

Sluggett J

This will be an inspiring interdisciplinary panel discussion on consumer and community engagement in pharmacy, pharmaceutical science and health services research projects.

Attendees will hear firsthand experiences from two consumers who have collaborated on research projects, discover practicaltips and tricks from researchers involved in medication safety projects, and learn about resources to support consumer engagement in research.

This session will commence with a short presentation (15-20mins) from Prof Steve Wesselingh (NHMRC CEO) on the recent review of the NHMRC's Statement on Consumer and Community lnvolvement in Health and Medical Research. lt will then move to a panel discussion (-70 mins) which will provide attendees to engage with panelists and learn more about how meaningful consumer and community engagement can shape research ideas, refine questions, and drive successful project outcomes

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e-Health: Harnessing Digital Tools for Better Healthcare

Suppiah V

Globally, healthcare systems are shifting towards more personalized, connected, and data-driven models of care. From medication reminders to mental health management tools, digital technologies are increasingly empowering individuals to take control of their own health. The pharmacy profession must be equipped to contribute meaningfully to patient care in this era of smart healthcare, making the integration of digital health in pharmacy practice essential.

This symposium aims to address the opportunities and challenges in using patient-centred digital health technologies in chronic diseases and wellbeing of healthy individuals.

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A qualitative evidence synthesis on the unintended consequences of prescription opioid policies

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Introduction:
Opioids are essential medicines for acute and chronic pain management, perioperative and palliative care, and opioid use disorder treatment. However, opioids also carry significant risks, and their potential for harms (e.g. dependence, overdose) contributes to morbidity, mortality, and public health burdens. In response, governments and institutions have introduced policies designed to ensure uniform standards for safer prescribing, equitable access to opioids, and thus reduce harms. However, such measures can also lead to unintended consequences for health systems, clinicians and patients.

Aims:
This qualitative evidence synthesis explored the unintended consequences arising from implementing opioid policies at national and subnational levels, and how these were experienced across different health system levels.

Methods:
We searched 4 databases to identify primary qualitative studies that reported on unintended consequences of opioid policies. These consequences were inductively coded into themes within the following levels: society and health systems (macro), organisations (meso), and individuals (micro).

Results:
The synthesis included 54 studies, consisting of four macro-level themes, such as structural stigma resulting from opiophobia; two meso-level themes including breakdowns in therapeutic and professional relationships (e.g. between pharmacists and physicians); and three micro-level themes, such as the loss of autonomy by both patients and prescribe.

Discussion:
While policies are designed to promote broader public health goals of reducing opioid-related harms, unintended consequences have been identified at multiple levels; consequences affecting individuals often originate from upstream systemic factors. For example, structural stigma embedded within healthcare systems can erode trust between pharmacists and patients. Patients may be scrutinised, and pharmacists may become overly cautious in dispensing decisions. This breakdown in relationships can reduce patient engagement with treatment and worsen health outcomes, such as relapse. Recognising these upstream drivers is essential for designing policies that not only regulate opioid use but also foster supportive, stigma-free environments that enable effective, patient-centred care.

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Awareness and understanding of the Black Triangle Scheme and its influence in adverse drug event reporting in Australia

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Introduction:
The Black Triangle Scheme, introduced by Australia's Therapeutic Goods Administration in 2018, aims to improve adverse drug event (ADE) reporting for newly approved or repurposed medicines. These medicines, under additional monitoring for safety, are marked with an inverted black triangle (▼) in their product information to prompt reporting. However, awareness of the Scheme and its impact on rates of reporting among healthcare professionals (HCPs) and the public remains unclear.

Aims:
To assess awareness of the Black Triangle Scheme among HCPs and consumers, and its influence on ADE reporting.

Methods:
A mixed-methods study (online questionnaire and one-on-one semi-structured interviews) was conducted among HCPs and consumers in Australia. Descriptive statistics and qualitative data analysis were conducted.

Results:
A total of 405 participants (138 HCPs, 267 consumers) completed the questionnaire; 21 (11 HCPs, 10 consumers) participated in interviews. Awareness of the Scheme was reported by 52% of HCPs and 10% of consumers. Sixty-three percent of HCPs and 11% of consumers saw the black triangle symbol. Most interviewees said the symbol was overlooked due to its design and placement in product leaflets. Suggestions for improved awareness included social media, television, and posters. Once the Scheme was explained, most participants described it as "very important" and a "good initiative" to enhance medicine safety, where 66.2% then reported being likely/very likely to report an ADE related to black triangle medicines. Interviewees otherwise expressed mixed views on the current scheme's impact on their inclination to report ADEs.

Discussion:
Awareness of the Scheme was particularly low among consumers. Once informed, most participants viewed the Scheme favourably and indicated greater likelihood of reporting. However, issues related to the visibility and meaning of the Black Triangle symbol arose. Improvements in symbol design and strategies for over-all consumer awareness may therefore enhance ADE reporting for medicines under additional monitoring.

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Section 19A in Practice: Assessing the provision of overseas-registered medicines to mitigate the impact of medicine shortages

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Introduction
Medicine shortages are a growing global concern, threatening patient access and healthcare system resilience. In Australia, Section 19A (S19A) of the Therapeutic Goods Act provides a regulatory mechanism for the temporary importation of overseas-registered medicines to mitigate shortages. Despite its increasing use, the real-world role of S19A in sustaining access to essential medicines has not been empirically evaluated.

