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Cultural responsiveness in pharmacy education: WTF (Why the fuss)

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Ongoing education is essential to bridging the persistent gap between theory and practice in healthcare. Rapidly evolving evidence, particularly in the setting of new pharmacological recommendations, necessitates an ongoing need to upskill our health professional workforce and align their practice with the latest guideline recommendations. Strategies for knowledge dissemination must be combined with behaviour change interventions that seek to embed theoretical evidence-based recommendations into practice. A culture of continued professional learning should be fostered in combination with strategies that positively influence health professional behaviour in line with guidelines. These include audit and feedback reflective activities, clinical decision support systems and software prompts. This presentation will draw on real-world experience implementing best practice cardiovascular care, from guideline development, education and learning, through to embedding clinical practice change at scale. Supporting health practitioners to align their practice with the latest evidence requires more than knowledge exchange to create lasting practice change and improved patient outcomes.

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Bridging the theory-practice gap: implementing evidence-based medicine

Ms Natalie Raffoul[1]
[1]National Heart Foundation of Australia

Ongoing education is essential to bridging the persistent gap between theory and practice in healthcare. Rapidly evolving evidence, particularly in the setting of new pharmacological recommendations, necessitates an ongoing need to upskill our health professional workforce and align their practice with the latest guideline recommendations. Strategies for knowledge dissemination must be combined with behaviour change interventions that seek to embed theoretical evidence-based recommendations into practice. A culture of continued professional learning should be fostered in combination with strategies that positively influence health professional behaviour in line with guidelines. These include audit and feedback reflective activities, clinical decision support systems and software prompts. This presentation will draw on real-world experience implementing best practice cardiovascular care, from guideline development, education and learning, through to embedding clinical practice change at scale. Supporting health practitioners to align their practice with the latest evidence requires more than knowledge exchange to create lasting practice change and improved patient outcomes.

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Dancing in the dark: Living Indigenous ways of knowing, being, and doing

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Introduction: Across the globe, Indigenous peoples have long held deep knowledge of medicine, health, and well-being, passed down through generations. However, colonisation has disrupted these systems, leading to significant health disparities. A pharmacy workforce equipped with cultural safety knowledge can play a vital role in addressing these inequities and improving health outcomes for Indigenous communities.
Methods: In this workshop participants will be led on a journey to choreograph a “dance” through the lived experiences of Māori, Aboriginal and Torres Strait Islander peoples. Participants will hear stories of the journeys of members of the Leaders in Indigenous Pharmacy Profession Education (LIPPETM) network, who are Indigenous pharmacy academics and teacher-practitioners from Australia and Aotearoa New Zealand with experience in developing curriculum in the health professions. They will reflect on these stories and be supported to use Indigenous ways of being, knowing and doing to enhance their teaching and guidance of their students and colleagues.
Results: Participants will learn about how Indigenous ways of knowing, being and doing can enhance their way to teach students to deliver culturally safe care to their communities. They will develop an understanding of their own assumptions and biases and move beyond the barriers to use teaching strategies that will support learners to have the confidence to “take the dancefloor”. Tangible outcomes of the workshop will include strategies for implementing curriculum that embeds cultural safety into their programs and delivers a culturally safe workforce.
Conclusion: By incorporating Indigenous perspectives into pharmacy education, we can cultivate a culturally safe and competent pharmacy workforce. This will empower future pharmacists to address the unique health needs of Indigenous communities and contribute to improved health outcomes.

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Entrustable professional activities and their use in credentialing pharmacists for medication management reviews

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Introduction: In 2023, the Australian Department of Health and Aged Care requested the Australian Pharmacy Council (APC) develop accreditation standards and a new accreditation system for education programs that credential pharmacists to work as Aged Care On-site Pharmacists and conduct Medication Management Reviews (MMR). Additional consultation resulted in development of a set of accompanying Performance Outcomes to provide training programs a framework to support a systematic approach to credentialing pharmacists that demonstrate their performance for these roles.
Methods: A mixed methods approach, comprising quantitative and qualitative data was used with a two-phase survey of subject matter experts (SMEs) conducted using the Qualtrics platform. Phase 1 aimed at assessing the relevance of 14 Entrustable Professional Activities (EPAs) previously validated for use in a provisionally registered pharmacist training program, to the role of MMR pharmacists utilising a five-point Likert scale. A 70% threshold for 'agree' and 'strongly agree' was used to qualify an EPA for Phase 2. During Phase 2, EPAs were mapped for their ability to demonstrate APC Performance Outcomes for MMR.
Results: Of the eight SMEs recruited, seven completed both phases of the survey. Three surveys were incomplete in phase 2. Twelve out of the 14 EPAs qualified for Phase 2 and were mapped against 24 APC Performance Outcomes for MMR. Brief reasons were given for those EPAs that were not deemed relevant to MMR (for example an EPA for compounding). Five EPAs were matched with 100% agreement to six of the Performance Outcomes.
Conclusion: Six Performance Outcomes for MMR credentialing were deemed by SMEs to be suitable for demonstration by five EPAs previously validated for use in a provisionally registered pharmacy training program. To our knowledge, this is the first study of its kind to map EPAs to the APCs Performance Outcomes for credentialing of MMR Pharmacists.

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Pharmacist competency examination methods in various countries: Bibliometric analysis of trends and research developments related to pharmacist professional education

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Introduction: Data from 194 WHO member countries in 2020 indicated that there were approximately 51 million healthcare workers worldwide, including 3.7 million pharmacists. As the number of pharmacists increases, competency-based education has become a top priority, guided by a global framework and evaluated through pharmacist competency exams. These exams vary by country, including written, oral, and OSCE formats, with some countries also requiring practical training or internships. A bibliometric study on pharmacist competency exam methods is essential for identifying trends and gaps in competency-based education across countries. This study employs a quantitative bibliometric analysis to examine pharmacist competency exam methods.
Methods: This bibliometric study involves several stages: 1) defining objectives and scope, 2) selecting the bibliometric approach, 3) gathering data, and 4) conducting and reporting the analysis. A literature search was performed using the PRISMA framework, focusing on articles published between 2014 and 2024 from Scopus and Web of Science, utilizing keywords such as "pharmacy competency exam", "pharmacist licensure", and "pharmacist certification". The final dataset, processed in RStudio and analyzed with Bibliometrix, integrates performance analysis, science mapping, and network analysis to visualize trends, collaborations, and knowledge gaps in the field.
Results: The bibliometric analysis reveals that pharmacist competency exam methods vary across countries. A total of 597 articles from Scopus and Web of Science were analyzed. The United States had the highest publication volume (330 articles), followed by Canada and Saudi Arabia. International collaboration analysis showed that 13.57% of publications involved cross-country collaboration. Keyword analysis highlighted "pharmacy" as the dominant topic, with research clusters focusing on pharmacy education, structured clinical exams, and interprofessional collaboration. The American Journal of Pharmaceutical Education led in publishing pharmacist competency exam-related articles.
Conclusion: This study identifies global trends and challenges in pharmacy education and practice, along with opportunities for development.

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Using action research to evaluate a professional activity-based national pre-registration pharmacist training programme in Singapore

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Introduction: Using the action research approach, the revised national pre-registration pharmacist ("pre-reg") training programme in Singapore was implemented in two phases (July 2023 to January 2024 and May 2024 to January 2025). This programme aligns with competency standards of the Development Framework for Pharmacists. It is based on professional activities (PAs). To support progression towards independent practice, workplace-based assessments (WBAs) and a supervision scale were introduced. This study aims to assess the efficacy of PAs for training and evaluation while gathering feedback on user experience.
Method: Pre-regs and preceptors were selected through purposive sampling with randomisation. The data was collected via online surveys and group interviews. Interviews were conducted separately for pre-regs and preceptors, using similar question guides, and subsequently audio-recorded, transcribed, and thematically analysed.
Results: Responses from 14 pre-regs and 16 preceptors during Phase One highlighted the strengths, challenges, and recommendations for improving the PAs and WBA templates. Pre-regs felt the revised framework supports a seamless transition to post-graduate training, while preceptors recognised their role in ensuring that pre-regs attain appropriate supervision levels. The new framework was positively received, with well-performing elements retained and areas for improvement identified. Insights gained from action research informed refinements to the training framework. Action research for Phase Two is ongoing, with results forthcoming.
Conclusion: Findings from this study have been integrated into the revised framework, scheduled for full implementation from May 2025. Adjustments were made to individual PAs and WBA forms based on the feedback, with consolidated guidance provided in a toolkit for user dissemination.

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Enhancing training for provisionally registered pharmacists (interns): Key insights for workplace-based assessments

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Introduction: Assessment is crucial in health professional education, including determining readiness for independent practice. In Australia, intern pharmacists must complete a period of supervised practice for registration, with preceptors evaluating their performance in the workplace. Until recently, there has not been a consistent national approach to workplace-based assessment (WBA) despite the growing interest in competency-based education. An initial WBA 'toolkit' was developed for Australian intern pharmacists, comprising Entrustable Professional Activities, Case-based Discussion, and structured in-training activities. This study explored emerging themes for the ongoing implementation of these WBA tools, aligning with the conference theme Hopping and Skipping – Current challenges in pharmacy education.
Methods: Data was collected with ethics approval using 3 complementary approaches: (1) Focus groups with pharmacy interns and preceptors; (2) structured interviews with pharmacists coordinating intern training; and (3) an anonymous cross-sectional survey of interns, preceptors, and intern training program providers. Qualitative data from focus groups and interviews were analysed thematically, while survey data were analysed using descriptive statistics.
Results: The survey included 510 respondents. 29 participants (Interns n=13, Pharmacists n=16) engaged in 9 focus groups, while 10 pharmacists from community and hospital settings were interviewed individually. Participants reported high satisfaction with WBA tools, highlighting six key themes: continuous upskilling in WBA, tailored WBA training opportunities, access to WBA training, a coordinated approach to WBA use between key stakeholders, uniformity in WBA performance expectations, and a desire for wider advocacy for WBA.
Conclusion: The integration of WBA tools into pharmacy intern training has revealed six key themes that offer valuable insights into the evolving needs and potential improvements within the WBA framework. These findings support the continued implementation of WBA in intern training and highlight the importance of addressing emerging needs to enhance the framework's effectiveness.

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Examining the perception of undergraduate pharmacy students towards their leadership competencies: A mixed-methods study

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Introduction: Developing leadership skills among pharmacy students is essential to meet the evolving demands of the healthcare sector. However, research on pharmacy students' perceptions of their leadership competencies, as well as the opportunities available to cultivate these skills, remains limited. This study aims to explore the students' perceptions of their leadership knowledge, skills, and attitudes. Additionally, it examines the curricular and extracurricular opportunities that support leadership development.
Methods: An explanatory mixed-methods approach was adapted. The quantitative phase involved the development, validation and administration of a questionnaire to Qatar University-College of Pharmacy (CPH) students (N= 187). Data were analyzed using SPSS, including descriptive statistics and inferential analysis. In the qualitative phase, four focus groups (FGs) were conducted, transcribed verbatim, and thematically analyzed using NVIVO®.
Results: The study indicated a fair level of leadership knowledge (Median [IQR] = 59.0 [7.0]), skills (Mean [SD] = 109.9 [11.9]), and attitude (Median [IQR] = 38.0 [7.0]) among students. Qualitative data confirmed that the CPH supports the development of students' leadership knowledge, skills and positive attitude through various curricular and extracurricular opportunities. Frequently mentioned opportunities included interprofessional education (IPE), clinical rotations, and courses and assignments nurturing leadership qualities. To enhance leadership development, participants recommended expanding IPE to be implemented in clinical rotations, standalone leadership courses, developing mentorship programs, and establishing exchange programs with international colleges.
Conclusion: The findings show that students possess a fair level of leadership knowledge and skills, recognizing its importance for their role as pharmacists. Many students identified student organizations and co-curricular activities as key opportunities for skill development, with most possessing skills in problem-solving, self-reflection, and adaptability. Those with prior leadership experience showed a more favorable attitude, highlighting the value of practical experience. Suggestions for improvement leadership development included integrating standalone leadership courses in the curriculum and promoting IPE into clinical rotations.

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Accreditation insights from the Advanced Pharmacy Australia (AdPha) Resident Training Program

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Introduction: The Advanced Pharmacy Australia (AdPha) Resident Training Program, formerly known as the Society of Hospital Pharmacists of Australia Foundation Residency Program, is Australia's first practice-based training program for early-career pharmacists or pharmacists entering hospital pharmacy. Launched in 2017, it has been delivered at over 53 accredited hospital training sites across Australia.
AdPha ensures hospital training sites have the commitment and resources to consistently deliver the Resident Training Program by conducting accreditation interviews with training program sites after 2-years of delivering the training program (full accreditation) and then every 4 subsequent years (re-accreditation).
Methods: As part of full or re-accreditation, AdPha staff conduct virtual accreditation interviews with the Program Lead, two Preceptors, and two Resident candidates at each training site. The interviews assess against the five domains of the AdPha Residency Accreditation Standards: Safe and socially accountable practice, Governance and quality, Program, Outcomes and assessment, and Candidate experience. Results are documented in accreditation reports for each site.
Results: In 2024, 20 of the 53 accredited training sites completed full or re-accreditation. Thematic analysis of the accreditation reports identified common strengths and challenges in delivering the practice-based training program. Strengths included enhanced educational, developmental, and research culture extending beyond Resident candidates, expedited professional development for Resident candidates into leadership roles, and improved external recruitment. Challenges involved limited access to experienced researchers, the need for upskilling pharmacists to confidently supervise workplace activities, and resources to expand training program size while supporting development outside of formal programs.
Conclusion: The findings from the accreditation interviews underscore the program's significant contributions to pharmacy practice while also highlighting areas for ongoing improvement, ensuring that the AdPha Resident Training Program continues to advance the professional development of pharmacists in Australia.

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Advanced Pharmacy Australia's Specialty Practice program: Providing pathways for lifelong learning, professional growth, leadership and influence

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Introduction: The Advanced Pharmacy Australia (AdPha) Specialty Practice Program was launched in 2017, with an overarching aim to support members' practice and professional growth at all career stages, by; connecting members with similar interests and facilitating their sharing of knowledge, providing a pathway for members' expertise and leadership to be developed and recognised, providing opportunities for members to contribute their expertise and influence pharmacy practice while enriching and informing AdPha offerings: CPD program, Standards of Practice, training programs, policy and advocacy submissions, representation in key stakeholder groups, submissions to key national programs, standards and other publications
and thus cultivating lifelong learning.
Methods: Having gauged the initial impact of the Specialty Practice program on members' practice after 12 months, at 5 years post-Specialty-Practice launch, AdPha collated the cumulative offerings supported by the Specialty Practice program and the member expertise it supported, to assess how well the aims had been met.
Results: The strong engagement by members in Specialty Practice and their feedback at 12 months indicated that the Specialty Practice program was supporting their practice. The data collated at 5 years demonstrated the many ways member expertise, harnessed through the Specialty Practice program, had contributed to AdPha offerings and influenced pharmacy practice at state and national levels. The demand for more specialties to be added to the program and the adoption of the Specialty Practice model to support members during the COVID pandemic is further evidence of its value.
Conclusion: AdPha's Specialty Practice program cultivates lifelong learning by providing pathways for members to share knowledge and be recognised for their expertise and leadership, and providing opportunities to channel member expertise to influence and enhance pharmacy practice at a local, state or national level.

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ANZCAP – the first year: Building a national recognition framework for advanced pharmacy practice

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Introduction: The Australian and New Zealand College of Advanced Pharmacy (ANZCAP) was developed to address the need for a structured, consistent way to recognize the professional advancement of pharmacists. Rooted in the principles of life-long learning, ANZCAP aims to create a clear, flexible pathway for pharmacists to demonstrate and be recognized for their advancing practice, offering professional recognition across diverse practice settings.
Method: In 2020, following a comprehensive review of previous credentialing efforts, a collaborative process involving key stakeholders, surveys, and focus groups led to the redesign of the credentialing framework. Central to the redesign were principles of prospective development, flexibility, and simplicity. This culminated in two main pathways: a time-limited foundation program and an ongoing independent pathway. The foundation program opened in late 2023 and provided recognition based on prior professional experience while the independent pathway allows pharmacists to build a portfolio throughout their careers, underpinned by evidence of progressing competencies.
Results: The Foundation program, which concluded in August 2024, has seen significant uptake, with 2,395 pharmacists recognized in its first year, across Australia and New Zealand. Most recognitions were at Pharmacist Consultant level, with specialties such as Leadership & Management, Cancer Medicine, and Medication Safety being most selected. Feedback indicates that the program has been well received, with pharmacists citing both personal and professional value. Additionally, ANZCAP has integrated existing workplace-based training programs to allow candidates to gain recognition at earlier career stages.
Conclusion: The first year of ANZCAP has demonstrated significant success in recognizing and supporting advanced pharmacy practice. Ongoing work is required to embed the program within the professional landscape, extend recognition to pharmacy technicians, and continue refining the program based on feedback and research. The future of ANZCAP holds promise for further advancing the role of pharmacists in healthcare delivery across Australia and New Zealand.

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5 years on: Has a registrar training program been embraced by the nation?

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Introduction: In 2019, the Society of Hospital Pharmacists of Australia (SHPA) introduced Australia's first Registrar Training Program (previously referred to as Advanced Training Residency Programs) for hospital pharmacists.
Unlike Foundation Residencies which are generalist and aim to support early career pharmacist development, the 2-year Registrar Training Program (Reg-TP) aims to support the development of practitioners who are further along the practice continuum and contribute more expert patient care in a defined practice area.
SHPA have developed a common framework and 16 specialist area frameworks which outline the workplace-based assessments, knowledge and skills required to enable pharmacists to reach the requisite practice level by the end of the program.
Methods: The adoption of the training program has expanded since its conception and an overall review of the program was conducted to better understand the contribution of Reg-TPs to professional development, gauge the Registrar candidates' attitude to the program, determine nation-wide uptake and identify areas for improvement. The review incorporated a survey of candidates as well as an internal assessment of site accreditation and candidate enrolment over the past 5 years.
Results: Site uptake has seen a consistent expansion over the years which aligns with Registrar candidate enrolment. From the initial four sites accredited in 2019, the program currently has 21 sites accredited to undertake the program over 22 different practice areas. Across these sites there is a total of 60 Registrar candidates currently enrolled.
Conclusion: Reviewing patterns of candidate enrolment and site accreditation has allowed the organisation to identify further opportunities for Reg-TP accreditation at new sites, expansion into new practice areas and how better to support candidates completing the program.
Incorporating formal recognition of program completion through the newly launched Australian and New Zealand College of Advanced Pharmacy is also expected to enhance the uptake of the program.

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Charting a course: Introducing student pharmacists to Continuing Professional Development (CPD)

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Introduction: Continuing professional development (CPD), a self-directed, intentional, and outcomes-focused approach to lifelong learning, represents a strategy utilized world-wide for practitioners to develop and maintain professional competence. The CPD model fosters lifelong learning, promotes professional identity formation, and ensures learners are prepared for engaging in life-long professional competence maintenance.
Methods: The Ernest Mario School of Pharmacy at Rutgers University recognizes the importance of incorporating CPD into the current pharmacy curriculum to ensure graduates are prepared for contemporary pharmacy practice. A CPD documentation form has been developed an incorporated into an eight-semester longitudinal professional development course sequence. Each fall semester, students self-reflect on learning goals and needs and in the spring, revisit accomplishments and receive feedback from faculty advisors; this documentation additionally houses reflections on the student's co-curricular achievements.
Results: In this small group session, participants will explore the emergence and evolution of CPD as a model for life-long learning, including a case-based discussion of strategies of how schools and colleges of pharmacy might incorporate CPD for students within current coursework and curricula.
Conclusion: Pharmacy educators from around the world are encouraged to consider how to introduce and prepare learners for implementation and utilization of a personal CPD process upon graduation, to ensure learners are able to analyze professional competency, evaluate goals and personal learning needs, and to ensure readiness to meet these expectations in the workplace.

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Pharmacy administration and leadership: Engaging in global role delineation and lifelong learning strategies

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Introduction: The Pharmacy Administration & Leadership (PAL) Job Analysis, a completed role delineation study in the United States, defines the roles and responsibilities of pharmacy administrators and leaders across various settings, including hospitals and community pharmacies. This comprehensive analysis identifies key domains, tasks, and competencies necessary for effective practice within the profession. By seeking global perspectives on pharmacy leadership, this workshop aims to foster lifelong learning and enhance educational opportunities for future pharmacy leaders, addressing both current needs and emerging trends.
Methods: The workshop will begin with a 30-minute presentation summarising the PAL Job Analysis findings, covering five major domains: Strategic Planning & Advancement, Clinical & Operational Practice Management, Financial Management, Medication Safety, Policy, Quality, & Regulatory Compliance, and People Management. Participants will break into groups by WHO region, utilising a nominal group technique to review job analysis results, identify regional similarities and discrepancies, and generate ideas for potential additions or removals. Each group will reach a consensus on the importance and frequency of tasks within the identified domains and rank them based on their perceived importance to practice in their region.
Results: Expected outcomes include a deeper understanding of the PAL Job Analysis and its implications for training pharmacy leaders globally. Participants will gain insights into regional differences in pharmacy leadership roles, contributing to the identification of tasks essential for effective practice. This collaborative approach enhances lifelong learning by allowing participants to actively engage with peers, share experiences, and reflect on the evolving landscape of pharmacy administration and leadership challenges.
Conclusion: This workshop provides a vital platform for exploring global perspectives on pharmacy leadership, emphasising continuous professional development and the alignment of training programmes with the needs of pharmacy administrators and leaders worldwide. By contributing to these discussions, participants will promote lifelong learning and excellence in the pharmacy profession.

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Emergency contraception practice guidelines: Fertilising the “kraznozem” to increase the crop yield

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Introduction: Failure to refer to evidence-based clinical guidelines, up to date educational resources, and maintain current knowledge potentially exposes customers seeking emergency contraceptive pills (ECP) to misinformation, (Mill et al., 2021; Garrett et al., 2018) and risking unwanted pregnancies. Pharmacists’ lack of application, and poor interpretation of guidelines has reduced access to ECP. (Nona et al., 2024) Disparity exists between the information in guidelines and what occurs in practice, resulting in a failure of pharmacists to adhere or refer to these guidelines. (Nona et al., 2024). Australian pharmacists relate poor guideline utilisation to limited time, resource access and ambiguity. Focus areas of concern included age of supply, choice of ECP, consent, transgender customers, and advanced supply. Therefore, the aim of this study was to use the Delphi technique to achieve consensus about the content of a guideline, developed to enhance ECP provision in pharmacy practice.
Methods: Data from preceding qualitative interviews with practicing pharmacists, alongside international guideline comparison, informed development of a draft guideline. A sequential two-stage Delphi process was conducted with a panel of experts, invited from the interviewed practicing pharmacists. Over two Delphi rounds participants were supplied with sections of the revised guidelines and asked to record their reaction using a 5-point Likert scale and justify their decisions in a free text response.
Results: The Delphi process produced reflective feedback on six main elements of the guidelines including: use of unambiguous language, accuracy of content workflow, visual appeal, key components, incorporation of new evidence-based best practices and usability in current clinical practice.
Conclusion: The use of the Delphi process allowed for the development of an explicit, patient centred, and easy to navigate guideline suitable for use in Australian pharmacy practice. Future research into international ECP guideline utilisation and interpretation is recommended.

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Building resilience equips future pharmacists for lifelong success

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Introduction: Pharmacists typically experience high levels of stress resulting from burnout, practice/professional uncertainties and workload issues. Pharmacy students face significant stressors including assignments, placements, exams, cost of living, and more, which can negatively affect their academic performance and well-being. Resilience has been described as the ability to rebound from adversity and setbacks and has been positively linked to psychological well-being and increased quality of life. Resilience has been shown to improve stress responses in a variety of academic and professional environments. If we are to navigate the dynamic nature of modern pharmacy practice, we must develop resilience to not only endure, but to thrive.
Methods: Researchers from The University of Sydney and the University of Minnesota aimed to understand how pharmacy students value, develop, and maintain resilience. Session attendees will experience highlights of an interactive 30-45 minute class focused on knowledge and skill-building for resilience. Educators stressed developing resilience is a skill requiring practice. A mixed method structure was designed, including pre- and post-class surveys to self-assess student learning and educational impact measuring value, confidence and their ability regarding development of resilience.
Results: Qualitative questions were included in a survey for students to complete pre and post the class session. Analysis of question responses was conducted to formulate specific themes. We will discuss student responses to an important question from the survey: “What is one way you can develop your resilience? (Be specific.)”
Quantitative analysis of the pre and post survey data was conducted, using a paired mean test which showed that students experience an increase in how they value, develop, and maintain resilience. A Wilcoxon signed-rank test was performed.
Conclusion: This session includes data-driven outcomes and practical implementation strategies, with guided time for participants to explore resilience teaching, and generate ideas to be effectively applied in diverse educational settings.

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Searching for the elusive AI Tasmania tiger of assessments: Rethinking assessment redesign with digital competencies in mind

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Introduction: The rapid evolution of AI in educational contexts presents an exciting yet challenging frontier: the quest for an "AI-proof" assessment. Much like the elusive search for the Tasmanian tiger, striving to create assessments entirely immune to AI interference may prove both impractical and counterproductive. Rather than abandoning proven assessment methods—written, video, and image-based—that students can now complete with AI assistance, we suggest reframing the conversation to embrace AI as an essential partner in learning and an opportunity to develop future-relevant digital skills.
Methods: In this collaborative discussion, we will explore how digital competency frameworks can guide our reimagining of assessment, enabling us to develop not just digitally aware but digitally capable graduates. By embedding AI interaction into our assessment strategies, we can teach students critical digital competencies: the knowledge, skills, and attitudes needed to navigate AI-enhanced work environments. This session invites academics to share experiences, discuss challenges, and co-create strategies to integrate AI into assessment practices—fostering students' ability to work effectively with AI tools rather than evading them.
Results: Participants will co-create practical strategies that they can implement in their courses to encourage AI literacy and critical thinking. Furthermore, they will leave with a list of prioritised competencies that their programs can focus on, ensuring that graduates are not just familiar with digital tools but are prepared to use them effectively and ethically.
Conclusion: Join us to explore purposeful and equitable approaches to AI-integrated assessments. Together, we can cultivate assessment strategies that prepare students to thrive in a future where digital competency is not just an advantage, but a necessity across all industries.

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Connecting the dots: Using a competency-based approach to design a microcredential for a new scope of practice

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Introduction: Competency-based education (CBE) is advocated as an instructional design for health professions education. However, the design and implementation of CBE programmes are often perceived as challenging because the CBE approach combines different educational theories and notions in contemporary higher education. The workshop will provide an opportunity for participants to familiarise themselves with CBE related assessments and consider how they can design a microcredential educational programme using the CBE approach.
Methods: The workshop will apply a small group discussion and co-creation workshop style. Each group will consist of 5-6 participants. A set of programme designing tools will be provided to each group and participants will discuss and co-create a microcredential educational programme using the CBE approach. Group discussions will be facilitated by a member of the presenting team. The developed programme will be reported back to all workshop attendees, where further considerations for actual implementation will be discussed.
Results: Each group of participants will co-create and develop a microcredential CBE programme related to a selected scope of practice. Feedback and issues related to actual implementation of the developed programme will be provided by all workshop attendees for further learning.
Conclusion: The workshop will provide deeper understanding of different aspects of CBE approach and assessments. Activities will support the process of actual designing and implementing CBE programmes in participant's local settings.

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Determining the effectiveness of the Undergraduate Pharmacy Program at the UMP on lifelong learning

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Introduction: The Faculty of Pharmacy (FoP) at the University of Medicine and Pharmacy at Ho Chi Minh City is one of the largest pharmacy training institutions in Vietnam. However, FoP and other training institutions in Vietnam have never assessed the effectiveness of their programs on lifelong learning competencies.
Methods: A cross-sectional study was conducted on final-year students and alumni (1-year post-graduation). The survey was developed based on the European Reference Framework (2018) for Lifelong Learning Competencies. After a pilot survey, the questionnaire was refined in terms of terminology and question phrasing. Data were analyzed using STATA software, with reliability and factor analysis conducted via Cronbach's Alpha and EFA. Criteria were tested using Chi-square/df, absolute fit indices (GFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), RMSEA model error, Average Variance Extracted (AVE), and Composite Reliability (CR). NFI, RFI, and IFI were used to test model fit and the impact of observed variables.
Results: All survey questions achieved a Cronbach's Alpha of above 0.8. TLI and CFI values were ≥ 0.9; GFI ≥ 0.8, and SRMR < 0.08, indicating acceptable fit. For discriminant validity, component correlations were all different from 1 and statistically significant ($p < 0.001$). The model fit assessment showed GFI and AGFI values of ≥ 0.8. NFI, RFI, IFI, TLI, and CFI were all ≥ 0.9, indicating good model fit and accurate reflection of observed variable changes and their effects.
Conclusion: This study is the first in Vietnam to investigate the impact of a pharmacy training program on lifelong learning among pharmacists.

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Cultivating lifelong learning in pharmacy: Supporting pharmacy student learning journeys with dispositional learning analytics

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Introduction: Equipping students with skills and knowledge to become lifelong learners is a priority for pharmacy educators across the world. One approach is the use of dispositional learning analytics (DLA) to enable student self-reflection and growth. The learning journeys tool leverages dispositional learning analytics to evaluate student learning power and has been used in the discipline of Pharmacy since 2018.
Methods: The study used a mixed methods design to assess the impact and acceptability of the learning journeys tool. All first-year pharmacy students (n=80) participating in the learning journeys workshops (February and July) were invited to participate. Quantitative components included student learning power pre/post scores and student academic data. Qualitative analysis involved document analysis of learning design artefacts, and student written reflections and feedback. This research was supported by a Centre for Research on Education in a Digital Society (CREDS) research sprint grant.
Results: 40 students agreed to participate. Of the learning power categories assessed, changes between the pre and post-test scores for curiosity ($p = .045$) and collaboration ($p = .027$) reached statistical significance. Curiosity indicated a significant decrease in the mean value while collaboration had a positive change. Pretest scores indicated a negative, significant correlation ($r = -.40$, $p = .01$) between creativity and GPA scores. Key qualitative themes identified were the development of self-awareness, a recognition of strengths and weaknesses and identification of potential areas of improvement in relation to learning.
Conclusion: The learning journeys tool is an excellent way of introducing students to dispositional learning analytics, facilitating self-reflection and encouraging the development of lifelong learning skills.

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Empowering pharmacists in general practice: A comprehensive resource and support package for integration and professional growth

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Introduction: As the role of pharmacists evolves within primary care, pharmacists transitioning into working within general practices require new skills and competencies. To ensure pharmacists are adequately supported, a comprehensive package was developed to address knowledge gaps, foster professional growth, build confidence and expedite the pharmacist's integration into the general practice team.
Methods: The structured support package included: a welcome pack with information about the role; individualised mentoring sessions; peer review with structured feedback; personalised needs assessment to identify gaps in knowledge; extensive professional development opportunities; an online peer support community to share resources and fortnightly team huddles.
Pharmacists were surveyed on their experiences of the program. Staff attrition rate was also monitored.
Results: 17 pharmacists (out of 20) opted to undertake mentoring with an experienced general practice pharmacist. All continued with their mentoring sessions.
40% of pharmacists responded to the feedback survey. Responses were collated and the average ratings on a 10-point Likert scale included:
How supported do you feel in your role (9.13)
How valuable were the mentoring sessions (9)
How valuable is the online discussion forum? (8.63)
How valuable was the GP pharmacist foundation training course? (7.75)
Only 1 pharmacist out of 20 (5%) left the program prior to their contract termination date. This was significantly lower than published research where 35% of pharmacist left programs early and lower than previous programs run by PSA (54%), where a comprehensive support package was not included.
Conclusion: The comprehensive support package created provided essential resources to pharmacists transitioning into general practice roles, helping them address gaps in knowledge, enhance professional skills, and build a strong support network. The program's success demonstrates the importance of structured mentoring, feedback, and professional development in fostering confidence and building the capabilities of pharmacists working in general practice.

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Between CPD and CPE: ACPE CPD program accreditation and international variations and advances in pharmacist relicensure requirements

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Introduction: The Accreditation Council for Pharmacy Education (ACPE) defines continuing professional development (CPD) as “a self-directed, ongoing, systematic and outcomes-focused approach to lifelong learning that is applied into practice.” In 2023, the ACPE Board of Directors approved a CPD program accreditation pathway, allowing accredited CPD programs to award CPD units (CPDUs) for completing activities reflective of each CPD cycle component. Many countries use a CPD model for pharmacist relicensure or recertification, however, the only states to accept CPD in lieu of continuing pharmacy education (CPE) hours are Iowa and New Mexico.
Methods: In this small group session, participants will be exposed to the critical elements/principles of the ACPE CPD Accreditation Pathway, identify components of accredited CPD programs which are likely to contribute to learner success, and discuss how CPD is used for recertification and relicensure requirements in a variety of countries.
Results: Data from the inaugural year of the CPD program accreditation pathway will be presented, with polling questions used to facilitate conversation around CPD’s intended purpose and definition. Following this introduction, learners will Think, Pair, Share on elements of CPD programs accredited by ACPE during the inaugural year of the program. During this activity, learners will be tasked with identifying “high impact” CPD program components which may contribute to sustainability and positive learner experiences. Finally, participants will review existing relicensure and recertification models from a variety of countries, completing ranking activities comparing strengths and weaknesses of each model, with the opportunity to share experiences and perspectives from different countries.
Conclusions: At the conclusion of the activity, learners will leave with a greater understanding of how CPD is used internationally to facilitate lifelong learning and professional competency. Ultimately, we hope this session inspires additional work by the Global Forum on Quality Assurance of Continuing Education and Continuing Professional Development (GFQACE).

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Implementation of continuing professional development (CPD) recertification framework within the Board of Pharmacy Specialties (BPS)

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Introduction: CPD can be defined as intentional, life-long learning through reflecting, planning, learning, evaluating, applying, and recording/reviewing. CPD activities include continuing pharmacy education (CPE), but also include practice-based activities such as academic/professional study, scholarly activities, teaching and precepting, workplace activities, and leadership/professional service. The implementation of CPD within the BPS recertification framework acknowledges the array of activities board-certified pharmacists participate in to maintain and enhance competence. This project seeks to describe CPD uptake amongst board-certified pharmacists.
Methods: Board-certified pharmacists with certification cycles beginning January 1, 2024 and after are eligible for the updated CPD-recertification framework. Eligible board-certified pharmacists receive CPD information by email upon successfully recertifying or upon successfully earning certification. Furthermore, subsequent email campaigns are sent at least quarterly, prompting eligible board-certified pharmacists to document activities. At the end of each quarter, data is obtained from the MyBPS database to monitor the uptake and most frequently reported CPD activities. Data is used to inform quality improvement initiatives.
Results: There are approximately 8,500 certifications with cycles beginning January 1, 2024 currently eligible for the newly implemented CPD recertification framework. Over 350 CPD activities were self-reported in the first quarter of 2024. Nearly 1,300 CPD activities were self-reported in the second quarter of 2024. Over 1,500 CPD activities were self-reported in the third quarter of 2024 for a total of over 3100 activities from January 2024 through September 2024. This does not include activities that were completed as assessed CPE through BPS-approved programs. The most reported activity categories were CPE; precepting learners; and developing/presenting educational content.
Conclusion: BPS continues monitoring CPD uptake among board-certified pharmacists. Findings inform quality improvement initiatives. Implications of this project may inform implementation of CPD in other avenues such as maintenance of licensure, performance evaluations within the workplace, Doctor of Pharmacy curriculum, resident development plans, and more.

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Engaging adult learners in complex pharmacology theory: A situated learning approach with Miller's Pyramid

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Introduction: Pharmacology education for healthcare professionals often suffers from poor engagement, impeding mastery of complex topics such as therapeutic drug monitoring, pharmacogenomics, and paediatric therapeutics. Pharmacology knowledge is critical for pharmacists and benefits other clinical professionals, including nurse practitioners and medical officers, who can significantly influence patient outcomes through improved understanding. A pharmacology in paediatric critical care course was developed, applying adult learning principles, Miller's Pyramid (knows, knows how, shows, does) and situated learning theory to create an engaging and clinically relevant three-part educational framework. The aim is to enable learners to progress from foundational knowledge acquisition to practical application in patient care.
Methods: A course titled "Pharmacology in Paediatric Critical Care," was developed with a three-part framework for pharmacists, nurses, and junior medical officers at an Australian children's hospital. Part one involved foundational knowledge activation using interactive, self-paced online modules created with Articulate™ software, prioritising learner engagement and structured learning design. Part two employed case-based, small-group workshops to facilitate the transition from theoretical knowledge to practical application through guided discussions and problem-solving exercises. Part three focused on achieving the "does" level of Miller's Pyramid by incorporating workplace-based learning and mentoring strategies, enabling learners to apply pharmacology concepts in real-life clinical scenarios with feedback.
Results: The pilot implementation demonstrated improved understanding, retention, and confidence among participants in pharmacological decision-making. Self-assessment results indicated that the interactive and problem-based methods effectively translated complex theoretical knowledge into practical skills applicable in clinical settings.
Conclusion: The three-part approach provides a structured and engaging model for teaching pharmacology in clinical settings. By integrating online learning, collaborative workshops, and real-world application, this framework supports adult learners in developing and applying complex pharmacology knowledge in their professional roles.

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Cultural competency in pharmacy education: Bringing the intangible to life through Object-Based Learning (OBL)

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Introduction: Cultural competence is a core professional skill that plays a key role for bridging health inequities among culturally and linguistically diverse populations. However, student receptiveness and perceived relevance of content remains a
challenge for integrating content in the earlier stages of the curriculum. This study evaluates object-based learning (OBL) as a pedagogical approach to stimulate student engagement with cultural competency in undergraduate pharmacy curriculum.
Methods: A bespoke OBL workshop was implemented in a unit of study with 320 first year undergraduate pharmacy students enrolled. Students worked in small teams of 5-6 people, handling a curated collection of health-related art, specimens and artefacts across cultures in a 2-hr workshop. Across three activities, students critically analysed the collection items.
Results: A total of 169 and 66 students responded to the baseline and post-workshop questionnaire respectively, giving rise to 46 matched pairs who were mostly female (63%, n=29) with a mean age of 18.93 (SD =1.36). Nearly half of the respondents self-identified as “Asian” with three quarters speaking a language other than English at home. Significant post-workshop changes were observed in students’ ability to define
cultural competence (Z=-2.236, p = 0.025) as well as their perceived levels of cultural competency advancing from “cultural pre-competency” to “cultural competency” (Z= -
2.524, p = 0.012). At baseline, students endorsed a high level of agreement with respect to the importance of pharmacists providing culturally appropriate care and the relevance of cultural competence to their future pharmacy career which remained unchanged post-workshop.
Conclusion: OBL is a promising approach to introducing concepts of cultural competency to first year pharmacy student cohort. There is scope to expand OBL approaches in other areas of skill development in pharmacy education.