Aims
This study aimed to evaluate the utilisation of S19A medicines subsidised by the Pharmaceutical Benefits Scheme (PBS) and to assess their effectiveness in maintaining continuity of care during medicine shortages.

Methods
PBS dispensing data were analysed for 15 medicines with PBS-listed S19A alternatives. Time series analyses were conducted to examine dispensing trends before and after the PBS listing of S19A products. Case studies were used to illustrate the clinical and policy impacts of S19A implementation.

Results
In 53% of cases, S19A products accounted for more than half of dispensings in the year following PBS listing, indicating substantial uptake. However, dispensing volumes often did not return to pre-shortage levels, and delays between S19A approval and use were common. Case studies highlighted variability in effectiveness: the desmopressin shortage led to altered prescribing practices, whereas the availability of cefuroxime under S19A prevented a shift to a less safe alternative. Overall, impacts were heterogeneous, with no consistent pattern of recovery across medicines.

Discussion
The S19A pathway is a valuable regulatory tool to mitigate medicine shortages, supporting patient access in times of disruption. However, its effectiveness is limited by delays, inconsistent uptake, and variable recovery in dispensing patterns. Timely regulatory and subsidy coordination, clinician awareness, and logistical readiness are critical to maximising its impact. Future policy should consider anticipatory approvals and improved transparency to strengthen the resilience of Australia's medicine supply.

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Inappropriate Surgical Antibiotic Prophylaxis and Watch-Class Overuse in Papua: A Two-Hospital Audit Against Indonesian and Australian Guidelines

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Introduction:
Surgical antibiotic prophylaxis (SAP) accounts for a major share of inpatient antibiotic use and, when misused, accelerates antimicrobial resistance (AMR), a priority threat in Indonesia's National AMR Action Plan and WHO (World Health Orgnization)'s global strategy. National SAP adherence data are scarce, and no published audits exist from Papua, a province with persistent health system challenges.

Aims:
To quantify SAP prescribing in two government hospitals in Jayapura, Papua, and evaluate adherence to Indonesian and Australian guidelines, identifying priority stewardship targets.

Methods:
A retrospective review of adult surgical ward patients undergoing surgery (June–November 2023) was conducted in a Type B (intervention) and Type C (control) hospital. Data on antibiotic choice, timing, and duration were extracted. Appropriateness was assessed against the Indonesian Ministry of Health's surgical antibiotic prophylaxis guideline (Permenkes No. 28/2021) and the Australian Therapeutic Guidelines: Antibiotic. Findings were reported as frequencies and percentages.

Results :
A total of 318 patients were included (200 intervention; 118 control); 66.0% and 66.9%, respectively, received SAP. The most common regimens were ceftriaxone (46.5%; 148/280), ceftriaxone + metronidazole (7.9%; 25/280), and cefazolin (4.1%; 13/280). Inappropriate SAP was recorded in 85.5% (171/200) of intervention hospital cases and 69.5% (29/200) of control hospital cases. WHO Watch class agents dominated prescribing (83.8%; 482/575 vs 76.7%; 283/369).

Discussion:
In this first SAP adherence audit from Papua, we have demonstrated high rates of inappropriate antibiotic prophylaxis with considerable reliance on Watch class agents, particularly ceftriaxone, and limited Access class use. The consistency across two hospital tiers indicated system-wide practice gaps despite national guidance. These findings highlight an urgent need for locally tailored stewardship interventions, reinforced perioperative protocols, and education to align practice with national and WHO recommendations, supporting both Indonesia's AMR Action Plan and global targets.

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Restoring the Gut-Brain Axis: Precision Antipsychotic Delivery via Microbiome-Targeted Nanocarriers

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Introduction
The gut–brain axis is an emerging therapeutic frontier in psychopharmacology, yet current antipsychotic formulations overlook this bidirectional pathway. Olanzapine illustrates this limitation: despite clinical efficacy in schizophrenia, its 73% discontinuation rate reflects disruption of enteric homeostasis and gut–brain signalling. The drug perturbs microbiome composition, compromises gastrointestinal barrier integrity, and impairs enteric neurotransmitter synthesis, driving metabolic dysfunction that undermines adherence. Gut-mediated variability in treatment response therefore represents an under-recognised contributor to inequity in mental health outcomes.

Aims
To develop and evaluate a microbiome-targeted nanocarrier platform for olanzapine delivery that restores gut–brain axis integrity, improves pharmacokinetics, and mitigates metabolic side effects.

Methods
We engineered a lipid-based nanocarrier co-delivering olanzapine (7.5 mg/kg) with targeted prebiotics (fructo-oligosaccharides, galacto-oligosaccharides, human milk oligosaccharides). Male and female Sprague–Dawley rats (n=8/group) were treated for 21 days. Assessments included 16S rRNA microbiome sequencing, enteric neurotransmitter quantification, gastrointestinal barrier integrity, pharmacokinetic profiling, and metabolic phenotyping.

Results
The nanocarrier halved olanzapine-induced weight gain while increasing bioavailability four-fold. Microbiome α-diversity was restored, enteric neurotransmitter synthesis enhanced, and small intestinal dopamine and serotonin rose four- and two-fold, respectively. GLP-1 signalling was reinstated, short-chain fatty acid production increased, and pharmacokinetic variability was reduced. These data demonstrate mechanistic links between microbiome restoration and improved therapeutic predictability.