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Enhancing pharmacy education with AI coaches

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Introduction: Clinical education in pharmacy involves helping students counsel patients and manage pharmacies, both of which face engagement challenges. The use of generative AI was explored as a coach and tutor to enhance student learning and engagement as well as to provide teaching insights. Using the University of Sydney's Cogniti AI platform, AI agents were developed to create realistic patient counselling scenarios and provide personalised, Socratic-style tutoring.
Methods: Two AI agents were developed: a patient medication counselling coach and a pharmacy management tutor. The medication counselling coach guided students during dispensing classes, offering feedback. Diverse and realistic practice scenarios were generated to avoid rehearsed responses. The pharmacy management tutor was integrated into Canvas. It provided timely, Socratic responses to student inquiries enhancing understanding.
Results: The medication counselling coach enabled students to engage in dynamic and realistic interactions, closely simulating real-world patient interactions and provided the teaching team with valuable insights into the students understanding. This approach prepared students for the Australian Pharmacy Council's case-based discussions. The pharmacy management tutor addressed student inquiries effectively, promoting critical thinking and understanding of financial concepts. High engagement was observed, with almost 100% usage in the pharmacy management course and a significant increase in USS response rates.
Discussion: The iterative development process involved refining AI prompts based on student feedback. The AI agents transformed the learning experience, encouraging students to think critically and engage deeply with the material. The dynamic and interactive nature of the AI was well-received, with students appreciating its impact on traditionally challenging topics.
Conclusion: The integration of AI coaches in pharmacy education significantly enhanced student engagement and learning outcomes. The AI agents provided realistic practice scenarios and personalized tutoring, preparing students for real-world pharmacy practice. Positive student feedback highlights the potential of AI in transforming pharmacy education

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How does AI influence pharmacy students' psychological motivation and academic self-efficacy? A mixed-methods study of student and educator perspectives

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Introduction: AI is being increasingly used in pharmacy care and education. However, there is limited literature on the relationship between AI use and students' intrinsic motivation (internal psychological needs of satisfaction that drive you to do your work) and self-efficacy (individual's judgment of how well they believe they can execute different academic tasks). This study aimed to explore the impact of AI use on pharmacy students' self-efficacy and intrinsic motivation to inform educational policy and practice.
Methods: Questionnaire composed of demographic, Likert-scale and open-ended questions completed by students via RedCAP and semi-structured qualitative interviews with pharmacy students and educators.
Results: Seventeen Bachelor of Pharmacy (BPharm) students (82% female) completed the questionnaire. Interviews were conducted with 7 BPharm students and 10 educators. Survey results indicated significant differences in the impact of different platforms on intrinsic motivation and the highest impact of AI is on learning strategies which assist skill development (e.g. saving time in research or gaining clarity from lecture content such as pharmacology concepts); lowest impact was observed in enhancing participation and connection with peers and teachers. Findings were triangulated between interviews, survey results and the literature. Participants were most positive towards the effect of AI use on competence and least positive towards its impact on relatedness. Ethical concerns included accuracy and reliability of information provided by AI, lack of references for information provided and lack of clear guidelines from institutions on how AI should be used.
Conclusion: To our knowledge, this is the first in-depth exploration of pharmacy student and educator views on the impact of AI on their intrinsic motivation and academic self-efficacy. Key implications for practice include thoughtful assessment design to minimise misuse, appropriate training for students and educators on effective use, and guidelines on best use of different platforms to optimise student learning and academic outcomes.

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Building Resilience Equips Future Pharmacists for Life Long Success - Outcomes from an International Resilience Education Collaboration

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Introduction: Pharmacists often encounter high stress levels due to burnout, professional uncertainties, and heavy workloads. Similarly, pharmacy students face significant stressors such as assignments, placements, exams, and rising living costs, which can negatively impact their academic performance and well-being. Resilience, defined as the ability to recover from adversity, is positively linked to psychological well-being and a higher quality of life and has been shown to enhance stress responses in various academic and professional settings. The value of incorporating resilience in pharmacy education is to equip students with skills to develop resilience, for their growth as students and future pharmacists in the ever-changing environments within healthcare.
Methods: Students from The University of Sydney and the University of Minnesota took part in an interactive 30-45 minute class focused on developing resilience knowledge and skills. Educators stressed that developing resilience requires practice. A mixed-method structure was designed, including pre- and post-class surveys to self-assess student learning and educational impact, measuring the value, confidence, and ability of pharmacy students regarding the development of resilience.
Results: Qualitative analysis of questions from the pre- and post-survey generated themes such as Spirituality/Faith, Support/Collaboration, Time Management/Planning/Goal Setting, and Mindset/Attitude/Self-awareness. Quantitative analysis of the survey data, using a paired mean test, showed that students experienced an increase in how they value, develop, and maintain resilience. A Wilcoxon signed-rank test confirmed the statistical significance of these improvements.
Conclusion: The study highlights the role of resilience in managing the stressors faced by pharmacists and pharmacy students. The interactive session demonstrated that structured resilience training significantly enhances students' ability to value, develop, and maintain resilience. Incorporating resilience-building techniques into pharmacy student education encourages improved navigation of challenges in pharmacy practice, well-being and professional performance. This approach underscores the importance of lifelong learning in fostering resilience and adaptability in the pharmacy profession.

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Investigating student perspective towards generative artificial intelligence (GenAI) within the context of assessments

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Introduction: Since the launch of ChatGPT by OpenAI, tertiary institutes and academics have increasingly been concerned about widespread over-reliance of GenAI tools by undergraduate students, particularly in the absence of critical evaluation of AI output. Here, we evaluate undergraduate students GenAI literacy, and current use in their university studies. We then investigated student perceptions and use of AI in assessments.
Methods: The project involved students completing one summative assessment requiring varying degrees of GenAI use. The cohorts involved were second-year Laboratory Medicine and Biomedical Science students enrolled in a Genetics course, and third-year Pharmacy and Pharmaceutical Science students enrolled in Dosage Form Design 4. The data was obtained using mixed methods for quantitative and qualitative data using opt-in anonymous Likert-scale surveys and de-identified incentivised focus groups deployed before and after the assessment completion.
Results: Before undertaking the assessment task, students reported some use of GenAI to simplify complex concepts and save time, mainly for study materials and assessments. While this was seen as efficient, students expressed concerns about accuracy, privacy (confidentiality), and inadequate university support, with one student stating, "It helps me understand by explaining things in the most basic way." After the assessment, students reported GenAI as beneficial for tasks like report writing and presentations, however, they expressed concerns about evaluation complexity and plagiarism. While students found their prompting skills improved, they expressed a desire for clearer university guidelines on acceptable AI use.
Conclusion: This project highlights the need to continually engage with students in higher education around the affordances of available AI tools, providing further insights into current student perceptions and use of GenAI. This project will guide development of assessment activities that will foster GenAI literacy skills for student in Medical and Pharmaceutical Science programs at the University of South Australia.

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Continuing pharmacy education provider perspectives on artificial intelligence

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Introduction: Advancement of artificial intelligence (AI) has revolutionized pharmacy education, including the development of continuing pharmacy education (CPE). Recognizing concerns surrounding AI-generated content validity and the ethical use of AI, the Accreditation Council for Pharmacy Education (ACPE) initiated exploratory work to better understand the perspectives of CPE providers on the use of AI within CPE.
Methods: This study evaluated current use of AI by CPE providers using a cross-sectional survey distributed in October 2023 to 260 CPE providers. The survey consisted of seven items collecting information on organizational policies related to AI, AI current and future uses, training provided to faculty and staff related to AI, and educational needs related to AI. Frequencies and descriptive statistics were calculated for quantitative response items and open-ended comments were analyzed using content analysis to identify common trends in AI use.
Results: A total of 39 responses were received, resulting in a response rate of 15%. Only one respondent (2.7%) reported having an AI policy or framework in place. While most respondents reported their organizations were not currently using AI, some respondents indicated that they used AI throughout the activity development process to begin developing learning objectives, needs assessments, and content outlines. Several respondents reported that while they currently do not provide AI training/guidance, language within faulty guidance materials for disclosing the use of AI to learners is being developed. Many providers requested additional education and examples of how AI could be used in CE and best practices for navigating appropriate AI use.
Conclusions: With limited policies currently in place and the request for additional education on AI use, CPE providers need additional support to navigate the appropriate use of AI in CPE development. As such, ACPE has developed AI guidance and education for CPE providers with an additional AI survey planned for 2025.

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Building a culture of successful education and training in pharmacy practice

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Introduction: As part of any pharmacy place of practice, there needs to be a strong foundation of teaching and training provided. The way this is addressed in any role within pharmacy practice can vary. The pharmacy department at Alfred Health have utilised evidence-based strategies to ensure department members are being provided with high quality education and training, and therefore feel equipped and qualified to practice within their role.
Methods: Alfred Health have developed a pyramid of learning and practice that has been incorporated from evidence-based pedagogical theories including Miller's Pyramid, Bloom's Taxonomy, Cognitive-apprenticeship and Kolb's learning cycle. The three tiers of the pyramid include:
1. Activation: Providing clear learning objectives followed by interactive education content.
2. Exploration: The learner explores what they have learnt through structured observation and one to one coaching.
3. Application: The learner now applies what they have learnt into practice and are assessed using a competency-based framework.
The pyramid can be used to build education and training content in pharmacy practice, and each tier will be presented to the group with detail prior to small group discussion.
Results: Participants within the session will be instructed to gather in groups of two or three. They will be given time to discuss the three tiers of the pyramid as well as examples of education and training procedures or activities that address each tier. The session will then break out to discuss responses with the entire group. The presenter will also discuss training programs that have been created using the pyramid. This includes credentialing programs that produce knowledgeable and qualified pharmacists to expand their scope of practice.
Conclusion: The evidence-informed Alfred Health Learning and Practice Pyramid presents a foundational basis to design effective education and training to support pharmacy learners in workforce environments.

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Psychological traits and states – what's the difference? … and do they matter in pharmacy?

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Introduction: There are a range of psychological concepts that have been applied in the study of pharmacy workforce development. Some studies have focused on theories of trait, such as personality theories, whilst others have focused on theories of state.
Whilst studies of personality provide interesting insights into pharmacist tendencies, personality traits tend to be fixed and constant over time and are generally not considered amenable to development or change. Psychological states, however, are aspects of behaviour that can be leveraged, manipulated and developed to support positive development of the workforce. In this workshop, participants will have the opportunity to consider the concepts of psychological traits and states, and will explore the role of each in pharmacy and workforce development.
Methods: Two psychological concepts will be presented for consideration - personality theory and psychological capital, the former an example of trait theory and the latter an example of state theory. Attendees will have the opportunity to share their insights, experiences and ideas and to consider how the information presented could be applied in their practice.
Results: Attendees will understand the difference between aspects of personality that are relatively stable and aspects of behaviour that are amenable to change and development.
Conclusion: This will be relevant to those working in undergraduate education, as well as those interested in supporting workforce development more generally.

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Rules, access, familiarity, and trust – A practical approach to addressing generative AI in education

Prof Adam Bridgeman[1]
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Generative AI is revolutionising teaching, learning, and assessment. Its influence on our students' careers and lives will be profound. In this session, Adam will introduce generative AI and its educational implications. We'll explore how to adapt assessments to ensure effective learning and teach students to use AI proficiently. Plus, discover how AI doubles can enhance our teaching methods.

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Lifelong learning in 2030: AI, workforce and microlearning

Prof Daniel Thurley[1]
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The rapid evolution of healthcare demands that pharmacists adapt continuously to remain at the forefront of patient care and innovation.
As artificial intelligence (AI) becomes deeply integrated into healthcare systems, pharmacists will need to cultivate new competencies to harness its potential. From clinical decision support to personalized medicine, AI is redefining pharmacists' roles and the skills required to succeed. AI-driven tools can enhance the learning process, providing personalized educational pathways and real-time knowledge updates.
The shifting workforce landscape presents additional challenges and opportunities. Pharmacists must navigate expanding interdisciplinary collaboration, address the rise of specialized roles, and embrace new care delivery models. These changes necessitate a commitment to agile and adaptable learning strategies.
Microlearning—a focused, on-demand approach to education—offers a promising solution. By breaking down complex topics into digestible modules, microlearning aligns with the busy schedules of pharmacists while fostering knowledge retention and immediate application in practice. There are a growing number of examples of microlearning platforms, and strategies, for integrating this method into daily professional development.

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Generative AI in action: Practical applications for pharmacy educators

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Introduction: Generative Artificial Intelligence (genAI) is transforming pharmacy education by providing tools to assist educators in developing course materials, designing assessments, and providing personalised feedback efficiently. This hands-on workshop will empower pharmacy educators to experiment directly with genAI tools, using structured prompts to create and customise educational content and feedback. Through guided practice and collaborative exploration, participants will learn to harness genAI effectively to enhance the teaching and learning experience.
Methods: The workshop will begin with a brief overview of genAI applications in education, followed by live demonstrations of specific tools relevant to pharmacy educators. Participants will then engage in guided practice, using sample prompts across various genAI platforms to create course content, assessments, and feedback. In the next session, they will explore customisation by modifying prompts to suit unique instructional and administrative needs. The workshop will conclude with a reflection and discussion on ethical considerations, best practices, and the practical challenges of integrating generative AI into educational settings.
Results: Participants will leave the workshop with practical skills in creating and refining prompts tailored for educational use with genAI tools. They will gain experience in utilising generative AI tools to streamline course design, enhance feedback quality, and manage administrative tasks effectively. By incorporating these tools into their workflow, participants can increase their instructional impact while maintaining ethical standards and addressing potential limitations of genAI.
Conclusion: This workshop provides pharmacy educators with a hands-on introduction to genAI, highlighting practical applications and ethical considerations. By actively engaging with AI platforms, participants will gain the confidence and skills to leverage genAI effectively, ultimately enhancing their teaching efficiency and student engagement.

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Visual thinking strategies: Beyond art

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Introduction: Visual thinking strategies (VTS) is a technique which uses the facilitated discussion of art by a group to develop critical thinking and observation skills, teamwork, tolerance of ambiguity, empathy and respect for the diverse perspectives of others. Technical or science-based images have also been used to support learning in education and professional settings. To date, VTS discussions with our pharmacy staff have utilised art images, however feedback from staff has indicated more workplace relevant images were needed to extend and engage viewers.
To pilot the use of pharmacy-related images in VTS discussions for pharmacy students, interns, technicians and pharmacists in our workplace.
Methods: The level of ability of each group was used to help determine appropriate images which were incorporated into VTS discussions during placements, teaching or CE sessions. Feedback from participants was sought, alongside facilitator reflection on image success.
Results: Images chosen successfully for each group varied. The most useful images for pharmacy students and technicians were scripts to help them learn how to review hospital medication charts. Structured VTS discussion of charts was followed by a debrief and free format discussion. Feedback indicated that both groups found it a useful way to see and practice interpreting charts.
Pharmacy interns responded well to diagrams initially presented with little information and then sequentially increasing information. Charts alone were too simple. At pharmacist education sessions diagrams were chosen that related to the content of the subsequent presentation, which served to orientate the audience to the mechanism of the underlying disease process or medication action discussed.
Conclusion: The use of pharmacy-related images appears to integrate well into VTS discussions and seems a feasible and acceptable way to support learning. It is crucial to match image selection to learners needs and ensure relevance to their current level of practice.

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Ethics in digital health: Preparing students through inter-professional education

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Introduction: With the advancement of technology, artificial intelligence and digital medicine is becoming an integral part in patient care. It is important to educate pharmacists and other healthcare providers about the possible ethical dilemmas they can face in practice. The objective of this project is to assess the impact of integrating core concepts of digital health and artificial intelligence ethical dilemmas in healthcare on student knowledge and perspectives.
Methods: First-year pharmacy and physician assistant students enrolled in inter-professional development course (IPE) were eligible for this study. All students received didactic education about ethical dilemmas in healthcare such as: patient autonomy, beneficence, non-malificience, etc. A new concept was added to this course expanding on those dilemmas when utilizing digital medicine tools. Additional digital specific concepts were discussed such as: validity and accuracy of AI algorithms, data safety, and digital divide. Students completed a pre- and post- assessment quiz. They were also asked several questions post intervention to reflect on the top three ethical dilemas that they did not consider prior to IPE. The reflections were reviewed and the reflection statements were matched to various concepts.
Results: Two hundred and fifteen students (pharmacy, 72%) attended the workshop, of which, 192 (response rate 89.3%) completed all quizzes and surveys. Thematic analysis of the reflections revealed the top three dilemmas namely: 1.) data safety, 2.) patient autonomy, and 3.) validity of AI algorithms. There was improvement on the knowledge quiz (64% versus 88%). On the attitudes survey, there was statistically significant improvement on all questions including " I feel confident in my ability to handle ethical dilemmas related to digital health"
Conclusion: The integration of AI concepts in medical education, can help students identify and discuss various digital health dilemas in patient care.

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Real-world impact: Evaluating practitioner integrated curriculum through a realist lens

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Introduction: To better prepare graduates for practice, Monash University redesigned its undergraduate pharmacy degree. The redesigned curriculum, progressively integrated from 2017, embedded hospital pharmacist practitioners to build and deliver content. The redesign's impact on students, graduates, academics, and practitioners has yet to be evaluated. This study employed a realist evaluation to examine hospital practitioner integrated curriculum, answering the question, 'what works (or does not work) for whom and in what circumstances?'
Methods: Following the tenets of realist methodology, initial program theories were derived through thematic analysis of a survey querying third-year student perceptions of practitioner integrated teaching (n=303). To further define programme theories, semi-structured interviews (n=45) were conducted with key stakeholders (current students, graduates of the re-developed degree, academics, and hospital practitioners) and 8 years of Student Evaluation of Teaching and Units (SETU) scores (2017- 2023) were analysed.
Results: Thematic analysis of survey responses identified key themes including practitioners teaching workshops and lectures, student's level of career interest in hospital pharmacy, and practitioners providing students with authentic learning experiences and practical feedback. Key themes were refined through thematic analysis of semi-structured interviews, revealing key enablers, including practitioners providing insight into the nuance associated with real-world practice and updating content in line with practice and disabling factors including some high-level content taught by practitioners confusing students. SETU data showed that units incorporating hospital practitioners had slightly higher overall satisfaction scores compared to those without (mean score 4.23/5 vs4.19/5, p=0.0002, respectively).
Conclusion: Integration of hospital practitioners adds value to both academics and students with key enablers including practitioner's ability to share real-world examples and provide curriculum updates in line with practice. Key disablers included some practitioners lacking pedagogical training and resource constraints associated with hospital pharmacy departments.

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DARWINian evolution of learners into Wikipedians: Training pharmacists DOWN UNDER to have impact UP THERE online

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Introduction: Wikipedia's impact is massive! Wikipedia is a source of drug information for much of the world's population. It has 255 million views per day and is the fifth most visited website in the world. As part of our university's postgraduate clinical pharmacy program, we introduced a Wikipedia page review assignment. This required students to critically appraise literature to support or refute a claim in a Wikipedia page of a single drug, and then revise that Wikipedia statement. The aim of this assignment was to evolve pharmacists from passive learners into socially active and responsible citizens, converting their knowledge into impact for the global community. However, it was unclear whether this updating of Wikipedia pages led to long lasting change or were immediately modified.
Methods: In October 2024 we audited revised Wikipedia page changes from pharmacist learners who had completed a Wikipedia page review in either April 2022, April 2023 or April 2024.
Results: Overall, 124 statements from 24 Wikipedia drug pages page were reviewed by 124 students. 84/124, 35/124, and 5/124 statements were significantly, slightly, or not revised respectively. After revision 66/119 revised statements were completely unmodified, 34/119 were slightly modified, and 4/119 were majorly modified, and 5/119 revised statements had reverted completely back to the original statement, and 10/119 revised statements were completely removed from the Wikipedia page altogether. 37/46 of the significantly revised statements that remained completely unmodified were deemed to have been well written in lay friendly language, compared to 3/13 significantly revised statements that had either reverted back to the original, changed to a completely different statement or been removed completely.
Conclusion: Wikipedia page revisions by pharmacist learners lead to long lasting changes especially when they are well written in lay friendly language.