Discussion
This microbiome-targeted delivery system addresses a critical gap in psychopharmacology by treating the gut as a determinant of antipsychotic efficacy and tolerability. By restoring gut–brain axis function, the platform transforms a variable, poorly tolerated therapy into a predictable, personalised treatment. This strategy offers psychiatrists and gastroenterologists a novel approach for optimising psychotropic outcomes through targeted intestinal intervention, signalling a paradigm shift toward gut-centric therapeutics in mental health.

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Evaluation of anti-thymocyte globulin (ATG) dosing to determine optimised strategies in obese patients undergoing stem cell transplantation

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Introduction:
Current weight-based anti-thymocyte globulin (ATG) dosing regimens for graft-versus-host disease prophylaxis in allogeneic haematopoietic stem cell transplantation (allo-HSCT) are largely empirical and fail to consider the product's pharmacokinetic characteristics.

Aims:
Utilising a population pharmacokinetic approach, this research aimed to examine the ability of current and alternate weight-based dosing regimens to meet therapeutic exposure targets across the spectrum of body mass index (BMI) classes.

Methods:
An in-silico patient population of 50,000 individuals was constructed with evenly distributed body weights across five BMI categories. Concentration-time profiles were predicted after administration of ATG according to a standard regimen based on total body weight (TBW), as well as alternate strategies based on adjusted body weight (AdjBW25 & AdjBW40), ideal body weight (IBW) and lean body weight (LBW), from which post-transplant exposure (AUCpost) was determined. Regimens were evaluated for each BMI category based on the probability of target attainment (PTA, %) against an established therapeutic range of 60-95 AU.day/mL.

Results:
When dosing ATG according to TBW, incidence of AUCpost overdosage increased by 15% for every increase in BMI category above healthy weight. All alternate weight-based dosing regimens performed better than TBW in obese individuals, without compromising target attainment in other BMI categories, except for LBW which underdosed non-obese individuals. IBW and AdjBW25 performed best in obesity, with 26% target attainment and AUCpost medians of 71.5 and 81.5 AU.day/mL respectively, which was well within the therapeutic range. Underweight individuals had universally poor target attainment with weight-based dosing, with >70% underdosed.

Discussion:
Current weight-based dosing regimens are not consistent with ATG pharmacokinetics and are unlikely to achieve therapeutic targets. This is particularly apparent in obese individuals, likely due to poor adipose tissue distribution. Use of IBW- or AdjBW25-based regimens is predicted to increase attainment of therapeutic exposure, and may lead to superior outcomes in allo-HSCT.

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From Printing a Cure to Translating One: Proof of Concept 3D Implants for Liver Cancer

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Background:
Liver cancer remains a major therapeutic challenge with recurrence rates as high as 70%, after resection and dose-limiting toxicities from systemic chemotherapy. Localized, patient-specific drug delivery systems can address these limitations. Recent advances in three-dimensional printing (3DP) offer a pathway to design individualized, biodegradable implants with controlled drug release. Regulatory bodies have launched initiatives to support 3DP in drug development, while industry has shown growing interest in on demand manufacturing of personalised dosage forms, highlighting the translational potential of this technology.

Aims:
Development of 3D printed biodegradable bilayer films for localized chemotherapy in liver cancer and to explore 3DP translational and regulatory implications for clinical and industrial adoption.

Methods:
Bilayer films co-loaded with 5-fluorouracil (5FU) and cisplatin (Cis) were fabricated using semi solid extrusion printing. The films were characterized and their cytotoxicity evaluated using HepG2 cells.

Results:
The optimized implants achieved immediate 5FU release within 24 hours and sustained Cis release for up to 23 days, maintaining stability and mechanical strength. Cytotoxicity studies demonstrated up to 81% inhibition of HepG2 cell viability, with apoptosis confirmed by PARP and caspase-3 activation.

Conclusion:
This study demonstrates proof of concept for the use of 3D printed biodegradable films as localized chemotherapy platforms for liver cancer. These findings highlight the potential for future regulatory alignment, industrial development, and eventual clinical translation of patient-tailored drug delivery systems.

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Developing Nanoparticle Formulations to Enhance γδ T Cell Activation for Cancer Immunotherapy

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Background:
γδ T cells represent a promising target for cancer immunotherapy due to their ability to recognise and eliminate tumour cells in a non-MHC-restricted manner. However, effective activation of these cells requires efficient delivery of small molecule phosphoantigens, which are often unstable and poorly taken up by cells. Nanoparticle-based delivery systems offer a strategy to overcome these limitations by improving solubility, stability, and targeted cellular uptake.

Aims:
This project aims to develop and characterise nanoparticle formulations for the delivery of phosphoantigens to enhance γδ T cell activation and proliferation.

Methods:
Nanoparticles were synthesised using a microfluidic NanoAssemblr platform and characterised for size, polydispersity, and surface charge. Uptake studies were performed using flow cytometry and confocal imaging in U87 glioblastoma and HFF fibroblast cells. Preliminary cell impedance assays were conducted to assess the in vitro ability of phosphoantigens to sensitise glioblastoma cells to γδ T cell mediated killing over time.

Results:
Initial formulations produced stable nanoparticles with sizes in the 80–120 nm range and narrow polydispersity indices. Flow cytometry and confocal imaging demonstrated successful cellular uptake in both U87 and HFF cells. Early viability and impedance data suggest the formulations are well-tolerated at working concentrations, supporting their suitability for further biological testing.

Conclusion:
These preliminary findings demonstrate the potential of nanoparticle-mediated delivery to improve phosphoantigen stability and uptake, laying the groundwork for subsequent γδ T cell activation studies and in vivo evaluation.

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Reinforcement, Retention and Readiness: Student Experience with a Blocked Pharmaceutics Curriculum

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Introduction:
Linear delivery of teaching content has been a traditional course design with in-person lectures and students rotating through laboratory practicals not always directly linked to the concurrent theory content topic. Student feedback has long identified this misalignment between theory and practice as a barrier to engagement in pharmaceutics courses. In response, a semester 1 course, Dosage Form Design 1 (DFD1), was redeveloped using an intentional "blocked" curriculum model, aligning tutorials and practical classes in close-proximity. In contrast a semester 2 course, Dosage Form Design 2 (DFD2), which retained a traditional linear structure.

Aims:
To evaluate the impact of a blocked curriculum on student engagement and learning experience compared to traditional linear delivery.

Methods:
Anonymous surveys were administered at completion of DFD1 (SP2, n=63) and DFD2 (SP5, n=29). Students rated teaching modalities using Likert scales and provided open-text reflections. Data analysis included quantitative and qualitative thematically analysis (Braun & Clarke, 2006).

Results:
Regardless of course structure, students rated workshops and practicals as the most engaging modalities. However, students in DFD1 consistently emphasised reinforcement, retention, and confidence gained from the close sequencing of theory and practice. Thematic analysis revealed that blocking created clearer connections, reduced cognitive load, and fostered a sense of preparedness. In contrast, responses from DFD2 highlighted the weaker alignment resulting in greater reliance on student self-learning in preparation for practicals.

Discussion:
Intentional course design through a blocked curriculum demonstrably improves students' perception of coherence and learning support in DFD1. As expected, practicals were valued in both courses, however the blocking of activities in the redevelopment provided a more engaging and confidence-building experience. These findings suggest that course design, not just content, is central to optimising student experience and learning in pharmaceutics.

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Meeting compounding standards through improved education, training, and compliance strategies in a geographically diverse profession

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Introduction
Pharmacy practice in Australia is shaped by significant clinical and geographical diversity. Access to essential education and training is particularly challenging for compounding, a highly technical practice that carries a substantial risk of patient harm. Recent cases, including the 2024 compounded semaglutide incident, have highlighted deficiencies in compliance and training that can compromise patient safety.

Aims
This study aimed to evaluate current education and training pathways for pharmacists engaged in compounding and to identify practical solutions to improve compliance with compounding standards while ensuring equitable access to training across Australia.

Methods
A review of accredited pharmacy compounding programs was undertaken, focusing on curriculum design, competency assessment, and accessibility. Legislative requirements, continuing professional development (CPD) frameworks, and emerging education modalities were also examined.

Results
Pre-registration pharmacy programs provide limited exposure to compounding, largely restricted to simple preparations. Training opportunities in complex compounding are lacking, predominantly located in metropolitan centres, and often reliant on overseas curricula misaligned with Australian standards. Multiple jurisdictions further complicate standardisation. Pharmacists may self-assess their competence through CPD, yet this approach risks gaps in knowledge and compliance. Practical training opportunities remain limited, particularly for rural and remote practitioners.

Discussion
To mitigate risks of non-compliance and patient harm, a national standardised training framework is essential. Innovative models, including virtual and augmented reality, could provide scalable solutions for skills development, enabling pharmacists to practice in simulated environments before entering compounding laboratories. Consultant pharmacists may also play a role in delivering personalised, accredited on-site training and supporting compliance through facility audits. Improved access to tailored education, combined with structured national standards, is critical to strengthening patient safety in compounded medicines.

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Embedding career awareness into the second year of the pharmaceutical science bachelor's program via coursework

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Introduction:
Career awareness is a vital component of undergraduate education, particularly in industry-focused programs such as pharmaceutical sciences, where graduates pursue diverse career outcomes.

Aims:
The aim of this study is to investigate the extent to which course-based learning activities contribute to enhancing undergraduate students' awareness of potential career pathways within the pharmaceutical sector.

Methods:
To embed career awareness within the coursework, students were provided with structured career-focused resources. These included (i) one module (three weeks of content) dedicated to pharmaceutical career pathways, (ii) a seminar delivered by an industry professional outlining the pharmaceutical career pathway, and (iii) a short video repository featuring alumni discussing their professional roles and responsibilities. The roles for the video repository were selected to represent diverse career pathways within the pharmaceutical industry. Each alumnus's talks were guided by open-ended questions, which explored their professional role, key responsibilities, challenges encountered, and the aspects of their work they found most engaging.
The impact of these resources on student career awareness was assessed through an assessment task. Students were required to deliver a five-minute face-to-face presentation in class, outlining potential areas of future employment within the pharmaceutical industry. In preparing their presentations, students were expected to critically engage with the provided resources and draw connections between course content and career pathways to inform their reflections.

Results:
Student engagement data and course experience survey feedback indicated a positive impact on students' career awareness.