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Gamification in pharmacy education: A case study in minor ailment prescribing

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Introduction: In 2023, Ontario pharmacists in Canada were granted authority to prescribe for 19 minor ailments (MAs). Pharmacist prescribing for minor ailments (PPMA) has marked a crucial shift in the scope of practice, necessitating innovative approaches to education and training. This project was aimed to identify the most challenging MAs perceived by senior pharmacy students and explore how gamified education may facilitate learning and knowledge reinforcement of PPMA concepts.
Methods: A needs assessment was conducted among fourth-year PharmD students in December 2023 to identify MAs and associated concepts that were perceived to be challenging and may benefit from further education support. Quizizz (a gamification platform) was used. Six multiple choice questions (MCQs) were developed for each of the top three identified MAs. In May 2024, two online synchronous Quizizz sessions were hosted, followed by an asynchronous offering of self-directed homework-mode Quizizz. Participants completed a 12-item post-game evaluation questionnaire. Quantitative data collected were analyzed using descriptive statistics; free-text input was subject to thematic analysis.
Results: Pinworms and threadworms, nausea and vomiting of pregnancy, and impetigo were perceived to be the three most challenging MAs with complex presentation and differential diagnosis. Sixty-nine students (30% Year 4 PharmD class) participated in the Quizizz sessions. Average MCQ scores (i.e., knowledge accuracy) were 52%, 47%, and 41% for nausea and vomiting of pregnancy, pinworms and threadworms, and impetigo, respectively. Students reported that MA games allowed them to become more familiar with the MAs that they have minimal practice experience, identify knowledge blind spots, and recognize important concepts for patient assessments.
Conclusion: Gamification in pharmacy education may facilitate learning and contribute to knowledge reinforcement and application in PPMA. Going forward, the question bank in Quizizz could be expanded to support more MAs and gamified education might be applied to practicing pharmacists for their continuing professional development.

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Development of an integrated ethics curriculum for undergraduate pharmacy students

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Introduction: Pharmacists increasingly find themselves confronted with complex and morally challenging decisions and experiences. To navigate this space, they require more than scientific knowledge and technical skills—skills in communication, empathy and ethical reasoning, reflection and deliberation are essential. Additionally, as part of their accreditation requirements, Australian pharmacy higher education providers need to be able to demonstrate that their graduates can practice ethically and with integrity. The introduction of a new integrated undergraduate program at our institution provided an opportunity to design a novel ethics and professionalism curriculum.
Methods: A new curriculum that spirals throughout the program, encompassing multiple vertical and horizontal themes, was created. Learning outcomes ranged from developing an awareness of relevant ethical and professional codes, legal framework governing the profession and social accountability in year 1, to developing more hands-on application of principles and guidelines in ethical decision-making in year 2 and demonstrating strong decision-making skills in various scenarios and disease states in later years. A focus was on emerging ethics and professionalism challenges, such as pharmacogenomics, equity of access (e.g. Ozempic), and trust-building to support pharmacists' evolving scope of practice.
Results: The new ethics curriculum is being implemented from 2023. To date, six lectures and four workshops have been developed and delivered to first- and second-year students to positive feedback from students and educators. Workshop activities were designed to integrate with students other learning activities such as work-integrated learning (WIL).
Conclusion: Ethics education should be designed to foster a comprehensive understanding of ethical principles and development of necessary skills to apply these independently in real world settings. A scaffolded, structured, up-to-date and culturally relevant curriculum is the first step in ensuring that ethics teaching is integrated into an already packed pharmacy curriculum. Further evaluation and refinement is required as this new curriculum is implemented.

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World Café conversations for developing and delivering an organisational EDI strategy

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The NHS East of England No more tick boxes paper recommends systemic integration of EDI principles across organisational processes and policies for sustained cultural change. The Centre for Pharmacy Postgraduate Education (CPPE) adopted this approach in the development of a three-year EDI strategy with a year-one focus on cultural competence education for CPPE employees and learners (registered pharmacy professionals). This workshop builds on the session 'Developing cultural competence in Pharmacy' delivered by CPPE in Denver 2023, which showcased learning content from the CPPE Culturally competent communication for person-centred care e-learning, now mandatory learning for all CPPE employees as part of the EDI strategy.
The 3 Horizons model is introduced as a tool to facilitate strategic thinking when developing an EDI strategy. Participants will work in small groups, using the concept of a World café to discuss and share ideas for developing an EDI strategy in response to prompt questions for each stage of the Horizon model.
Details of how the CPPE EDI strategy emerged through the 3 stages of the Horizon model will be shared as an example. Integration of key aspects of psychological safety, building trust and bold action on inclusion are emphasised. Innovation in celebrating diversity and inclusive cultures through facilitating sharing of personal cultural and identity linked stories and experiences will be narrated. Participants will use a self reflection tool to identify their strengths and areas for development in cultural competence. They will be invited to share their own examples of tools and resources to support the cultural competence education of their teams, learners and stakeholders. Plans for evaluation and research of the EDI strategy and aspirations to present at future international conferences will be briefed.

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Who we are, how we learn: Exploring the intersection between social identities and inclusive teaching

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Introduction: Students come into the classroom with multiple, overlapping identities that shape their perceptions of and interactions with others. These identities may intersect with and amplify social determinants of learning, such as physical and psychosocial health and economic stability. This intersection shapes how students engage with course content and influences their sense of belonging and academic outcomes.
To support inclusive teaching within the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences (SSPPS), a 30-item survey was designed and disseminated to first year pharmacy students. This tool was devised to help faculty understand the social identities of their students and tailor instruction to address diverse learner needs.
Methods: The survey was adapted from the “who is in the classroom” tool, described in the book What Inclusive Instructors Do. The survey was distributed to first-year pharmacy students during an introductory session on equity, diversity, and inclusion. It provided an opportunity for students to voluntarily and anonymously share aspects of their identity that can impact how they learn. Examples of survey domains included: demographics, socioeconomic and cultural background, access to learning resources. Faculty were provided with anonymised, aggregated survey results.
Results: 96% of students completed the survey (n= 97). Results revealed diversity in socioeconomic background, primary spoken language, and cultural identity; 24% of respondents identified as first-generation college students; 23% reported they do not have the financial means to buy all the materials needed to complete coursework. An inclusive teaching workshop is being developed to help faculty explore the survey’s implications for inclusive teaching practices.
Conclusion: The designed survey provided valuable insights into the diverse social identities of the first-year pharmacy students at the SSPPS, equipping faculty to address the specific needs of their students. Faculty engagement and application of survey results may enhance inclusivity and support curricular learning outcomes.

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Expanding opportunities for pharmacy students in global healthcare

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Introduction: Pharmacy programs should equip students with both clinical and interpersonal skills, and provide a framework for reinforcing their role as global citizens. Early understanding of their position within the global healthcare community paves the way for future networking and career opportunities, and research collaborations. However, to gain this perspective, students require exposure to international experiences, to learn about global health initiatives during their degree program. Though universities have a variety of strategies to support this, the structured nature of pharmacy degrees provide challenges to implementation. Some students perceive that limited exposure and awareness of global opportunities are barriers to gaining insight into pharmacy beyond their local setting.
Methods: This session provides different perspectives of global pharmacy from pharmacy education stakeholders, focusing on the student viewpoint. Short presentations will stimulate small group discussions. Questions will be posed for discussion and analysis, aiming to guide participants to further explore barriers and enablers.
Results: Key stakeholder perspectives will set the scene for participant appreciation of the importance of early student exposure to global opportunities and consider strategies applicable to their own institutional requirements. A current student will discuss how they were exposed to global opportunities in their current curriculum, including barriers and enablers to the availability of these opportunities. A recent graduate will provide reflections on how engaging in global pharmacy has opened their eyes to potential for a globally focused pharmacy career. A senior educator involved in program accreditation will share their experience regarding implementation of global opportunities in the curriculum. Using these presentations as stimulus for group discussion, participants will develop strategies to increase global opportunities for their learners.
Conclusion: This small group session will provide tangible solutions to increase global opportunities for pharmacy students and educators. Sharing expertise will ensure attendees have strategies to implement following the session.

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Peer Assisted Learning (PAL) in Clinical Pharmacy Teaching: Reduce supervision time and increase learning and autonomy

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Introduction: In recent years, a critical shortage of pharmacists has emerged. This short staffing crisis has far-reaching implications, particularly for pharmacy learner clinical supervision. With an increasing patient load and heightened responsibilities, pharmacists are stretched thin, often prioritising immediate patient care over educational mentorship. Therefore, pharmacy learners may experience reduced opportunities for hands-on training and guidance, hindering their professional development and preparedness for future practice. Peer Assisted Learning (PAL) is an educational approach where learners of similar levels collaborate to enhance their knowledge and skills. This model, distinct from traditional 2:1 clinical supervision, emphasises mutual support, experience sharing, and collaborative problem-solving, whilst reducing supervisor requirements.
Methods: This small group session aims to introduce learner supervisors with the confidence and skills to utilise Peer Assisted Learning (PAL) in practice. It explores the implementation of PAL in pharmacy education to reduce supervision time and increase learning. It will outline practical strategies, using the SNAPPS (Summarise, Narrow, Analyse, Probe, Plan and Select) model, to implement PAL in every day clinical scenarios. Challenges to PAL and how these may be overcome will also be explored.
Results: Literature and placement feedback indicates that PAL significantly enhances learner autonomy, communication skills and teamwork. Learners and supervisors report improved learning outcomes, increased satisfaction, and greater self-evaluation abilities. PAL allows for increased placement capacities and reduces supervisor burnout.
Conclusion: PAL integrates peer supervision with expert guidance, creating a dynamic educational framework that enhances both individual and collective learning experiences. This approach not only benefits learners academically but also prepares them for collaborative roles in healthcare.

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Roll up, roll up, for the Great Pharmacy-related Environmental Sustainability Debate

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Introduction: Medicines are the most widely used healthcare intervention in the world as they save lives and improve the health outcomes of many people. However, the manufacture and consumption of pharmaceuticals can result in active pharmaceutical ingredients accumulating in ecosystems. The United Nations Sustainable Development Goal 12 is to ensure sustainable consumption and production patterns. This includes significantly reducing the release of potentially harmful chemicals into the air, water and soil to minimise their adverse impacts on the environment and on animal and human health.
Methods: This workshop will provide attendees with a fun and stimulating active learning experience. Attendees will spend time exploring and debating concepts and arguments relating to medicines, environmental sustainability and the role of pharmacy and pharmacists. Attendees will be stepped through a debate format, presented with some background information and provided with the moot before being let loose on the internet to forage for relevant information and plan their arguments in two smaller groups. The ensuing facilitated 20-minute debate will use a standard debating format and will include a post-debate debrief. No prior knowledge is required or expected in order to participate in this session. The moot will be announced at the start of the workshop.
Results: These will be revealed during the debate. They will depend on the avenues of enquiry that the affirmative and opposing teams use during the debate.
Conclusion: Attendees will reflect on their learning relating to pharmacy-related environmental sustainability as a group. The session will end with individuals completing a short reflection on their takeaways from this session.

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Cultural inclusiveness of a palliative care foundation training program for Australian pharmacists

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Introduction: It is widely acknowledged that culturally appropriate health delivery systems improve Indigenous health outcomes. To achieve this, the health workforce must deliver care in a way considered culturally safe and responsive by those who receive it. A key driver of positive change is increasing the contributions of Indigenous participants in the development of education content for health practitioners, including pharmacists.
The Pharmaceutical Society of Australia (PSA) has developed a Palliative Care Foundation Training Program for pharmacists as a key activity under its National Palliative Care Project, with significant contribution from Indigenous people and organisations.
Methods: Indigenous participation in content development included -

Indigenous representation on the Project Advisory Group.

stakeholder consultation reach to Indigenous organisations including the National Community Controlled Health Organisation, Indigenous Allied Health Australia and the National Association of Aboriginal and Torres Strait Islander Health Workers and Practitioners.

input from Indigenous consumers.

guidance from Palliative Care Australia's Yarning Circle.

co-authorship with a Sorry Business Consultant.

Results: PSA's Palliative Care Foundation Training Program features –

an Acknowledgement of Country and cultural sensitivity warning for each module.

content that supports holistic palliative care for Indigenous peoples.

strengths-based language reflecting Indigenous ways of knowing, being and doing.

bespoke filming with an Indigenous Leadership Team project officer.

'Didja Know?' pop-up key facts throughout, accompanied by digital icons created by an Indigenous artist.

links to a wide range of resources to support the palliative care needs of Indigenous peoples.

Conclusion: Available from May 2025, PSA's accredited Palliative Care Foundation Training Program has been developed with significant Indigenous participation.
Uptake by pharmacists across Australia is anticipated to increase the profession's palliative care knowledge and cultural responsiveness, with the potential to positively impact care for Indigenous people who are approaching end of life.

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DEI Down Under: How accreditation supports the development of socially accountable pharmacists

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Introduction: The Australian Pharmacy Council (APC) is the national accreditation authority for pharmacy education and training. APC is responsible for setting and maintaining high standards of pharmacy education. The upcoming review of the APC Accreditation Standards for Pharmacy Programs will consider how standards can ensure that graduates meet the healthcare needs of their diverse communities and provide equitable healthcare.
Methods: APC undertakes periodic review of their accreditation standards to ensure they remain contemporary, fit for purpose, and reflect Australian healthcare needs. The 2020 Accreditation Standards included, for the first time, reference to the concept of social accountability, by requiring programs to promote the development of learner knowledge, skills, behaviours and attitudes congruent with a commitment to public service and safety; cultural safety, respect and responsiveness; equity, diversity and inclusiveness; person-centred care; reduction of disparities in health care; and addressing community aspirations for health. Programs were required as part of the accreditation process to provide evidence of curriculum content and assessment aligned with graduate outcomes.
Results: As APC reviews their 2020 Accreditation Standards, and as Australia begins to recognise the importance of health professionals having the skills to work with and support patients and consumers from a wide range of backgrounds and with varied needs, the review will need to incorporate new Australian frameworks and prepare for future needs.
The presentation will share diversity, equity and inclusion (DEI) requirements for healthcare practitioners in Australia and how this will be embedded in the training of future pharmacists using accreditation as a lever for change.
Conclusion: Accreditation is a valuable tool to ensure educational quality and shape the health workforce of the future. Accreditation standards must evolve to produce pharmacists who are able to work effectively with, and provide support for, Australia's diverse population.

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Building pharmacy profession capability to deliver culturally safe care for First Nations people – the journey of the LIPPE™ Strategy!

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Introduction: The Leaders in Indigenous Pharmacy Profession Education (LIPPE™) network is a partnership with the Council of Pharmacy Schools (Australia/New Zealand). The network provides a platform where Indigenous voices can influence pharmacy education for the benefit of all. This partnership role models a strengths-based approach for culturally safe pharmacy practice.
Methods: The LIPPE™ Steering Committee leads the network and comprises both Indigenous peoples and allies (non-Indigenous peoples) from the two partners.
The Committee determined the need for a strategy to guide its work, with clear deliverables and outcomes. To do this, the group engaged an external consultant with experience in working in a culturally safe way to guide the development of the strategy. The strategy development was undertaken in a consultative way, honouring Indigenous voices and perspectives, using Indigenous ways of being and knowing over several months. The process of developing the strategy was as important as the outcomes.
Results: The finalised LIPPE™ strategy was accepted by both partner organisations and is structured according to three pillars that guide the work of LIPPE™ in shaping the pharmacy profession, both internally and externally – leadership, profession and education. Engagement and relationship are connecting threads that feature in each pillar.
LIPPE™ works through a commitment to the mantra of capacity, capability and allyship.
Collectively, the work implemented under each pillar will contribute to realising the overall goal, to transform pharmacy education and professional practice through Indigenous leadership. Outcomes within each pillar outline each activity and how they will be measured and demonstrated.
Conclusion: LIPPE™ is only beginning its journey and has a long way to go. The growth of network continues with webinars, workshops and conference presentations spreading the word. The strategy is an ambitious but vital vision for the pharmacy profession to improve Indigenous health outcomes through culturally safe pharmacy practice.

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Cultural responsiveness in addressing domestic violence: Enhancing pharmacy education for diverse communities

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Introduction: Domestic violence (DV) is a significant global health issue that affects individuals across all demographic groups, with profound physical and mental health consequences. Pharmacists, as accessible healthcare providers, have a critical role in identifying and supporting individuals affected by DV. However, there is a growing need for pharmacy education to integrate cultural responsiveness to ensure that pharmacists are equipped to care for diverse populations impacted by DV. This study explores pharmacy students' and professionals' perceptions of their preparedness to identify and respond to DV, focusing on cultural competence and the integration of diverse, culturally appropriate practices in pharmacy education.
Methods:An anonymous survey was distributed to pharmacy students and professionals to assess their knowledge, confidence, and training needs regarding DV. Participants were also asked about the inclusion of cultural competence training in addressing DV, with a focus on adapting practices to meet the needs of diverse communities.
Results: The results showed that a significant proportion of participants felt unprepared to support DV victims, with 65% uncertain about how to provide culturally appropriate assistance. The majority (88%) expressed a need for more cultural competence training in pharmacy curricula, including practical methods such as role-play scenarios and case studies reflecting diverse cultural perspectives.
Conclusion: The study highlights the need for culturally responsive education in pharmacy to better prepare students and professionals for the challenges of supporting DV victims from a wide range of backgrounds. Integrating cultural competence into pharmacy curricula can enhance the ability of pharmacists to provide effective, sensitive care to all individuals, regardless of their cultural or social background.

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From margins to mainstream: Embedding an academic certificate on equity into the pharmacy curriculum

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Introduction: Pharmacy profession emphasizes the importance of cultural competency to address health disparities and enhance patient outcomes. The Foundations in Equity Certificate (FIEC) offered by the University of Colorado Anschutz (CUA) campus includes four modules on topics such as implicit bias, microaggressions, and allyship. The FIEC was available to all CUA employees and students as a free-of-cost professional development opportunity. Students willing to take the certificate had to do it on their own time, in addition to required courses and classes.
Methods: The process to embed the FIEC into the curriculum involved extensive discussions with the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences' (SSPPS) curriculum committee, and with the faculty. Learning outcomes from the certificate were mapped to the American Association of Colleges of Pharmacy's Curriculum Outcomes and Entrustable Professional Activities. Original modules were expanded to allow for content adaptation to pharmacy practice. Four courses were identified as ideal placements for the FIEC modules, based on course content.
Results: Content from the certificate assisted in reinforcing curricular content addressing equity, diversity, and inclusion (EDI). Starting in Fall 2024, matriculated pharmacy students were automatically enrolled in FIEC. Students take one module per semester and the academic certificate will be issued to participating students at the end of year 2. Content delivery was optimized to allow for these modules to be embedded into the curriculum. The additional time in each module was used for active learning activities that enhanced student engagement.
Conclusion: By integrating EDI principles from the FIEC into the core learning experience, pharmacy students gain critical knowledge and skills. The combination of the FIEC and original course content better prepares future pharmacists to address healthcare disparities and improve patient outcomes across diverse populations. Additionally, earning an academic certificate alongside the PharmD credential provides a distinct professional advantage.

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Case-based excellence: Strategies for effective skill development

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Introduction: In the rapidly evolving patient care practice, and with the advancement of the role of clinical pharmacists it is important to train pharmacy students during didactic education to achieve excellence in navigating clinical cases. The ability to sharpen and apply problem solving skills to care for patients is essential before students embark on advanced experiential training. This will improve their readiness to pharmacy practice. Unfortunately, there are several obstacles to implementing effective case based courses. Some of which include: resource constraints, faculty training, and student assessment.
Methods: In this presentation, we will present the experience of the University of the Pacific. The three presenters will describe the different strategies implemented across case based course series to enhance excellence and optimize the learning experience. The authors conducted a focus group with third year pharmacy students and regional coordinators who serve as experiential training preceptors. We collected feedback on which strategies are currently effective, and which require improvement.
Results: Several strategies were marked as successful such as: providing limited time to work up patients. Some of the feedback points include: navigating different drug information sources, prioritizing patients and navigating electronic health records. Authors will also present future strategies to be implemented in 2025 to enhance the case based course experience despite the faculty challenges.
Conclusion: Implementing various strategies across a longitudinal case based course can improve learning outcomes and improve experiential training and practice readiness.

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Simplifying complexity: Practical approaches to cognitive load management in pharmacy education

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This workshop will introduce faculty and instructional designers to cognitive load—the mental effort involved in learning—and its impact on student success. While the right level of cognitive load can support learning, excessive or unnecessary load can create barriers. In this session, we will explore the different types of cognitive load and examine when they support or hinder learning. Using evidence-based strategies, participants will discover practical approaches to minimize unnecessary cognitive load, creating more effective learning experiences and improving student outcomes.