Discussion:
Developing career awareness early in a degree program is crucial for guiding students' academic choices and professional development. Utilising the alumni network to provide industry insights represents an innovative and authentic teaching approach, offering students both relatable role models and practical perspectives that strengthen their connection to the pharmaceutical industry, while enhancing career awareness.

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From simulation to bench: a scaffolded, inclusive model for work-ready pharmaceutical laboratory learning

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Introduction.
Large cohorts can push practical classes toward step-following rather than scientific thinking. In MPS5302 (Contemporary Technical Skills), we introduced a scaffolded “simulation to bench” model aligned to real workflows in messenger RNA (mRNA) and lipid nanoparticle (LNP) therapeutics to better prepare students, reduce stress, and protect rigor.

Methods.
Virtual pre-lab activities formed part of the unit’s Discovery material. Students rehearsed procedures and key concepts at their own pace using simulations, including high-performance liquid chromatography (HPLC) analysis and gel electrophoresis, before applying those workflows in the wet lab. Short post-lab inquiry debriefs then focused on analysis, troubleshooting, and experimental design. Evidence for impact draws on facilitator and teaching-assistant testimonials.

Results.
Testimonials described five outcomes. (1) Lab readiness and execution improved: simulations offered a safe space to trial concepts; students arrived better prepared and more confident, enabling deeper discussion and more accurate execution at the bench. (2) Sessions shifted from procedural steps to higher-order inquiry: students asked “why does this happen?” rather than “what do I do next?”, engaged in peer reasoning, and focused on mechanisms and parameter choices. (3) Bench pressure fell and motivation rose; classes felt more dynamic and productive. (4) Inclusivity improved: self-paced preparation lowered anxiety and helped students with diverse backgrounds reach a similar level of readiness. (5) Teaching became more rewarding: staff spent less time on basics and more on experimental design, interpretation, and developing scientific thinking.

Discussion.
These outcomes align with studies showing pre-laboratory simulations improve preparedness and reduce anxiety (Blackburn et al., 2019; George-Williams et al., 2022), and that virtual–physical blends are most effective when simulations precede laboratory sessions (systematic review: Chan et al., 2021). This innovative sequence is a pragmatic way to use simulations to prime learning, reserve in-person time for analysis and design, and scale laboratory teaching while improving readiness and inclusivity.

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Complementary Medicine in Practice: Safeguarding Usage and Regulatory Challenges

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Complementary medicines represent a significant and rapidly expanding sector of healthcare in Australia, with pharmacies serving as a key point of access and consumer guidance. Ensuring their safe and effective use relies on a robust regulatory framework, established and overseen by the Therapeutic Goods Administration (TGA). This framework includes pathways such as AUST L and AUST L(A), which are tailored to the type of health claims made and the level of scientific evidence required.

For commercial brands, these pathways present both challenges and opportunities in balancing compliance obligations with the drive to innovate and build consumer trust. By leveraging diverse forms of evidence—from clinical trials to real-world data—brands can substantiate on-pack claims while also generating insights into product effectiveness and consumer experience. When communicated clearly, this evidence enhances pharmacy interactions, strengthens transparency, and supports informed consumer choices.

This presentation will examine how regulatory pathways, innovation within compliance, research integration, and pharmacovigilance practices can be aligned to advance consumer education, reinforce trust, and drive responsible growth in the complementary medicine sector.

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Collaborative Pharmacist Prescribing in Australian Hospitals

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Collaborative pharmacist prescribing in hospitals involves credentailed pharmacists working with doctors and patients to create medicine plans and prescribe medicines. Various collaborative pharmacist prescribing models have been trialled and implemeted in Australian hospitals with demonstrated reductions in prescribing discrepancies and errors, reductions in inpatient length of stay and hospital costs. Furthermore, collaborative prescribing has increased pharmacists scope of practice and job statisfaction.

This symposium will provide an overview of collaborative pharmacist prescribing in the Australian hospital setting including pharmacist scope of practice, training and credentialing of prescribers and legislative pathways persued in different jurisdictions in Australia to enable pharmacist prescribing. Preliminary results from pilots of collaborative pharmacist prescribing will also be shared, demonstrating the impact of collaborative pharmacist prescribing on patient outcomes and the healthcare system.

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Comparing characteristics of long- and short-term antidepressant users with non-users using longitudinal data on Australian women

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Introduction:
Antidepressant use is rising, mainly driven by an increasing proportion of long-term users (>1 year). While previous studies have examined socio-demographics, clinical factors and health service use characteristics, differences in functional health (physical and mental) remain unexplored.

Aim:
To compare functional health and characteristics differences between long- and short-term antidepressant users, and with non-users. Findings may assist clinicians identify patients at risk of long-term use and facilitate antidepressant weaning within the recommended treatment timeframe.

Method:
We selected participants from across three age cohorts of the Australian Longitudinal Study on Women's health and categorised them by their antidepressant use status using linked Pharmaceutical Benefits Scheme data (July 2012-survey year). We then analysed survey data (socio-demographics, co-morbidities, health service use and functional health parameters).

Results:
Among 22,308 participants, 15% were long-term and 4% short-term antidepressant users. Both user cohorts had lower socio-economic status, poorer self-reported general and functional health, and more comorbidities than non-users. However, when comparing short- and long-term users, most variables, including functional health (SF-36), showed no significant differences. Long-term users reported more depressive symptoms and diagnoses, yet levels of psychological distress and mental health-related disability were similar to those of short-term users.

Discussion:
Antidepressant users overall demonstrated greater disability in functional health and lower socio-economic status than non-users, but differences between short- and long-term users were minimal, suggesting antidepressant 'ever use' may be a stronger predictor of poorer health characteristics than duration of use. The discrepancy between self-reported depressive symptoms and actual mental health burden between short- and long-term users raises questions about the efficacy of long-term antidepressant use. Given the limited therapeutic benefits and potential negative outcomes from recent literature, strategies to encouraging greater diagnostic rigor prior to initiating antidepressants and deprescribing long-term antidepressants should be considered.

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Stakeholders' perspectives about factors influencing the successful implementation of the Aged Care Onsite Pharmacist (ACOP) program in Australia

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Introduction:
The Aged Care Onsite Pharmacist (ACOP) program was launched in Australia in July 2024 to enable pharmacists to deliver clinical governance, clinical pharmacy and education services in residential aged care homes (RACHs). It is crucial to understand the complex interactions between various factors at the individual and organisational levels to ensure the program's uptake, effectiveness and sustainability at scale.

Aims:
This qualitative study aimed to explore stakeholders' perspectives on medication management, the perceived value of onsite pharmacists, and key considerations for successful program implementation in RACHs.

Methods:
Semi-structured interviews (n=61) were conducted with residents/families, pharmacists, medical practitioners, RACH staff, and individuals involved in policy. Participants were recruited from metropolitan and rural areas across Australia. Interviews were conducted prior to the national rollout of the program. The Consolidated Framework for Implementation Research informed the study design, data collection and analysis.

Results:
Factors influencing the program implementation were grouped into 1) Individuals: factors concerning individuals involved in the program; 2) Innovation: factors related to the program design; 3) Process: implementation process actions; 4) Inner setting: factors relating to the organisational context; and 5) Outer setting: factors pertaining to the policy context. Most participants valued the potential contribution of onsite pharmacists. Program flexibility was noted as essential to increase its uptake and acceptability, particularly in rural and regional areas. A desire for implementation strategies was evident. Workforce, organisational leadership, infrastructure and resources, and broader policy support were noted as critical for the program's success.

Discussion:
The ACOP program represents a promising strategy to enhance medication management in RACHs. However, implementation on a large scale necessitates a thoughtful consideration of various interconnected factors that may affect its uptake and sustainability. This has implications for policymakers and care providers to ensure the program achieves its ultimate goal of enhancing residents' health outcomes.

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Understanding antibiotic disposal in Papua, Indonesia: A window into public health challenges

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Introduction:
The inappropriate use and improper disposal of antibiotics contribute to antimicrobial resistance and environmental contamination. In Eastern Indonesia, behavioural patterns driving informal antibiotic use and disposal are limited.

Aims :
This study investigated the level of knowledge regarding the disposal of unused/ expired antibiotics.

Method:
A cross-sectional study was conducted at a primary health centre in Jayapura, Papua, Indonesia (October–December 2024) using a questionnaire administered to health workers and patients aged 18–65. A structured questionnaire measured demographics, antibiotic use knowledge, and disposal behaviours

Results:
Of 280 returned questionnaires, most were female (66.1%;n=185), aged 18–35 (61.4%; 172) and residing in metropolitan areas (86.4%; 242). Educational attainment was high (85.4% ≥ Senior High School; 239). A total of 185 (66.1%) respondents reported retained leftover antibiotics, often due to early symptom relief (43.9%; 123) or saving for future illness (12.1%; 34). Retention was higher among housewives (74.0%; 57/77) and civil servants (75.9%; 22/29) than among health workers (33.3%;12/36). Among those with leftovers, 92/185 individuals (49.7%) reported using antibiotics themselves for self-medication, and 57/185 (30.8%) reported disposing of antibiotics via household trash or sink flushing.

Discussion:
Despite many participants having a high level of education and urban residence, we found that retention of leftover antibiotics was common, often retained due to early symptom relief or for future use. Retention was especially high among housewives and civil servants, suggesting occupational influence on storage behaviour. Nearly half of those with leftover antibiotics practised self-medication, and one-third disposed of antibiotics inappropriately via household trash or sink flushing. These patterns highlight persistent gaps in public understanding of antibiotic use and disposal, even among educated populations. The findings underscore the need for targeted community-level interventions to address misuse and environmental risks, aligned with national stewardship goals.

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Pharmacist integration in interprofessional ward rounds: A realist synthesis

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Introduction:
Pharmacists' participation in interprofessional ward rounds in inpatient hospital settings has been shown to reduce adverse drug events, improve medication appropriateness and improve communication about medicines. However, pharmacists do not routinely participate in interprofessional ward rounds, with reports of participation varying from 10% to 39%. Knowledge about how, why, and under what circumstances a pharmacist will successfully integrate into interprofessional ward round teams remains limited.

Aim:
A realist synthesis was conducted to explore the underlying causal mechanisms and contexts influencing the success or failure of pharmacists' integration into interprofessional ward rounds.

Method:
Evidence from a literature review focusing on pharmacists and interprofessional ward rounds was synthesised using realist logic. Demi-regularities of contexts, mechanisms, and outcomes relating to pharmacists' participation in interprofessional ward rounds were identified and configured into context-mechanism-outcome configurations to establish causation.