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Quality entrustment decision making: the key to supporting workplace based learning

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Introduction: Entrustable Professional activities (EPAs) are now being implemented widely in pharmacy programmes across the globe. The workshop will follow on from one delivered in LLLP23 on 'Trans-national learning to support the development of Entrustable Professional Activities (EPAs) in undergraduate pharmacy placements.
Key to the success of EPA models is the ability to make reliable and valid entrustment decisions; however, it has been documented in the literature that several factors may influence this ability. These factors include trainee and preceptor/supervisor features, the nature of the tasks and the circumstances, and the preceptor/supervisor-trainee relationship. Furthermore, each of these factors includes several additional variables that may also influence the decision.
Methods: This workshop will use a small group discussion to review key evidence and a pilot study completed by the workshop authors describing attributes of entrustment decision making. Participants will apply a standardisation exercise to assessing this process and then contribute to the development of a novel entrustment attribute framework which will be shared.
Results: Participants will share and discuss the contemporary views on entrustment decision making in healthcare students. The workshop will generate a shared resource of experience of the application of entrustment decisions across the global pharmacy education network. The workshop hosts will collate shared experiences from the participants and share this to generate a novel entrustment attribute framework.
Conclusion: Participants will share experiences of supporting preceptors and supervisors to make high quality entrustment decisions and work with the workshop hosts to develop a good practice framework.

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Psychological predictors of burnout in pharmacy

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Introduction: This workshop will build on the findings from a burnout study in Irish pharmacy, in which 868 pharmacists completed an instrument enabling validated measurement of burnout, psychological safety, psychological capital and job-crafting.
Methods: The concepts of burnout, psychological safety, psychological capital and job-crafting will be introduced. The findings from the Irish study will be presented, and the predictors of burnout will be examined and discussed. During the workshop, participants will work together to identify strategies that could be used to mitigate the burnout predictors identified.
Results: It is anticipated that participants will be able to
- describe tools used to measure burnout
- identify psychological concepts that are predictors of pharmacist burnout and those that are not
- develop mitigation strategies for burnout in pharmacy
Conclusion
This workshop will combine an initial information-sharing session with an interactive and collaborative group activity to identify potential solutions to a universal issue

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Preparing students for collaborative practice: Understanding the consumer's perspective

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Introduction: Interprofessional education (IPE) aims to equip students with the capability to collaborate effectively with other members of the health care team. Collaborative practice has a range of positive impacts, including better health outcomes and system efficiencies, and is therefore an important goal of education. To contribute to health profession education, we sought to identify the attributes of a collaborative health practitioner from a range of perspectives, including consumers.
Method: A qualitative approach was chosen, and a series of focus groups conducted using a semi-structured interview guide designed to capture participant experiences with, and perspectives about, collaborative practice. Transcripts were verified and analysed using framework analysis.
Results: Nineteen focus groups, involving eighty-four participants were completed. Ten consumers participated. Focus groups highlighted the fundamental importance of patient-centredness as a foundation for collaborative practice and therefore IPE. Consumers expressed an expectation that members of their health care team collaborate effectively and a desire to be included in the decision-making and goal-setting processes, consistent with their preferences. Examples of poor health professional collaboration were highlighted and the resultant impact on consumers described.
Conclusion: This research reinforced the importance of patient-centredness as a foundation for developing the skills for, and ultimately providing, effective collaborative care.

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The scholarship of teaching and learning (SoTL) in pharmacy education: Where do I start?

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Introduction: Many pharmacy educators face the dual challenge of maintaining high-quality teaching and contributing to the scholarship of teaching and learning (SoTL). This challenge has become more difficult given recent disruptions to teaching and learning practices such as the COVID-19 pandemic and the emergence of generative artificial intelligence tools. While these disruptions can be stressful for educators, they can also provide opportunities for scholarship. However, many educators may be hesitant or reticent to pursue educational scholarship without support, guidance or clear starting points. Therefore, this workshop, aims to help pharmacy educators reframe challenges as opportunities for scholarship and provide practical strategies to initiate and sustain meaningful engagement with SoTL.
Methods: Three interactive activities will be used to structure this session. The activities will be supported with real-world case studies and scholarly examples. Initially, participants will be invited to articulate and share their personal challenges from their teaching practice with a partner to encourage reflective thinking. Following the initial discussion, participants will analyse shared challenges, discuss potential opportunities for scholarship and record for later reference. Finally, participants will collaboratively brainstorm methods that can transform one opportunity into a scholarly project and identify the first steps for action.
Results: Participants will appreciate how they can transform challenges they encounter in their teaching practice into opportunities for scholarship. They will understand the importance of collaboration, community building and mentorship with colleagues in their education scholarship journey. Importantly, participants will have a starting point to examine their teaching practice from a scholarly perspective as the landscape of pharmacy education continues to change.
Conclusion: Given the challenges educators face in becoming scholars in pharmacy education, it is crucial to support them; especially for educators who are early in their careers or newly focused on education after building their careers as pharmacists or scientists.

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Engage learners for a lifetime: Enhance motivation and metacognition with an intention/reflection practice

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Introduction: This workshop will focus on a teaching/learning practice known as "Intention/Reflection" (I/R), which is an evidence-based, low-effort, high-yield tool to enhance learner engagement, motivation, and metacognition. This practice is easily repeatable and adaptable to almost any learning environment, which makes it ideal for lifelong learning. One primary outcome of repeating this practice with students is to help them develop the habit of looking at all professional experiences as potentially meaningful, and something they can learn from.
Methods: After a brief explanation of the I/R practice including theoretical foundations and how it has been developed, attendees will participate in an I/R practice, discuss obstacles and opportunities for implementation, and ultimately create their own I/R for a class, course, and/or curriculum that can be used immediately in their unique educational environments.
Structure
- Introduction and audience participation in an active demonstration of the I/R practice.
- Overview of practical I/R implementation strategies supported by research in higher education and cognitive psychology
- Discussion of current obstacles and opportunities in our teaching/learning environments
- Participants generate an I/R for their class, course, and/or curriculum and share best practices amongst other attendees in how to engage students and collaborate with colleagues.
Results: The I/R practice has had a positive impact on pharmacy education across the US. In total, since inception of the original development of I/R in 2014, scholarly outputs include 6 peer-reviewed publications, 19 presentations, 9 posters, and it was positively highlighted by reviewers during the 2023 Accreditation site visit at the University of Minnesota College of Pharmacy.
Conclusion: The I/R practice, based on a confluence of evidence from different categories of education theory and practice, provides a low-resource, high-yield activity which can be implemented in almost any learning environment to foster a lifelong learning habit.

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Supporting responsible use of generative AI to co-create assignments in postgraduate pharmacy education

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Introduction: Learners can choose to use generative AI responsibly to co-create assignments. However, at a training session on generative AI it became apparent that several assessors thought that using generative AI was always cheating and should be considered academic malpractice. Some assessors were speculating on whether learners had used generative AI, however there isn't a reliable way to detect generative AI use.
Method: Concerns about potential bias and impact on marking decisions led to the implementation of a learner declaration on the use of generative AI on submission of an assignment, which is shared with the markers. Marking standards were updated to include: Marking criteria should be the only determinator on whether the assignment passes or fails. The use of generative AI should not affect decision-making when marking. All assignments co-created with generative AI were double marked by one of two moderators between April and August 2024 using agreed assessment criteria. If the moderator did not agree with the markers assessment decision (pass or fail) then the assignment was marked by the second moderator.
Results: 154 (7.3%) of the 2114 assignments submitted between April and August 2024 were declared as having been co-created with generative AI. The moderators did not agree with the marking decision for five of the 154 assignments moderated.
Conclusion: Moderators did not agree with marking decisions, due to disagreement over whether marking criteria were met, however there was no evidence of bias due to markers opinions and beliefs about generative AI. Double marking all assignments where the learner has used generative AI is not sustainable. Of greatest concern, two of the five assignments marked as fail were marked a pass by the moderators. The intention is now to retrospectively double mark all failed assignments co-created with generative AI, with no double marking of passed assignments.

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Assessing the impact of a pharmacy administration and leadership short course targeting new hospital pharmacy leaders

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Introduction: In today's increasingly complex healthcare landscape, pharmacy administrators and leaders play a crucial role in ensuring quality patient care and organisational success. However, many pharmacists promoted to these positions lack formal training in administration and leadership, resulting in gaps in knowledge, skills, and confidence. While some enhance their skills through independent learning, these avenues may not provide comprehensive training. Recognising this need, the University of North Carolina Eshelman School of Pharmacy developed a Pharmacy Administration and Leadership (PAL) Short Course for pharmacy leaders at Monash Health (Melbourne, Australia). This study assesses the viability and impact of the programme, focusing on changes in participants' confidence levels, skill acquisition, and perceived value.
Methods: The 12-module PAL Short Course was launched in November 2023 for 23 pharmacy leaders at Monash Health. The modules included two in-person workshops at the start and end of the programme, with remaining sessions conducted via live video conferencing over six months. A pre- and post-course survey assessed demographics, perceived confidence in pharmacy administration and leadership skills, prior business education, and job performance confidence. Descriptive statistics and paired t-tests were conducted to analyse the data.
Results: Findings indicate a clear need for additional training options in PAL for pharmacists, with 52% of participants reporting no formal, informal, or self-education related to PAL topics. Post-course, mean confidence levels significantly increased for all 16 PAL tasks ($p < 0.05$). With a Net Promoter Score (NPS) of 52, participants are highly likely to recommend this course to colleagues, suggesting that it effectively meets the PAL training needs of Monash Health pharmacy leaders and satisfaction with the learning format.
Conclusion: The PAL Short Course positively impacted participants' perceived confidence, effectively addressing their professional development needs. Continued investment in similar training initiatives is essential for advancing the pharmacy profession and promoting lifelong learning.

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How do students view and use AI in the creation of a multimedia project-based assessment?

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Introduction: New modes of assessments are needed to evaluate of the authenticity of student learning in an AI world. In mid-2023, we piloted a new assessment type; a collaborative group multimedia assessment with AI allowance. The aim of the research study was to explore the experiences of students using AI in a multimedia assessment. We further aimed to determine whether these use cases changed in student perceptions of the ways AI can be used in learning and assessment.
Methods: Students enrolled in a capstone Pharmacology interdisciplinary unit (n=40) were included in an exploratory, qualitative case study methodology. Thematic analysis using an AI role-based conceptual framework was used to explore student perceptions of AI use prior to and within logbooks documenting the assessment process.
Results: AI was initially perceived by students as a personal tutor-style role, which aligned with the taxonomy with AI acting as an Arbiter (49%), Oracle (41%) and Quant (10%). In contrast to their earlier perceptions, AI was only used in a limited manner in the early stages of assessment in the idea generation in the role as an Oracle (86%) or in data analytic purposes as a Quant (14%), (n=14 cases in 5 groups). No student group used AI to generate written text for the final assessment.
Discussion: Tension between perceived and actual use of AI is indicative of the uncertainty faced by students with the allowance of AI within assessments. Clear guidance for educators and students about how to assess the AI-supported learning process is needed to ensure the integrity of the assessment system.

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Bridging the Gap Between Competency and Understanding in Pharmacy Education

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Introduction: As competency-based education becomes more prominent in pharmacy curricula, there is a growing concern about the gap between training undergraduates to demonstrate competencies and nurturing a deep, transferable understanding to apply those competencies. This is particularly crucial in the multidisciplinary pharmacy field, where a firm grasp of foundational sciences is indispensable for knowledge-driven professional practice. Prioritising essential knowledge in the face of an expanding knowledge base, limited training time, and assessing students' conceptual mastery further compound this current challenge in pharmacy education. This session explores strategies to aid in synergizing competency and concept-guided pharmacy education to foster deep, transferable understanding and enhance long-term retention and application of knowledge in professional practice
Objectives: By the end of this session, participants will be able to:
1. Recognize the value of competency-guided and concepts-guided approaches in undergraduate pharmacy education
2. Acknowledge the value of the combining both approaches to drive evidence-based pharmacy education

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Minor ailments, major impact: Using small group learning to facilitate confidence building in Ontario, Canada Pharmacy Practice

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Introduction: Pharmacists in the province of Ontario, Canada received prescriptive authority for minor ailments (MA) in January 2023. The University of Waterloo School of Pharmacy and the Ontario Pharmacists Association supported this scope expansion for pharmacists through co-developed self-directed, online educational modules.1 While initial implementation of MA services has occurred, adoption and delivery patterns vary across the province. With regulatory approval pending for 14 additional conditions, assessing pharmacy team members' confidence in providing MA services became crucial for developing training and support tools.
Methods: Ontario pharmacists and pharmacy technicians actively involved in MA service delivery were invited to participate in a small group, in-person workshop. The workshop featured synchronous and asynchronous components, combining interactive discussions with didactic instruction on service implementation and optimization. Anonymous pre-and post-workshop surveys assessed participants' confidence levels in MA service delivery and evaluated the workshop's impact on their professional practice.
Results: Survey responses indicated that at baseline, self-reported confidence in providing MA services was not optimal. Post-workshop, a significant increase in participants' self-reported confidence in delivering minor ailment services was noted ($p<0.05$). Workshop feedback was overwhelmingly positive, with participants specifically valuing the small group discussions in a "safe space" environment, practical guidance on audit preparation, and strategies for optimizing pharmacy team involvement in service delivery.
Conclusion: Facilitated small group learning environments, including discussion and provision of tailored content, along with live demonstration of comprehensive tools and peer interaction, effectively enhance pharmacist and pharmacy technician confidence in delivering minor ailment services. This educational approach provides a framework for supporting pharmacy practice expansion as additional conditions are approved for pharmacist prescribing in Ontario, Canada.

1. Killeen R, Ackerman R, Nakhla N. Taking a collaborative approach to developing a minor ailments continuing professional development (CPD) programme in Ontario, Canada. Presented at LLLP Denver, CO, USA. July 3, 2023.
https://pharmacyeducation.fip.org/pharmacyeducation/article/view/2782/1794

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Survival of the fittest: Creating fit-for-purpose pharmacy curricula for the future

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Introduction: Healthcare is changing rapidly around the globe. As such, the pharmacy of the future will occupy many different spaces in the healthcare ecosystem. Future pharmacists will need a vast array of new knowledge and skills to navigate the shifting professional landscape. Education plays a crucial role in actualizing the exciting future that lies ahead for the profession. Pharmacy practice and education are inextricably linked; hence, you cannot reimagine one without the other. Pharmacy education of the future needs to be dynamic, nimble, adaptable, future-oriented, and skills-based to thrive. How do we build this contemporary curriculum within the academic and professional frameworks we work within?
Methods: Drawing on experience from the Faculty of Pharmacy, University of Toronto's curricular renewal project, this interactive session will explore future healthcare trends and threats facing contemporary higher education and their potential impacts on pharmacy education. We will examine strategies for curricular reform initiatives that meet regulatory requirements and address these challenges while prioritizing faculty, student, professional well-being, and health human resource issues.
Results: After completing this session, participants will understand opportunities and threats to pharmacy education and how they can use these ideas to spark conversations within their pharmacy programs to rethink and reimagine pharmacy curricula. Participants will also understand the impact of curricular reform initiatives on various stakeholders who intersect pharmacy education.
Conclusion: The evolution of healthcare practice and rising threats to higher education put pharmacy training programs at risk of obsolescence, declining applicant pipelines, and human resource issues. To survive, pharmacy programs must challenge the status quo, reimagine education, and implement creative solutions to graduate fit-for-purpose, future-ready graduates.

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Use of AI-powered simulation in pharmacist training

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Introduction: As pharmacists' scope of practice evolves to include expanded responsibilities such as prescribing, having a robust consultation technique is imperative. The Pharmaceutical Society of Australia (PSA), in partnership with Audirie and Hale AI, has launched an artificial intelligence (AI) powered patient simulation enabling pharmacists to experience consultations and receive feedback on their performance. This innovation aims to enhance practitioner development and improve patient care.
Method: In March 2024, pharmacists in Queensland were legally permitted to prescribe hormonal contraception under a new Queensland Community Pharmacy Hormonal Contraception Pilot. PSA developed a training program that assesses pharmacists' competence in recommending and prescribing contraception according to Queensland Health Clinical Practice Guidelines. AI technology was employed to assess pharmacists' consultation skills in alignment with these guidelines.
Results: Launched in July 2024, the PSA Sexual and Reproductive Health Contraceptive Service – Queensland training program features an interactive AI-powered simulation assessment. This includes two simulated patient consultations involving dynamic interactions requiring the pharmacist to make appropriate recommendations for each patient. Pharmacists are evaluated on their ability to understand patient needs, communicate management options, apply shared decision-marking, convey treatment decisions and adhere to documentation requirements. The AI-powered feedback assesses performance on key competencies, including patient empowerment, empathy, diagnostic accuracy, intervention quality and treatment advice.
Conclusion: The PSA Sexual and Reproductive Health Contraceptive Service – Queensland training program supports pharmacists expanding their role to include prescribing hormonal contraception. Through innovative AI-powered simulations, this program offers pharmacists a realistic and immersive assessment experience to demonstrate and enhance their consultation competence

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Bold action on inclusion through tackling microaggressions

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This workshop builds on the 'Developing cultural competence in Pharmacy' session delivered by the Centre for Pharmacy Postgraduate Education (CPPE) in Denver 2023, which facilitated recognising and avoiding words, phrases and language (microaggressions) that can cause people hurt, insult or offence, whether intentionally or unintentionally.
This workshop raises awareness of the infinite differences between people and how these impact on a person's experience of discrimination and loss of privileges. Participants will be encouraged to reflect holistically about their identity, recognise the advantages or privileges they do have and their essential role in collaborating to build trust, foster inclusion and sense of belonging, and facilitate people being their authentic selves at work. Recognising and avoiding microaggressions is integral to bold action on inclusion; an approach advocated by the Chartered Institute for People Development (CIPD). CPPE has adopted this approach to improve becoming a safe space for open discussions about our true identity, in response to employee feedback about the progress in delivering the organisational three-year EDI strategy.
'Cocktail party' meetings in pairs will facilitate exploring what makes us unique and the range of diversity within our communities. An interactive quiz will facilitate recognising common microaggressions in everyday language and challenge thinking in the use of more inclusive language. Small group activities help participants to reflect on assumptions and beliefs they hold based on peoples' appearance through pictures. Role play enables participants to apply learning and demonstrate dignity and respect to develop rapport when interacting with others. Participants will work together to discuss the impact of common phrases and the reasons why they may cause insult or offence and offer alternative approaches and inclusive language alternatives.

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Pharmacists' opinions about receiving complementary medicines training during their pharmacy education – a pilot study.

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Introduction: Evidence supports the importance of training pharmacists in complementary medicines (CMs) to support consumers in making evidence-based informed decisions. The primary aim of this study was to gather pharmacists' feedback about an integrated CMs program within pharmacy curricula, and application in pharmacy practice. The CMs curriculum covered the evidence for efficacy and safety of CMs, regulation and manufacturing, and counselling about CMs.
Methods: A mixed-methods study was conducted utilising a 52-question survey and a focus group. A total of 644 Sydney Pharmacy School alumni who had completed their final year in 2018, 2019, or 2020, who were currently practising as pharmacists, were invited to participate in this study. Descriptive statistics were used to analyse the survey data using Microsoft Excel. Audio recordings of the focus groups were transcribed and subject to content analysis.
Results: Thirty pharmacists completed the survey. Of the 30 pharmacists, seven participated in a focus group. Most (n= 20, 67%) participants were female, and practising community pharmacists (n= 24, 80%). Focus group data highlighted the relevance of training to pharmacy practice; CMs knowledge acquisition; and pharmacists' role in CMs. All survey and focus group participants (n=30) agreed the inclusion of a CMs program in the pharmacy curriculum was relevant, with some reporting a gap in knowledge about special patient groups' use of CMs, and the need for greater emphasis on CMs in the curriculum. Resources and continuing professional education that were provided by biased sources were suggested as a barrier to provision of care.
Conclusion: The pilot data suggest that integration of an evidence-based CM program in the pharmacy curriculum is relevant and valued by graduates who are practising pharmacists. CMs used by special population groups, continuing professional education, and resources provided by unbiased sources were identified as areas of need.