Results:
Thirty-six documents were synthesised into twelve context-mechanism-outcome configurations which supported the development of a program theory of how and why pharmacists integrate successfully into interprofessional ward round teams. The early engagement of multiple internal stakeholders prior to integration of pharmacists in interprofessional ward rounds results in shared solutions which can include discussions of concerns regarding the integration of non-medical practitioners in ward rounds and choosing an appropriate ward or unit for integration. Introduction of the pharmacist to team members by the consultant can initiate building trust amongst all members of the team. Consultants creating shared values and inviting contributions from the pharmacists can create a respectful atmosphere and enable pharmacists to contribute to patient care.

Discussion:
This synthesis advances knowledge by explaining how, why, and when pharmacist integration into interprofessional ward rounds is successful. Early introductions and collaborative planning involving all stakeholders can foster trust, enhance communication, and improve the feasibility and acceptability of pharmacist participation in interprofessional ward rounds.

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Innovative and Emerging Roles for Pharmacists

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Pharmacists in GP practices and in Aged Care are recent new practice areas for pharmacists. There is a small but growing community of pharmacists influencing practice change. This symposium will highlight recent innovations in South Australia.

Helen Stone was awarded a Churchill Fellowship to investigate the role of Palliative Care Pharmacist in aged care and community care. Concurrently conducting a project in regional South Australia with a consultant pharmacist providing palliative care medication support, we are now running Dementia Care Pharmacist project. We will also take a closer look at Aged Care Pharmacists and look at where next including Aboriginal Health Services, Disability Care and pharmacists with niche roles and competencies.

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Development, Implementation, and Evaluation of Tools to Facilitate Appropriate Medication Prescribing for Older Adults

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This symposium will present three innovative studies focused on enhancing medication safety and appropriateness for older adults across diverse healthcare settings. Each study contributes to address the complex challenges of polypharmacy and inappropriate prescribing in ageing populations.
The first presentation introduces prescribing appropriateness criteria (PAC), a tool developed for Sri Lankan older adults. This tool supports prescribers and pharmacists in promoting safe and effective medication use, particularly within resource-limited healthcare settings.

The second presentation will discuss the Australian Potentially Inappropriate Medicines (PIMs) list for older adults. This list helps clinicians and researchers identify medicines with risks that may outweigh their benefits, thereby improving medication management and safety.
The third presentation will outline the national rollout of The Goal-directed Medication review Electronic Decision Support System (G-MEDSS) and the development of My Medicine Goals for people (or carers of people) with polypharmacy.

Together, these studies highlight the critical role of tailored, evidence-based tools in improving medication use and health outcomes for older adults globally.

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Risk of adverse outcomes associated with mirtazapine versus sertraline use among older people living in aged care homes

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Introduction:
Antidepressants are used by 60% of residents of residential aged care homes (RACHs), and 1 in 5 use mirtazapine. Mirtazapine is indicated for moderate-severe major depression, however off-label use for mild depressive symptoms and changes in behaviour or sleep has been reported. Mirtazapine and sertraline are the most commonly used antidepressants, despite little safety information in RACHs.

Aims:
To investigate risk of adverse outcomes (falls, fractures, cardiovascular-, dementia- and delirium-related hospitalisations, all-cause mortality) associated with mirtazapine compared to sertraline use after RACH entry.

Methods:
An active new-user retrospective cohort study included individuals aged 65-105 years entering RACHs in three Australian states from January 2015 to October 2018, who initiated mirtazapine or sertraline ≤60 days post-RACH entry, with follow-up to December 2019. The inverse probability of treatment weighting of individuals' propensity scores was used to adjust Cox and Fine-Gray regression models to estimate the risk of outcomes associated with mirtazapine compared to sertraline use in RACHs. Weighted (adjusted) hazard ratios (aHRs), subdistribution hazard ratios and 95% confidence intervals (95%CIs) are presented.

Results:
5,409 residents initiated mirtazapine (71%, n=3,837) or sertraline (29%, n=1,572) post-LTCF entry, with median follow-up of 258 days (interquartile range 70-634 days). After weighting, mirtazapine was associated with higher risk of mortality (aHR 1.16, 95%CI 1.05-1.29) compared to sertraline. The risk of falls and fractures within 90 days was not statistically significantly different between groups but was lower in mirtazapine users after 90 days. No differences in cardiovascular-, dementia- or delirium-related hospitalisations risk were observed.

Discussion:
This study raises concern about the potential increased risk of harm associated with mirtazapine use in RACHs. This should be balanced with limited evidence for effectiveness when considering antidepressant therapy in RACHs. Pharmacists working with RACHs should consider the place of antidepressants in treatment pathways and safer alternatives and/or discontinuation where appropriate.

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The first clinical practice guideline for MDMA-assisted psychotherapy in post-traumatic stress disorder: What clinicians need to know

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Introduction:
In 2023, Australia became the first country to reschedule methylenedioxymethamphetamine (MDMA) and psilocybin to permit prescribing by authorised psychiatrists for post-traumatic stress disorder (PTSD) and treatment-resistant depression.

Aims:
To describe the Australian Clinical Practice Guideline for the Appropriate Use of MDMA-assisted Psychotherapy (MDMA-AP) for PTSD and highlight the implications for clinicians.

Methods:
The GRADE Evidence to Decision framework was used to develop recommendations and good practice statements. An 18-member multidisciplinary Guideline Development Group (including psychiatrists, psychologists, pharmacists, researchers, and lived experience representatives) worked collaboratively with 17 interest-holder organisations (professional societies, government agencies, peak organisations) and 21 expert advisors.

Results:
The draft guideline included 4 Recommendations, 18 Good Practice Statements, and 11 Research Recommendations. For people living with PTSD, the Guideline conditionally recommends against the routine use of MDMA-AP. If MDMA-AP is used, it should be limited to adults (≥18 years old) with PTSD symptoms for at least 6 months duration postdiagnosis, with moderate or severe PTSD symptoms in the past month (CAPS-5 total severity score ≥28), who have received an adequate trial of first-line evidence-based treatments, and who are not likely to be re-exposed to the index or other significant trauma during treatment.

Discussion:
Individuals living with PTSD may weigh the risks and benefits of MDMA-AP differently based on their previous experience with other established treatments. The Guideline emphasises the critical role of shared decision-making and informed consent processes in providing trauma-informed, participatory, and culturally-responsive care.

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Enhancing undergraduate pharmacy students' readiness for interprofessional practice through simulation-based learning with nursing students

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Introduction:
Interprofessional collaboration is essential in modern healthcare to enhance care quality and improve patient outcomes[1]. However, undergraduate health programs may inadequately prepare students for effective multidisciplinary teamwork. Pharmacy and nursing curricula often lack structured interprofessional learning (IPL) opportunities that simulate real-world practice[1].

Aim:
To examine changes in undergraduate pharmacy students' perceptions of, and readiness for, IPL following a dosage form modification simulation-based IPL between pharmacy and nursing students in a simulated hospital ward.

Methods:
An interprofessional simulation was conducted between undergraduate pharmacy and nursing students using high-fidelity hospital suites. Pharmacy and nursing students, aged ≥18 years, participated in four immersive case-based exercises, managing simulated patients with dysphagia or enteral feeding tubes, and requiring dosage form modification and vehicle selection for administration. Pharmacy students completed the validated Readiness for Interprofessional Learning Scale (RIPLS), a 19-item, 5-point self-reporting Likert scale (min-max score: 19-95) to evaluate perceptions of knowledge, skills, and attitudes regarding their readiness to learn with other healthcare professions, both before and after the simulation. RIPLS scores pre- and post-simulation scores were analysed and statistically compared.

Results:
Post-simulation RIPLS scores (87.0±0.96) were significantly higher than pre-simulation scores (83.5±0.99) among pharmacy students (n=62), indicating increased readiness for IPL ($P<0.001$). Pharmacy students showed significantly improved agreement post-simulation in areas including: value of shared learning ($P<0.05$), importance of learning communication with other healthcare students ($P<0.005$), understanding personal limitations ($P<0.001$), becoming better team workers ($P<0.001$), and increased clarity regarding their professional role ($P<0.0005$).

Discussion:
The interprofessional simulation successfully enhanced pharmacy students' readiness for collaborative practice, deepened understanding of their role within a healthcare team, and promoted understanding of shared responsibilities and communication in clinical settings. The positive outcomes have encouraged further cross-disciplinary IPL initiatives within the School, supporting integration of interprofessional education in health curricula.

[1]Fusco NM & Foltz-Ramos K. J Interprof Care. 2018;32(5):648-652.

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Stakeholder perspectives on interprofessional collaboration with pharmacists when caring for people living with mental illness in the community

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Introduction.
People living with mental illness often experience complex medication needs requiring interdisciplinary care. Pharmacists are well-positioned to support this population; however, collaboration with other healthcare professionals in mental health remains limited.

Aims.
To explore healthcare professionals' perspectives on working with pharmacists in community mental healthcare and to identify strategies for enhancing interprofessional collaboration.

Methods.
Semi-structured interviews were conducted with healthcare professionals across Australia. Audio-recordings were de-identified, transcribed verbatim, and analysed thematically. Coding was undertaken by one author and cross-checked by a second author, with discrepancies discussed until a consensus was reached.

Results.
Eleven healthcare professionals were interviewed, including general practitioners (GPs), psychiatrists and psychologists. Interprofessional collaboration in mental healthcare was largely centred on GPs, who were seen as the first point of contact, with psychologists and psychiatrists engaged through formal referral pathways. In contrast, collaboration with pharmacists was described as informal and largely on an ad hoc basis, often restricted to issues related to dispensing or medication misuse. Barriers included time pressures, unclear expectations of pharmacists' roles within the broader mental healthcare team, and the sensitive nature of mental health information, which can hinder data sharing between healthcare professionals. Nonetheless, participants identified opportunities for pharmacists to contribute through initiatives such as screening and medication reviews, which could strengthen interprofessional collaboration if supported by clearer structures and communication pathways.

Discussion.
There are both opportunities and challenges for interprofessional collaboration involving pharmacists in community mental healthcare. While participants acknowledged pharmacists as accessible and knowledgeable in medicines, they also noted that their expertise can be limiting in mental healthcare when collaboration is needed beyond pharmacological care. Future research should explore strategies to develop communication systems that enable information sharing and examine frameworks that can support pharmacists' integration into interprofessional teams.

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