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Empowering pharmacists: The key role of entrustable professional activities

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Introduction: Entrustable Professional Activities (EPAs) are essential tasks that individuals can be entrusted to perform independently once they demonstrate the necessary competence. Entrustment decision making is a determination of the level of autonomy a learner is ready for when performing these tasks, providing a basis for safe and socially accountable practice. These decisions are future-focused and assess a learner's readiness for increased autonomy in subsequent tasks. This workshop aims to empower pharmacy learners and workplace pharmacist supervisors to effectively use EPAs to support workplace learning and make informed entrustment decisions.
Methods: The workshop will begin with a facilitated Q&A forum, featuring a registered pharmacist (supervisor) and provisionally registered pharmacist (learner) discussing their experiences with entrustment decisions within pharmacy workplaces. Topics will include practice observation, entrustment discussions, decision-making, and feedback. Participants will then view a simulated video interaction between a patient and pharmacy learner, followed by a role-play group activity where they take on the roles of learner or supervisor, guided by exemplar EPA documentation. Participants will be supported with a suite of EPA resources. The workshop will conclude with a group debrief to share lessons learned and strategies for applying EPAs in the workplace.
Results: Participants will gain an understanding of entrustment decision making, including examples of EPAs that support pharmacy learners, and strategies for conducting effective entrustment discussions and providing feedback. Insights from an evaluation study on early experiences with EPAs in Australian pharmacy settings will highlight practical challenges and enablers in these environments. Tangible outcomes of the workshop will include strategies for implementing EPAs supported by a framework for robust entrustment decision making.
Conclusion: This workshop will enhance the ability of supervisors to make informed entrustment decisions, thereby supporting the ongoing implementation of EPAs in pharmacy training.

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Comparative evaluation of two placement programs for pharmacy students

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Introduction: This study evaluates two pharmacy student placement programs conducted in 2024 at Hospital A and Hospital B. The focus is on assessing the effectiveness of hands-on versus observational learning experiences in enhancing pharmacy students' skills and career interests.
Methods: In the Hospital A placement, students were assigned one preceptor and engaged in a hands-on component complemented by digital resources, including electronic medication management system logins. This setup allowed students to practice medication history-taking under appropriate supervision, following Entrustable Professional Activities (EPAs). In contrast, the Hospital B placement was observational, designed to expose students to a variety of hospital pharmacist roles and environments. A post-placement survey was administered to 26 students to gather feedback on skill acquisition, clinical knowledge, and perceptions of hospital pharmacy roles.
Results: Students at Hospital A reported significant improvements in their medication history-taking skills and clinical knowledge, largely due to hands-on practice with EPAs. Most participants expressed increased interest in pursuing careers in hospital pharmacy and indicated a willingness to apply for internships at the hospital. In contrast, students in the observational program at Hospital B noted limited skill development due to the lack of direct clinical activities, although they valued the exposure to hospital operations.
Conclusion: The findings highlight the importance of active learning through EPAs in enhancing practical skills and fostering career interest among pharmacy students. The study suggests that hands-on experiences are more effective than observational placements in promoting skill acquisition and engagement in hospital pharmacy careers.

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To dispense or not to dispense: Teaching pharmacy pre-registrant pharmacists to make legally and ethically sound dispensing decisions

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Introduction: Pharmacists must assess the legal and ethical implications of prescriptions they dispense to ensure compliance with legal standards and provide quality patient care. Australian higher education programs must equip graduates with the necessary skills to do this. Despite a range of training and educational interventions, pre-registrant pharmacists report struggling with how to respond when faced with scripts that don't meet legal requirements. There is therefore a need to bolster legal and ethical reasoning skills among pre-registrant pharmacists in the context of dispensing prescriptions.
Methods: Two activities were developed. A didactic lecture was delivered at the start of the program and outlined key sources of legal and ethical obligations to support decision-making and a framework to that can be used to address and resolve legal and ethical problems in the context of dispensing. A lectorial was delivered as a capstone activity at the end of the program and provided learners with practical opportunities to make legally and ethically defensible decisions about dispensing prescriptions. These were supplemented with an online discussion board where students could discuss legal and ethical dilemmas encountered in their practice.
Results: Activities were delivered in 2024 to 82 students by an academic specialising in legal aspects of pharmacy practice. Feedback on both was positive, as indicated by 100% agreement with the statement "I have developed the ability to practically apply knowledge of the field(s) I am studying" in a program evaluation survey (n=56). There was robust discussion both during the live session and afterwards on the online discussion board. These will be retained in future years and expanded to other universities with student feedback used to refine content.
Conclusions: Training pre-registrant pharmacists to make legally and ethically defensible decisions about dispensing prescriptions is necessary both for their clinical practice and for education providers to meet accreditation requirements.

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The use of the Medicines Related – Consultation Assessment Tool (MR-CAT) for self-assessment of pharmacists' consultations

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Introduction: The Medicines-Related Consultation Assessment Tool (MR-CAT) is a validated tool used to assess pharmacists' consultations through direct observation. Many community pharmacists work in isolation and struggle to find colleagues for assessment, making self-assessment a practical alternative. This study aimed to explore the acceptability and feasibility of using the MR-CAT for self-assessment in community pharmacy.
Method: Newly qualified pharmacists and education supervisors (ES) on a post-registration programme in England were invited to participate in semi-structured online interviews. Participants were required to have experience of using the MR-CAT for self-assessment. Anonymised transcripts were analysed thematically. Eight ES were interviewed; pharmacist data is currently unavailable due to recruitment challenges.
Results: ES reported the MR-CAT self-assessment as clearly structured, helping users understand consultation standards and enabling effective self-assessment. The focus on practice levels rather than pass/fail was perceived as a supportive way to explore current practice. ES emphasised reflecting on strengths as well as areas for improvement, embedding reflective practice in early careers and promoted ongoing use rather than a one-off. MR-CAT offers a structured way to reflect amid busy pharmacy work, should be completed soon after consultations to keep reflections relevant, and is integrated into support meetings by supervisors. Guided reflection alongside self-assessment was perceived to add value.
Conclusion: ES view MR-CAT as an acceptable, non-judgmental self-assessment tool that helps pharmacists reflect on strengths and areas for development, promoting active learning and early career growth. ES integrate discussions into support meetings, showing the MR-CAT fits busy, isolated pharmacy settings. The data reflects ES perspectives based on their support of pharmacists who have completed the MR-CAT self-assessment. However, direct insight into pharmacists' experiences is currently limited. Perspectives from pharmacists' interviews are essential to fully evaluate MR-CAT's acceptability and feasibility as a self-assessment tool.

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Entrustment decisions in the workplace: A New Zealand experience

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Introduction: Clinical pharmacists at Auckland City Hospital undertake eight key clinical activities as part of their role e.g. medicines reconciliation, patient counselling. Intern (preregistration) pharmacists, and pharmacists new to the department, must demonstrate that they can complete these activities to a set standard. Interns were assessed using the same four-point scale as the national intern training programme (not yet competent /borderline /competent /competent with merit). Pharmacists new to the department were assessed during their induction as competent or not competent. Both scales lacked clear definition and were open to interpretation between supervisors. We aimed to introduce a more robust tool to define and standardise assessments.
Method: In 2021, following a review of the literature, we introduced the five-point assessment scale associated with Entrustable Professional Activities (EPAs) for the eight clinical activities. Level 3 of the scale was expanded to 3a – c for interns, to reflect the nuanced stages of their progress towards level 4 by the end of the year. Registered pharmacists must achieve level 4 before working unsupervised on the wards. An online survey was utilised to elicit feedback from staff on useability and acceptability.
Results: Feedback indicates staff find the entrustment scale easy to understand and use. It provides a more informative evaluation of intern's progress across the year and allows gaps to be addressed in a timely manner. For pharmacists new to the department who achieve level 4, it provides assurance to the service and to themselves, that they have the skills to work independently. The scale provides a clear description of a learner's level of independence, making it easier for new supervisors to provide support at the appropriate time.
Conclusion: Entrustment decision scales in the workplace are acceptable to assessors; support intern and new pharmacist development; and provide quality assurance of pharmacy service delivery.

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I trust you…validating an entrustment-supervision scale integrating the concepts and language of trust

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Introduction: Entrustment-supervision scales (ES), used to assess Entrustable Professional Activities (EPAs), have been widely adopted in healthcare education. However, inconsistencies persist in making entrustment decisions among assessors. This may be partly due to limited understanding of entrustment and a lack of overt language of trust within ES. Therefore, the authors aimed to develop and validate an ES that integrates the concepts and language of trust.
Methods: In collaboration with a linguistic expert, subject matter experts in competency-based education developed an ES integrating trust-related concepts and language. Pharmacists with over two years' experience with workplace-based assessment (WBA) were invited to participate in a two-round validation survey. Participants rated scale descriptions on a 1-4 scale of clarity and comprehension and provided narrative feedback, which informed refinements after each round. A scale face validity index (s-FVI) was calculated with an acceptance threshold set at a minimum s-FVI of 0.83.
Results: In 2024, 13 pharmacists (community n=1; hospital n=5; academia n=7) with a mean 9.15 (SD=7.63) years' experience with WBA completed the validation survey. The initial survey round resulted in a s-FVI of 0.39. Narrative feedback from round one, focusing on concern of the use of the words "loved ones" and the definition of proximity of supervision, was used to refine the ES. In the second round, ten of the original 13 participants responded and a satisfactory s-FVI score (0.88) was achieved. The narrative feedback from the second round suggested that the refined scale was "clear and logical," further validating the s-FVI.
Conclusion: An ES integrating trust-related concepts and language was developed, refined and validated, potentially easing challenges associated with making entrustment decisions for EPAs. Future research will investigate whether the revised ES improves EPA assessment consistency.

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Professionalism: A shady concept to understand and assess in pharmacy education

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Introduction: Professionalism in pharmacy encompasses a spectrum of dispositions and behaviours, such as punctuality, accountability, appropriate communication, serving the community with respect, honesty, and compassion. However, assessing professionalism is complex due to its multifaceted nature. Clear expectations and effective tools are necessary to foster professionalism in pharmacy education. The aim of this presentation is to shed light on the shady concept of professionalism for pharmacy educators.
Methods: We used a definition of professionalism to perform a strengths, weaknesses, opportunities, and threats (SWOT) analysis on an existing rubric. This rubric was used to evaluate students' written reflections of professionalism during their clinical placements. Results of the SWOT analysis were used to construct a framework for teaching and assessing professionalism in pharmacy.
Results: Strengths of the existing rubric included that it invited students to reflect broadly on their clinical placement experiences, allowing students to select and highlight relevant instances of professionalism. Weaknesses involved students not making connections to professionalism in their reflections, and the large variation in features of professionalism that were reported. Opportunities included altering the guidance to students about the assignment by featuring a definition of professionalism. Threats included the placement setting, which may limit the features of professionalism that students experienced. The constructed framework features four dimensions, representing how a pharmacist behaves, how they relate to others, how they improve themselves, and how they engage with the profession and beyond.
Conclusion: We shed light on the shady concept of professionalism by identifying four dimensions of professionalism that can be taught and assessed. Pharmacy educators can use this framework to evaluate the rubrics they use to assess professionalism and adapt them to different contexts. Further research and iterative refinement of these materials will enhance their relevance and effectiveness in fostering professionalism in pharmacy education.

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Introducing a mystery shopping activity as a work integrated learning observation activity to a large cohort, undergraduate pharmacy degree program

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Introduction: For over half a century, mystery shopping has been used to evaluate service experience through the lens of the consumer in health care settings. It has shown benefits in evaluating competence and improving performance for pharmacy staff when feedback and coaching follow the mystery shop. For research to evaluate mystery shopping's suitability for education in the context of WIL, students were required to visit a pharmacy and roleplay as a person seeking treatment advice for a minor ailment and to observe pharmacy staff communication and service during the interaction. Compared to non-participants, student participants showed a stronger sense of professional identity, improved empathy and potential for improved performance in oral exams.
This project outlines the development of a new mystery shopping student activity (MYSSA) in the WIL program for an undergraduate pharmacy program at The University of Sydney.
Method: MYSSA involved students working in pairs to select locations, design patient scenarios, role play or observe the interaction and record a video log. An exclusion zone and rotating 2week cycle were included to avoid visit frequency congestion. Students commenced in week 4 after delivery of communication and clinical topics. Students wrote individual reflections for submission for marking and feedback by tutors. A short debrief activity was included in their final tutorial in week 13.
Results: A total of 536 mystery shopping visits were conducted by 270 paired enrolled students. Students enjoyed planning visits and exposure to different pharmacies with 38% of student survey responders including MYSSA in "the best aspects" of the unit. Students found the Vlog helpful for reflection writing and simple scenarios improved interactions and understanding. MYSSA built student knowledge and confidence.
Conclusion: Lessons learned will inform next steps for MYSSA including visit reduction, prompt feedback for submissions and use of AI in case design.

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Reducing cognitive overload through pre-briefing and worked-out modeling in an interprofessional simulation

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Introduction: Simulation-based learning (SBL) enhances critical thinking, communication, and interprofessional skills, but can be inherently stressful for the learner. Cognitive Load Theory (CLT) suggests optimizing mental load to facilitate learning, focusing on intrinsic load (IL), extraneous load (EL), and germane load (GL). This study aimed to compare self-perceived cognitive load between students who received pre-briefing and worked-out modeling (WOM) before a simulation and those who did not.
Methods: Final-year pharmacy (N=12) and physician assistant (N=41) students were randomized into control (7 teams) and intervention (7 teams) groups. The control group received a 30-minute orientation and proceeded to a pediatric escape room. The intervention group received the same orientation plus pre-briefing and completed five pediatric cases (WOM). Post-event, students completed the Cognitive Load Assessment Scales in Simulation (CLAS-Sim) and rated their pediatrics knowledge. An independent t-test assessed differences in CLAS-Sim scores.
Results: The intervention group reported significantly higher IL (5.83 vs. 6.58; p=0.036), better GL (5.49 vs. 6.95; p=0.002), and lower EL (5.03 vs. 4.04; p=0.031). They also had higher average scores on pediatrics knowledge (4.0 vs. 3.5).
Conclusions: Pre-briefing and WOM before simulations can improve GL and reduce EL.

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Keep them inQUIZitive! A case study on the development and evaluation of clinical pharmacy pre-tutorial quizzes

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Introduction: Tutorials offer opportunities for pharmacy students to apply acquired knowledge, through case-based learning. Due to time constraints, it can be challenging for tutors to assess assumed knowledge. Therefore, formative assessments are necessary to gauge this assumed knowledge. In 2023, the University of Sydney Bachelor of Pharmacy program transitioned from pre-tutorial short-answer question worksheets to quizzes across all third-year tutorials. This study focuses on the quiz bank development, implementation and evaluation processes.
Methods: The third-year curriculum contains seven clinical units of study with each unit delivering five tutorials across five weeks. Quizzes, consisting of six multiple choice questions, were administered during the first 15 minutes of each tutorial. A question bank for each tutorial was designed using a rigorous process whereby a pharmacist developed the quiz questions by aligning tutorial content with key relevant pharmacy resources. These questions were reviewed and validated by a pharmacy academic and unit coordinator. Focus groups were conducted to explore students' views of quizzes and its impact on learning. Transcripts were transcribed verbatim and underwent inductive thematic analysis.
Results: 1200 quiz questions were developed. 286 students enrolled in 2023, and 301 students enrolled in 2024 completed the quizzes. For each tutorial, the 40-item question bank was integrated into the Canvas learning management system, so that each student received a random six-item quiz for each tutorial, with a five-minute time limit. Three focus groups were conducted with a total of 13 students. Preliminary analyses suggest that students generally regarded quizzes as a valuable tool to gauge their understanding of their learning, however, would appreciate more detailed feedback on how to improve.
Conclusions: Since iterative education design is imperative to ensure learner-centred teaching and contemporary to practice, incorporating feedback from students to develop more detailed and automated feedback is necessary when considering improvements to quiz delivery.

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Implementing a remote entry-level Doctor of Pharmacy pathway

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Introduction: To increase diversity, attract qualified applicants, and serve students unable to attend on campus, the University of Colorado School of Pharmacy sought innovative delivery methods for its entry-level PharmD (ELPD) program. Offering a remote learning option emerged as a more inclusive approach, expanding access for qualified candidates while preserving the integrity of the ELPD program, compared to alternatives like a new online degree or satellite campuses.
Methods: Students living greater than 40 miles from campus are eligible for the remote pathway, which is capped at 40% of each class. Admissions follow the standard ELPD process, with a supplemental application. Remote students complete the same curriculum and meet identical program outcomes as on-campus pathway students. They participate in synchronous classes via video conferencing during the first three years of the curriculum and travel to campus for up to 10 days each semester for required in-person activities. Pharmacy practice experiences are primarily completed in Colorado, though some may be completed closer to students' homes. Remote pathway students are fully integrated into all co-curricular and extra-curricular activities and have equal access to campus resources and support.
Results: Since launching in 2021, approximately 15% of PharmD students have joined the program via the remote pathway. Academic performance, measured by average semester GPA, has been comparable between remote and on-campus students, with similar course evaluations across groups. Faculty development initiatives promote effective teaching strategies in hybrid classrooms, with instructional designers supporting teaching and assessment needs. Faculty and staff workload impacts are being assessed, with ongoing efforts to optimize classroom technology and advance faculty development, ensuring students feel engaged and supported.
Conclusion: The remote pathway offers distance learners the opportunity to earn a PharmD degree with flexible, remote options. Successful implementation required careful planning across curriculum, assessment, oversight, resources, technology, and faculty and staff support.

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Applying narrative medicine to prepare empathetic healthcare providers in undergraduate pharmacy education in Singapore: A mixed methods study

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Introduction: Narrative medicine demonstrated positive impact on empathy in medicine and nursing students. However, this pedagogical approach had not been evaluated in pharmacy education. This study sought to apply and evaluate the narrative medicine approach in extending empathy in undergraduate pharmacy students from the National University of Singapore (NUS).
Methods: Narrative medicine was applied through workshops which used narratives of people with different experiences and perspectives. First-year undergraduate pharmacy students who attended these workshops formed the intervention group (N=31) and the remaining first-year cohort formed the control group (N=112). A sequential explanatory mixed methods approach was adopted in which quantitative methods were first used to measure impact on pharmacy students' empathy using the Jefferson Scale of Empathy – Health Professions Student (JSE-HPS); and qualitative methods were then used to assess pharmacy students' emotional responses to narratives, and the perspectives of pharmacy students and faculty on this pedagogical approach.
Results: There was no difference in JSE-HPS scores between intervention and control groups across baseline, pre-intervention, and post-intervention timepoints. Pharmacy students in the intervention group had lower scores in Factor 3 (Standing in People's Shoes) following the intervention. Five themes, guided by internal and external factors in cognition, emerged from group interviews: 1) incongruence between students' motivation and faculty's perception, 2) learning context, 3) academic context, 4) cognitive system, and 5) affective system. Themes 1, 4 and 5 referred to internal factors such as students' motivation, perceiving learnings, and feelings. Themes 2 and 3 referred to external factors including workshop materials, activities, content, and facilitation.
Conclusion: This is the first study on applying the narrative medicine approach for learning among NUS pharmacy students. Narrative medicine approaches are now being implemented on a larger scale in an inter-professional manner at NUS through a compulsory Common Curriculum for Healthcare Professional Education.

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Bringing andragogy and constructivism to administration and leadership training: An innovative approach to training tomorrow's pharmacy administrators and leaders

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Introduction: This session showcases an innovative approach to pharmacy administration and leadership (PAL) education through the incorporation of novel educational approaches focusing on experiential learning and constructivism. This is exemplified in a Master of Science (MS) in a Health-System Pharmacy Administration Programme and a PAL Short Course Programme. This approach addresses a critical need in the field to cultivate pharmacy leaders at the start of their careers (through training programmes partnered with residency programmes) and throughout their careers (through programmes designed for practising professionals). The design of both these programmes incorporates andragogy and experiential learning paradigms that enhance lifelong learning capabilities and interest in pursuing further education.
Methods: Through an innovative workshop design, education design principles will be demonstrated using the MS program and PAL Short Course as exemplars, emphasising the alignment with various education principles and experiential learning methodologies. These innovative approaches not only maximise learning opportunities for residents and practising professionals but also address the pressing shortage of pharmacy leaders by providing accessible educational pathways.
Results: Since 2005, the pharmacy profession has faced a significant leadership gap, reaffirmed in 2022 when 57.2% of hospitals in the United States reported a shortage of pharmacy leaders. By employing andragogy and constructivism, this session will demonstrate how real-world problem-solving enhances student outcomes and fosters a culture of lifelong learning. The MS programme has been operational since 2010, graduating 180+ students utilising this approach. The PAL Short Course has been completed in Australia and Ethiopia, with 60+ graduates worldwide.
Conclusion: Participants will engage in think-pair-share activities to reflect on how they can integrate various andragogical education principles into their own programmes. This session aims to stimulate discussion on the strengths and weaknesses of this educational approach, informed by feedback from programme faculty, ultimately promoting sustained growth in pharmacy administration and leadership.

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Co-creating a logic model for program evaluation of the Doctor of Pharmacy program with program administrators and pharmacy learners

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Introduction: Program evaluation is essential to prove and improve a program's quality and effectiveness. Our recent curriculum renewal of the Doctor of Pharmacy (PharmD) program has presented new opportunities for pharmacy learners, faculty members, experiential educators, and rotation/training sites. This project was aimed to co-create a logic model (with administrators and students), a feasible and sustainable framework for continuous quality improvement (CQI) of the PharmD program.
Methods: Representatives of pharmacy learners, faculty members, and program administrators took an initial attempt to review and streamline the various components (i.e., input, activities, outputs, and outcomes) of a previously established logic model. The PharmD Program Curriculum Renewal Retreat was held in winter 2023. Insights and feedback from retreat participants were collated and considered to inform the renewed logic model.
Results: An updated logic model was proposed to set priorities and guide program evaluation of the PharmD program. We refer to this model to (1) monitor actions and activities for achieving desired program outcomes; (2) collect and analyze data to prove and improve our program on an ongoing basis; and (3) document and reflect on short-term (e.g., program-related) and long-term (e.g., system-wide) accomplishments or changes as a result of the program. We will also take into consideration external factors and unintended outcomes of the PharmD program while ensuring feasibility and sustainability of the evaluation efforts.
Conclusion: By engaging and gathering insights from program administrators, faculty members, and pharmacy learners, we are committed to improve the delivery and achieve ongoing program evaluation and quality improvement of training for entry-to-practice pharmacists. Our next priority is to utilize the logic model to guide our measurement (i.e., data collection strategy) and evidence-informed (or data-driven) evaluation of the PharmD program.

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RCT protocol: Creating mental health safe spaces in pharmacy for Aboriginal and Torres Strait Islander consumers by educating the workforce

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Introduction: Mental illness is a major contributor to disease burden for First Nations Australians. The National Aboriginal and Torres Strait Islander Suicide Prevention Strategy supports prevention efforts in primary care settings. Yet, pharmacists lack sufficient culturally appropriate education on First Nations peoples' health and wellbeing, which can impede health equity for this population. MH-SPACE is funded by the Medical Research Future Fund to establish Mental Health Safe spaces in community Pharmacies, for Aboriginal and Torres Strait Islander Consumers by Educating the primary care workforce in Mental Health First Aid (MHFA).
Methods: MH-SPACE objectives are to 1) Co-design a training package, comprising Aboriginal and Torres Strait Islander MHFA training, cultural safety and awareness training and behavioural assessment, 2) Evaluate the impact of MH-SPACE training on pharmacists' ability to provide mental health support, first aid and referral through simulation, and 3) Demonstrate the impact of MH-SPACE on pharmacists' provision of mental health support, first aid and referral in routine practice.
Results: A First Nations Strategy Group has been established to provide overarching governance for MH-SPACE. It is anticipated that the project will result in the MH-SPACE training package, which will be co-designed and content validated by First Nations stakeholders. A RCT of simulated patient visits (mystery shopping) by First Nations actors in participating community pharmacies (target n=38) will be undertaken in the NT, Western NSW and Northern WA. The primary outcome measure is the proportion of standardized patients who receive appropriate mental health support and first aid from pharmacists during site visits, as measured on a psychometrically-tested rubric. Evidence-based implementation and behaviour change frameworks will guide qualitative exploration of barriers and facilitators to practice change.
Conclusion: It is envisaged that MH-SPACE findings may inform reforms to pharmacy education, nationally, with an aim to improve primary mental healthcare for First Nations people.

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Development of an entrustable professional activity tool for partnered pharmacist medication prescribing

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Introduction: Partnered Pharmacist Medication Prescribing (PPMP) is a medication management model that comprises collaborative medication review and prescribing of medicines by pharmacists. In 2023, a project was established to develop a Framework to support the statewide implementation of PPMP in Queensland Health facilities. The Framework defines the training and competency assessment process for pharmacist authorisation to undertake PPMP activities. It was determined that a PPMP entrustable professional activity (EPA) tool would be developed to assess pharmacist competence.
Methods: The National Prescribing Competencies Framework and medical prescribing EPAs were reviewed to facilitate the development of PPMP competencies and associated observable behaviours. A draft EPA tool was developed with reference to the PPMP competency set. The PPMP EPA was mapped to the medical prescribing EPAs to identify variances and ensure alignment. The draft EPA was reviewed by the Project Working Group who provided feedback. The tool was subsequently amended and piloted at a quaternary teaching facility.
Results: Mapping highlighted variances between the PPMP and medical prescribing EPAs. Unsurprisingly, the medical EPAs mapped poorly with PPMP processes such as collaborative decision-making and documentation. Other PPMP activities not included in medical EPAs, included review and optimisation of current medication; identification of medication-related problems; identifying patient preference; compliance with regulatory frameworks and clinical guidelines; identifying and managing medication errors; and communicating prescribing information to the multidisciplinary team. Feedback from the pilot indicated appropriate content and good user acceptability of the PPMP EPA. The final PPMP EPA was endorsed by the Directors of Pharmacy leadership group.
Conclusion: The development of a PPMP EPA tool identified gaps in medical prescribing EPAs. The PPMP EPA will inform the development of an online PPMP education program and support statewide implementation.

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Shaping the future with the updated Nanjing Statements

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Introduction: The original Nanjing statements were developed in 2016 after extensive consultation with multiple country stakeholder conference in Nanjing China. With the changing higher education landscape, COVID-19 and other crises occurring across the globe it was essential to formulate a vision and update the statements to better reflect guidance for the current and evolving understanding, challenges and regional contexts of pharmacy and pharmaceutical sciences education.
Methods: In 2023 and early 2024, a comprehensive update of the 2016 FIP Nanjing Statements was undertaken. This process involved a group of 14 experts (Policy Committee) selected in 2022 from across six WHO regions, focusing on several key changes and innovations. Multiple consultations occurred among key stakeholders across FIP.
Results: Domains were used instead of a reference to Clusters in the prior document. Domains were restructured to mirror the pharmacy education journey from admissions to graduation and practice. There was specific reference to reflect the pharmaceutical sciences alongside pharmacy practice, concepts of Continuing Professional Development (CPD) were integrated into the Professional Skills domain and the CPD domain was removed to avoid overlap with the FIP Statements on CPD. Several sections were added:

1. A list of various focus areas in professional skills.
2. A brand-new domain focused on research
3. Appendices to organize professional skills
4. A glossary to ensure our terminology and definitions are consistent across the globe

Finally, preexisting statements were re-worded to include action verbs to facilitate the statements' use in assessment and monitoring tools, thereby making them more practical and outcome focused.
Conclusion: These statements exist to assist stakeholders in shaping the future by providing guidance on pharmacy and pharmaceutical sciences education to 2030. Interested users can assess their current state and apply the statements as appropriate for specific regional education contexts.

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The U of T PharmD in 3: Adaptive expertise as a solution to curriculum overload

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Introduction: Knowledge is being generated at rates we have never seen before. Across the globe, healthcare systems are facing mounting pressures, leading to expanding scopes of practice for many professions, including pharmacy. These issues drive educators to add more content to pharmacy curricula to ensure students enter the workforce with the knowledge and skills needed for contemporary practice. This trend challenges educators tasked with the curricular decisions of 'what stays and what goes.' One promising approach to curricular overload is adopting an adaptive expertise model. By emphasizing adaptive expertise, pharmacy students can be trained to apply existing knowledge and create new knowledge in response to patient needs and contextual demands.
Methods: The Leslie Dan Faculty of Pharmacy is transitioning from a 4-year traditional PharmD program to a 3-year integrated program, guided by an adaptive expertise theoretical framework and a backward design process. Faculty teams will collaboratively design and deliver courses, introducing foundational pharmaceutical and social science concepts across several first-professional-year modules. These concepts are then spirally reinforced throughout the therapeutic modules, enhancing students' ability to connect science to practice.
Results: The curriculum renewal project is actively progressing. Year 1 of the new program is being developed and set for implementation in Fall 2025. Year 2 is under development and will be completed by June 2025. This phased development allows the development team to refine the curriculum iteratively, ensuring alignment with the adaptive expertise framework.
Conclusions: Adopting an adaptive expertise model in pharmacy curricula prioritizes depth of knowledge over breadth. This approach enables educators to reduce content confidently, knowing that students will continue to develop the knowledge and skills needed for effective entry-level practice.

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The values of Pharmacy Experiential Education Programme (PEEP) in the curriculum – experience from Hong Kong

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Introduction: As Kolb's experiential learning theory explains, experiential learning aims to integrate learning through observation, conceptualisation and practice. The Department of Pharmacology and Pharmacy, The University of Hong Kong implemented the pharmacy experiential education programme (PEEP) in the curriculum where the students attend a community pharmacy or hospital pharmacy once a week during the semester.
The aim for PEEP is to offer pharmacy students valuable hands-on learning experience outside of the classroom. Apart from integrating knowledge-based skills, the programme also aims to cultivate the development of personal and professional qualities, including patient-centred care, ethics, problem-solving skills and teamwork.
Methods: To understand how students perceived on the programme, a retrospective, mixed method study was conducted. The primary objective of the study is to understand their perception on knowledge improvement and communication skills. The study also evaluated their satisfaction level to PEEP with the current arrangement. Ethical approval has been obtained for this study.
Results: Total of 61 students participated in the questionnaire which represented 82% of the cohort. Students expressed an agreement to knowledge enhancement from the programme with 94% of participants agreed the programme helped to bridge the gap between classroom learning and real-world practice. In communication skills enhancement, students also agreed that the programme helped to improve on their soft skills, particularly when preceptor provides guidance and feedback on their performance (93%).
Conclusion: This study clearly shows the benefits of experiential learning in both knowledge enhancement and soft skills. However, the execution to such programme would be a challenge in pharmacy programme with large cohort. Quality control of sites also poses an issue for students to experience the best practice we hope for.

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The power to change

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Psychologists define “power” as the capacity to influence the behaviour of others. In all aspects of life – including education and practice – power is an essential but often overlooked facet of interpersonal communication. Historically, the pharmacy profession has been described as “subordinate” to the power of medicine; today in many parts of the world with expanding scopes of practice, power is shifting but the fundamental psychological relationships established between pharmacists, physicians, patients, and others may not have kept pace. This presentation will review the psychology of power and the ways in which one’s own assumptions about power and powerlessness can be a barrier or a facilitator to change, professional satisfaction, and growth. Understanding and reflecting upon the psychology of power can be a powerful tool for individuals and is increasingly necessary for pharmacists involved in complex interpersonal and interprofessional, and political situations.

P100

Exploring healthcare professional students' perceptions of disaster management: A mixed-methods study

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Introduction: The increasing frequency of disasters worldwide highlighted the critical role of healthcare professional students (HCPS) as future responders to disasters. Despite the recognized importance of disaster preparedness, existing research often focuses on specific disciplines like nursing and medicine, using pre-existing tools designed for particular types of disasters. This study addresses these gaps by exploring the perceptions of HCPS in Qatar, examining factors associated with their knowledge, attitudes, and readiness to practice, and identifying key barriers and facilitators to improve their preparedness.
Methods: An explanatory mixed-methods approach was followed. Quantitative data were collected through a self-reported questionnaire designed in alignment with the Disaster Management Framework and administered to HCPS from various colleges across Qatar University Health Cluster. Qualitative data were collected through six online focus groups (FGs) and analyzed using thematic analysis.
Results: 455 of 1,392 HCPS responded to the survey (response rate= 32.7%), and 35 HCPS attended the FGs. Qualitative findings revealed that HCPS had a fair level of knowledge of disaster management [Median = 44 (IQR = 8), Min-Max = 13-65], good levels of attitude and readiness to practice in disaster management, respectively [Median = 39 (IQR = 5), Min-Max = 11-55], [Median = 42 (IQR = 6), Min-Max = 4-55]. Qualitative findings indicated that HCPS recognized the importance of disaster preparedness, emphasizing the need for more training, practical simulations, and mental health support. While students understood their roles in disaster response and the value of institutional support and social media for awareness and communication, they faced barriers such as limited knowledge, time constraints, and psychological challenges.
Conclusions: Despite positive attitudes toward disaster management, HCPS demonstrated knowledge gaps and readiness barriers, highlighting the need for interdisciplinary training that integrates practical and psychological skills. Addressing these gaps is essential for building a healthcare workforce prepared for effective disaster response.

P101

Returned medicine disposal practices of community pharmacists in Aotearoa New Zealand and pharmacist knowledge about third-party destruction of medicines

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Introduction: When medicines are unwanted or expired, it is recommended that health consumers return them to their pharmacy for appropriate disposal. In Aotearoa New Zealand, appropriate disposal of non-cytotoxic medicines involves collection by a third party to steam sterilise before going to landfill. This study aimed to determine whether pharmacies encourage consumers to return unwanted medicines, how community pharmacies dispose of returned or expired medicines and pharmacist knowledge about what happens to medicines collected by pharmaceutical waste management companies.
Methods: This sequential mixed-methods study comprised an online survey of pharmacies in Aotearoa New Zealand followed by semi-structured interviews with practising community pharmacists to provide additional context. Descriptive statistics were generated from the quantitative survey data and qualitative data was categorised. An inductive thematic analysis was conducted on transcribed interview data.
Results: From the 1043 pharmacies invited to participate, 104 questionnaires were completed sufficiently to be analysed. Of these, 98 respondents (94%) reported their pharmacy collected unwanted and expired medicines for disposal and 72% reported that they informed health consumers that the pharmacy accepted unwanted or expired medicines. Of the respondents, 84% reported feeling 'not at all' or 'slightly' informed about what happens to pharmaceutical waste when it is collected from the pharmacy. Current pharmacy disposal practices reported included depositing into a dedicated pharmaceutical waste bin, down the sink and into the general rubbish bin. Thirteen interviews were conducted which strengthened the view of a lack of knowledge around appropriate pharmaceutical waste management processes and surfaced barriers to changing pharmacy waste disposal processes.
Conclusions: The range of inappropriate pharmaceutical disposal practices reported and the lack of knowledge about pharmaceutical waste are causes for concern. Brief, easy-access education packages around environmental issues pertaining to pharmaceuticals should be developed, promoted and made freely available for pharmacy staff to address this knowledge gap.

P102

Developing core concepts in pharmacy administration and leadership training

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Introduction: Core concepts refer to fundamental ideas essential for mastery within a domain. Applying these concepts has shown benefits in various STEM disciplines. In pharmacy administration and leadership (PAL), understanding core concepts is crucial for aligning curricula, teaching, and assessment, especially in the context of lifelong learning. However, there is limited research on core concepts for PAL, leading to inconsistency in training programmes.
Methods: Phase one involved analyzing websites of PAL master's and accredited healthcare management programmes in the United States. Inductive coding identified recurring themes, forming a draft list of core concepts. Phase two employed a modified Delphi process with pharmacy administrators and leaders across the United States. An initial survey was distributed via ASHP Connect, with subsequent surveys sent to previous round consenting participants. Consensus was determined at an 80% endorsement threshold.
Results: Phase one analyzed 147 programmes (9 PAL, 71 MBA, 61 MHA, 6 MHSA/MSHA), identifying 13 themes as initial core concepts. In phase two, 85 respondents completed the initial survey, with two concepts falling below the endorsement threshold. Refined concepts were presented to 75 consenting participants in round two, with 43 (57.3%) providing evaluations and one concept falling below the threshold. In the third round, 31 (72.1%) responded, and all core concepts surpassed the endorsement threshold. Thus, leaving 13 PAL core concepts including topics such as strategic planning, executive communication, financial management, and supply chain management.
Conclusion: Identifying core concepts through expert consensus can standardize and improve PAL training. This research establishes a foundation for future studies and enhances training quality, enabling educators to develop PAL-specific lifelong learning programs that focus on the most relevant topics for the specialty. By prioritizing essential knowledge and skills, pharmacy administrators and leaders will be better equipped to address evolving healthcare challenges and foster continuous professional development.

P103

Interdisciplinary pharmacotherapeutics education: Development of an integrated pharmacotherapeutics curriculum for dental students

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Introduction: Knowledge of safe and effective use of medicines and the medicines regulatory environment is an essential component of dental education. Dentistry program accreditation requirements emphasise pharmacotherapeutics knowledge and skills. However, previous research has shown significant gaps in pharmaceutical knowledge of dental students and emphasises the importance of guidance and application-based teaching in increasing their confidence in this area. Interdisciplinary education is a key role for pharmacists, who help healthcare professionals to develop these necessary skills and awareness. The introduction of a new integrated pre-registration dental program at our institution provided an opportunity for pharmacy and dentistry educators to collaborate in the design a new pharmacotherapeutics curriculum for dental students. Here, we describe the development and implementation of this new curriculum.
Methods: Collaborative professional conversations between pharmacy and dentistry educators ensured that pharmacotherapeutics was purposefully designed and effectively integrated with other learning activities and assessments. Learning activities aimed to encourage the use of primary resources and up-to-date materials in learning activities. Lectures are short and focus on key concepts, with primary resources provided to students to deepen their knowledge in this area.
Results: The first two years of the pharmacotherapeutics curriculum—consisting of 15 in-person tutorials and 40 pre-recorded lectures—has been implemented to positive feedback from students. Assessments—including 250 multiple choice exam questions, two short-answer clinical exam stations, and 15 oral clinical exam stations—were also developed, reviewed and validated.
Conclusion: It is essential for pharmacy educators to leverage opportunities in other disciplines. Pharmacotherapeutics education for other healthcare professionals should be designed to foster a comprehensive understanding of key pharmacotherapeutics principles and development of necessary skills to apply these independently in real world settings. For dental students, this emphasises key concepts and practice such as collaboration, knowing their professional limitations, and improving interprofessional awareness.

P104

Pharmacy students on clinical placement – can we entrust students to document medication histories in our electronic medical records?

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Introduction: Final Year Pharmacy Students (FYPS) undertaking clinical placements can play a valuable role in obtaining Best Possible Medication Histories (BPMH), contributing to patient care. While Electronic Medical Records (EMR) are now widely used, integration of these systems into undergraduate learning is currently limited. Furthermore, FYPS currently have restricted EMR access during their clinical placements which can be viewed as a system limitation, hindering entrustment of learners. This study sought to evaluate the safety of students documenting medication histories in an EMR.
Methods: This prospective study was conducted across 11 metropolitan tertiary hospitals in South Australia over 36 weeks. For each BPMH conducted, FYPS generated medication orders in the EMR, and these were reviewed by the supervising pharmacist for any potential errors. The potential harm of each error was assessed by the supervising pharmacist and an interprofessional consensus panel, using the Harm Associated with Medication Error Classification system.
Results: Of the 2262 medication orders entered into the EMR by 65 FYPS, 156 (6.9%) were entered incorrectly. The most common type of errors identified was wrong directions (n=65/156, 41.7% of errors) followed by medication omission (n=28, 17.9%). Most errors were assessed as 'no harm' (n=82/156, 52.6%) or 'minor harm' (n=46/156, 29.5%), with only one instance classified as potential 'serious harm'.
Conclusion: Findings suggest that FYPS can accurately enter data into the EMR, with error rates comparable to other pharmacist activities. Entrusting learners to contribute to patient care with supervision levels that are appropriate based on their skills, knowledge and attitudes is important as supervision is a limited resource. Importantly, the decisions around EMR access levels for FYPS should be balanced with consideration around potential patient harm that could come from not training our available healthcare workforce in optimal use of EMRs or enabling them to make meaningful contributions to patient care.

P105

Purple Pen Podcast – Podcasting: A novel medium of continuing education for pharmacy professionals

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Introduction: In Australia, pharmacists are required to accumulate 40 points of continuing education each registration year. Continuing education opportunities have traditionally included conference attendance, specialist workshops, evening lectures, workplace education and reading pharmacy journals. The advent of new mediums such as podcasting offer pharmacists more flexible learning opportunities than traditional approaches. A podcast, in its most basic form, is a digital audio file, made available on the internet for downloading and listening to at a time of the users choosing.
Methods: A group of Australian pharmacists founded and host The Purple Pen Podcast, a long interview format podcast. Whilst the Podcast was originally pitched at Hospital Pharmacists, feedback from listeners indicates that the listenership includes pharmacy students, community pharmacists and other healthcare professionals. Topics for each episode are sourced from the hosts' clinical practice, the latest medical evidence, contemporary issues in pharmacy practice and feedback from listeners. The Podcast is not sponsored and does not accept speaker suggestions from pharmaceutical companies to minimise any conflicts of interest.
Results: There have been 166 episodes of the Purple Pen Podcast released between October 2016 and October 2024. The podcast has been downloaded over 265,791 times, an average of over 1600 listeners per episode. The most popular episode, entitled "Type II Diabetes" has been downloaded a total of 4031 times since release in September 2022. Other popular episodes include Coronavirus, Deprescribing Psychotropics, Cholesterol Update and Chronic Kidney Disease. Whilst the majority of podcast listeners are based in Australia (89%), the Purple Pen Podcast has been downloaded from 141 countries.
Conclusion: Podcasting is a viable alternative medium for the provision of education to pharmacists. The Purple Pen Podcast provides listeners with free continuing education at a location and time of their choosing.

P106

Shaping the future of Pharmacy Education: A four-year analysis of learner feedback on the Innovative Clinical Pharmacy Orientation Program

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Introduction: In 2020, a large tertiary healthcare network launched the Clinical Pharmacy Orientation Program (CPOP) to address challenges in providing consistent clinical training across multiple sites. Led by pharmacy educators, CPOP combines interactive presentations with case-based learning in a virtual simulated environment, reaching pharmacists across various locations. This study aims to analyse several years of evaluation data to identify the program's strengths and evolution opportunities from the learners' experiences and perspectives.
Methods: This retrospective mixed-methods study analysed learner feedback from August 2020 – August 2024. Routine online surveys, employing a 5-point Likert scale, assessed five key areas: understanding of the clinical pharmacist's role, content quality and relevance, presentation and delivery, learning environment, and overall satisfaction. Open-ended questions gathered suggestions for improvement. Quantitative data was analysed using descriptive statistics, and qualitative data underwent inductive thematic analysis.
Results: Over the four years, 306 learners completed the program, with 203 (66%) completing the survey. There were high levels of agreement (Strongly Agree or Agree) across the key areas: 95% of learners agreed the program enhanced their understanding of the clinical pharmacist's role. Similarly, 95% rated the content as high-quality and relevant. The program's presentation and delivery received 88% agreement, while 95% of learners agreed that it provided a positive learning environment. Overall, 95% expressed satisfaction with the program. Open-ended responses highlighted the need for enhanced technical support, additional interactive activities, and deeper exploration of complex topics.
Conclusion: This study highlights the CPOP's strengths as an innovative, future-ready pharmacy education program as evidenced by consistent positive feedback over four years. Enhancing technical support and interactivity could further improve the program. These insights offer direction for refining simulation-based training, ensuring continued longevity in the evolving landscape of healthcare education.

P107

A scoping review of resilience interventions in higher education

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Introduction: Pharmacy education faces unique challenges, including high academic demands, clinical training, and preparation for a rapidly evolving healthcare landscape. These pressures necessitate resilience as a core competency, enabling students to manage stress, adapt to complex situations, and maintain well-being. A scoping review was conducted to identify curriculum-based resilience interventions in health profession higher education to identify curriculum-based learning approaches utilised to foster resilience-building capabilities in students.
Methods: This review was conducted using the Arksey and O'Malley (2005) framework for scoping studies, following PRISMA guidelines across multiple databases, including Medline and CINAHL. The review included studies conducted between 2010 and 2023. Studies included in this review focused on resilience interventions in higher education, specifically within health sciences, using validated scales to assess impact.
Results: 339 studies were found in the initial search and sixteen studies met the inclusion criteria, encompassing interventions of different types (face-to-face, online and mixed) and durations. Nine studies focused on short-term interventions and active learning interventions in resilience and reported immediate benefits in mental health and engagement, while seven longer-term studies demonstrated sustained resilience and adaptability. Formats varied, with both face-to-face and online interventions achieving positive outcomes when incorporating interactive elements, supporting agility in curriculum design and delivery.
Conclusion: The review's findings emphasise the critical role of integrating long-term, interactive resilience programs within pharmacy curricula to better prepare students for managing both academic demands and future professional challenges. While short-term programs provide a foundation by introducing resilience concepts, long-term, interactive approaches are essential for fostering enduring improvements in resilience and overall well-being.

P108

Exploring the awareness and attitudes of undergraduate pharmacy students and staff towards the environmental sustainability of pharmacy

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Introduction: The environmental impact of pharmacy and what pharmacists can do to mitigate this is an increasingly important topic. This research aimed to determine pharmacy staff and students' knowledge and attitudes towards environmental sustainability, and the effect on students of introducing new environment-related content to the BPharm curriculum.
Methods: Two successive cohorts of second year undergraduate pharmacy students from the University of Auckland were invited to complete questionnaires at the start and end of a semester. Throughout the semester, several teaching sessions were dedicated to environmental sustainability and pharmacy, incorporating Māori concepts of sustainability and the disposal of pharmaceutical waste. Session formats included a debate, lectures, and small group discussions. Questions in the survey related to awareness of planetary health and sustainability concepts and attitudes towards pharmaceutical pollution. Views of teaching staff were ascertained at a single time point, as part of a half-day retreat dedicated to environmental sustainability and compared with those of pharmacy students.
Results: Of the 171 eligible student participants, 119 agreed for their data to be included in the 'before' survey and 132 agreed to be included in the 'after' survey. The proportion of students who reported being 'reasonably' or 'very' knowledgeable from the start to the end of the semester increased by more than four-fold for planetary boundaries One Health and unwanted medicine disposal in Aotearoa New Zealand. Students largely agreed that the environmental impact of medicines and pharmaceutical pollution were an important issue for pharmacy. Staff responses (n=18 out of an eligible 37) indicated reasonable knowledge with unwanted medicine disposal but little knowledge about planetary boundaries.
Conclusion: Student awareness of key sustainability concepts improved over the semester. Further implementation of sustainability concepts throughout the wider BPharm curriculum is warranted, but additional staff education will be necessary to support this.

P109

Evaluating education for pharmacist prescribing

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Introduction: Internationally, pharmacist's educational requirements to be prescribers are diverse. Educational offerings in Australia are evolving and being guided by the Accreditation Standards for Pharmacist Prescribers education programs (Australian Pharmacy Council December 2023). There is substantial literature on pharmacy prescribing, however, there appears to be limited published research on examining pharmacy prescribing education and its impacts. This study therefore aims to critically evaluate pharmacist prescribing courses, including content, pedagogy, and delivery, and examine their underpinning theories, models, or frameworks.
Methods: A systematic review of the literature is in progress, using Cochrane methodology and grey literature through a Google search including relevant pharmacy and university websites of the United Kingdom, USA, Canada and New Zealand. PubMed, Scopus, Web of Science and CINAHL were searched in July 2024 for papers published from 2008 to 2024. A quality appraisal of these studies will be undertaken using the Quality Assessment for Diverse Studies (QuADs) appraisal tool. Inclusion criteria were articles published in English relating to evaluating education and training for pharmacist prescribing.
Results: 1801 articles were screened by title and abstract, with 155 reviewed at full text reviewed and 25 included in the final review. Preliminary findings illustrate that education programs have similar content, structured around national competency frameworks. Included studies describe pedagogies such as simulation, audience response technology and podcasting. A supportive network such as mentors or designated prescribing practitioners during and following courses appear important. Course design seems to vary by cohort size, interprofessional or intraprofessional and mode of delivery – face-to-face, online or hybrid. Grey literature on accredited courses in the United Kingdom describes several strategies such as peer assessment, problem-based learning and personal development plans.
Conclusion: The findings will inform best practice for pharmacist education in prescribing for undergraduate and postgraduate programs for practicing pharmacists.

P110

Evaluating pharmacy students' perceived confidence levels after performing a simulated electronic medical record exercise

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Introduction: With the increasing integration of electronic medical records (EMR) in hospitals, proficiency in navigating these platforms has become an essential skill for pharmacy graduates. Studies suggest that simulation provides a safe environment to practise EMR processes, such as inpatient order verification. However, little is known about the use of MyDispense, a well known education simulation platform, to facilitate such practice.
Methods: During an on-campus workshop in May 2024, second-year pharmacy students at Monash University completed a thirty minute inpatient medication order verification exercise on the MyDispense platform. A total of 265 second-year students from Monash University Australia and 125 students from Monash University Malaysia participated in the exercise. Prior to the exercise, students were invited to participate in a voluntary anonymous pre-activity and post-activity survey approved by ethics (MUHREC42675). Both the pre- and post-survey included five 5-point Likert scale questions to evaluate their perceived confidence levels performing inpatient order verifications. The post survey included two open-ended questions to gain feedback about the exercise.
Results: A total of 277 responses (71% response rate) were recorded in the pre-activity survey, and 261 responses (67% response rate) in the post-activity survey. Comparing the medians of the Likert scale questions revealed an increase in perceived confidence levels after verifying inpatient medication orders on MyDispense (Median score out of 5, pre-activity was 3 vs post-activity was 4, $p < 0.0001$). Positive feedback highlighted the detailed instructional explanation of the MyDispense platform. Constructive feedback suggested extending the workshop duration to allow greater exposure to the MyDispense EMR
Discussion: The MyDispense platform positively impacted the students' perceived confidence to verify inpatient medication orders. Future studies could evaluate students' confidence levels following their hospital placements to determine whether prior exposure to a simulated EMR was beneficial in enhancing their ability to utilise an EMR in a real-world setting.

P111

No-to-nicotine: Enhancing pharmacy education on smoking and vaping cessation

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Introduction: While the health risks of smoking are well-documented, the emergence of vaping as a perceived alternative, despite containing high nicotine levels and other chemicals, has added complexity to smoking cessation efforts. Evidence on the role of vaping as a smoking cessation aid is weak, and recent Australian regulations now place nicotine vaping products at the forefront of the pharmacy profession, with pharmacists dispensing vapes without a prescription in specific instances. As health policy continues to evolve, there is a clear need to train pharmacy students in both smoking and vaping cessation, integrating current guidelines and effective risk communication.
Methods: The No-To-Nicotine module, an educational intervention was designed and implemented within PHAR2911, a second-year pharmacy unit at Sydney Pharmacy School. Using a flipped classroom approach, students reviewed nicotine pharmacology and vaping regulations before attending two 1-hour lectures on smoking and vaping and a 2.5-hour interactive workshop. The workshop involved case scenarios and skills practice, including assessing nicotine dependence, addressing common cessation challenges, counselling and communicating risks. A pre-post questionnaire was developed to measure changes in students' knowledge and attitudes regarding smoking and vaping cessation.
Results: Two-hundred-sixty-seven students attended the No-To-Nicotine module in semester 1, 2024. Analysis of pre- and post-questionnaires (55.1% response rate) indicated significant improvements in students' clinical knowledge of smoking and vaping cessation (pre-mean total knowledge score 18.9±5.6; post-mean total knowledge score 25.4±5.0). Students reported increased awareness and confidence in communicating health risks and expressed greater readiness to support patients to quit.
Conclusion: This model can inform future pharmacy education curricula, equipping students to advocate for smoking and vaping cessation in primary care settings and adapt to evolving health regulations.

P112

Standardizing virtual interactive cases for pharmacist prescribing for minor ailments

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Introduction: Virtual cases are associated with increased learner satisfaction and provide learning opportunities that simulate practice. We created a series of pharmacist prescribing for minor ailment (PPMA) cases, via the Virtual Interactive Case (VIC) System, to facilitate PPMA engagement. Following a usability study of three pilot cases, users requested an enhanced feedback mechanism in VIC to better inform individual gaps in PPMA patient assessments. This project was aimed to develop and standardize the scoring/feedback mechanism of PPMA VICs to more accurately reflect community pharmacy practice and provide case-specific feedback to users.
Methods: A preliminary scoring table was created incorporating feedback from the usability study of three PPMA VICs and by consulting the curricular resources on PPMA. Three independent pharmacy-student assessors then applied the scoring table on three VICs and regrouped to reach a consensus on the final scoring table. The final scoring table was then applied to the entire series of 14 PPMA VICs by four independent reviewers, followed by consensus generation.
Results: The final scoring table was separated into five “point” levels: 50, 25, 15, 5, and 0. If a PPMA VIC user asks all 50-point questions, then they have completed a core patient assessment of the respective minor ailment. If the user also asks the 25-point questions, then they will be able to recommend patient-specific interventions. For the 15-point questions, they represent best practices for general patient-centered care. The 5-point questions are unrelated to the specific minor ailment, but present opportunities for health promotion. Finally, 0-point questions are irrelevant/unnecessary PPMA patient-assessment questions.
Conclusion: Through an iterative/consensus-generating process, we developed and standardized the feedback mechanism of a series of 14 PPMA VICs. With this enhanced scoring method, pharmacists may better engage in the VIC learning experience and reflect on their strengths and weaknesses in PPMA patient assessments.

P113

Exploring unique postgraduate opportunities – A discussion on academic fellowships in pharmacy

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Introduction: Pharmacy graduates interested in academic careers face limited options that adequately prepare them for faculty positions. Academic fellowships have emerged as appealing options, equipping fellows with essential skills in teaching, scholarship, clinical practice, and service needed for success as faculty members. However, limited awareness of academic fellowships, combined with the wide variability among programs, makes it challenging for graduates to navigate these training opportunities. This study examines academic fellowship programs across the U.S., highlighting their unique structures and shared commitment to developing future pharmacy educators.
Methods: A Collective of known U.S.-based fellowship programs was formed. Program directors were asked to provide information including descriptions, structure, and requirements of their programs. In addition, a 22-item questionnaire was distributed to academic fellows to gain further insights. Data was compiled and analyzed to identify commonalities and differences among fellowship programs.
Results: Fifteen programs are represented in the Collective. Thirteen program directors provided information. Five programs (38.5%) are 1-year, five (38.5%) are 2-years, and three (23.1%) vary based on the fellow's background. Six programs (46.2%) require and five (38.5%) prefer one year of residency training or equivalent experience. Eleven (84.6%) include a clinical component. Thirteen fellows from ten programs responded to the survey. Fellows reported an average distribution of effort of 38% teaching, 23% research, 20% clinical service, 15% professional service, and 4% other. Current fellows reported completing or actively working on 3-4 major scholarship of teaching and learning (SoTL) projects or other research initiatives, indicating active scholarly engagement.
Conclusion: Academic fellowships in the U.S. vary significantly across institutions but share the common goal of preparing graduates for academic roles. This study highlights the diversity and shared goals of these programs. Expanding the Collective beyond the U.S. would contribute to a global vision for adaptable, skilled pharmacy educators.

P114

Bringing students into the modern age of therapeutics

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Introduction: Biologics, such as monoclonal antibodies, are increasingly used to treat complex conditions such as auto-immune diseases, cancer. Therefore, it is essential for future health care professionals, such as pharmacy students, to understand how and why these drugs function. To address this, we developed a scenario-based workshop to help students understand the chemistry and pharmacology underpinning the drugs' mechanism of action.
Methods: The workshop is modelled on existing workshops delivered in the pharmacy curricula which use Maestro (Schrodinger suite) to teach small molecule drug design. The new workshop utilises Bioluminate (Schrodinger suite) to study protein-protein interactions which underpin biologics' mechanism of action. Use of similar software builds on students' previous familiarity and reduces the learning curve associated with new software.
Results: The workshop comprises a 4-hour session and pre-workshop assessment, to be delivered in a new core unit in the undergraduate Pharmacy curriculum, focusing on oncology and immunology. To integrate their pre-existing pharmacological and clinical knowledge related to the treatment of breast cancer and their subtypes (namely, HER-positive), students are provided a hypothetical scenario where they are part of a research team at a pharmaceutical company, working to produce a report assessing their competitor's product and aim to develop a biosimilar or biobetter of trastuzumab using Bioluminate. Assessments and activities were mapped to unit learning outcomes accredited by the Australian Pharmacy Council. The workshop was open-ended to foster student engagement with the content and encourage students to be creative in selecting unique modifications to the protein-protein interface, resulting in the generation of many biosimilars.
Conclusion: We have developed a workshop to help students understand the chemistry and pharmacology underpinning the mechanism of action of biologics.

P115

Diversity, equity, and inclusion: Strategies from continuing pharmacy education providers

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Introduction: Continuing pharmacy education (CPE) plays an essential role in educating health care providers on how to optimize person-centered care for patients by incorporating concepts of diversity, equity, and inclusion (DEI) into practice. Despite the importance of DEI concepts in person-centered care, little is known about the DEI initiatives promoted and implemented by providers of CPE.
Methods: This study was a repeated cross-sectional evaluation of DEI initiatives reported by continuing pharmacy education providers from 2021 to 2023. Surveys were electronically administered to accredited pharmacy continuing education providers at two separate time points from 2021 to 2023. Survey items assessed providers' current efforts and best practices for incorporating DEI into organizational culture and educational programming. Frequencies and percentages were calculated for categorical responses, and a general interpretivist approach was used to code open-ended response items and describe categories of responses.
Results: Overall, 50 and 33 responses were received in 2021 and 2023, resulting in response rates of 18% and 12%, respectively. In both survey periods, the most common step to advance DEI was to engage pharmacists and/ or pharmacy technicians in DEI discussions (n = 21 (42%) in 2021 and n = 16 (48%) in 2023). Qualitative analysis described the following themes and categories: DEI Best Practices (CE programming DEI strategies; organizational DEI strategies), DEI Goals (mission statement and DEI strategic plan; developing CE; continuing pharmacy education committee and task force; faculty development and guidance), and Accrediting Body Support (sharing best practices and training; technical support).
Conclusions: Although CPE providers described current efforts and best practices related to DEI in CPE, organizations involved in CPE accreditation can continue to explore ways to support DEI initiatives. As a result of this work, ACPE staff updated guidance to providers on approaches to incorporating DEI into organizational culture and CPE activities.

P116

Incorporation of inclusive teaching training within a US-based Postgraduate Residency Teaching Certificate Program

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Introduction: Post-graduate pharmacy residency training is necessary to develop the foundational competence needed for direct patient care, and should include specific training related to teaching in the education and clinical environments. A state-wide resident teaching certificate program (TCP) was established in 2011 to enhance teaching skills in the didactic and clinical practice settings. Starting in 2022 – 2023, training on inclusive teaching and precepting was added to the established curriculum. The aim of this study was to evaluate the impact of incorporating inclusive teaching training on participant's self-rated confidence to implement inclusive teaching strategies in the didactic and clinical environments.
Methods: Content delivery and training on being an inclusive teacher was incorporated into the TCP. Participants were asked to evaluate their confidence to incorporate inclusive teaching strategies in the didactic and clinical settings via survey using a 10-point Likert scale (1- least confident and 10 most confident). The survey is administered at the beginning and end of the program to evaluate the effectiveness of the program.
Results: A total of 51 residents completed the pre and post survey in 2023-2024. Overall resident confidence in implementing inclusive teaching strategies in didactic classroom teaching improved from a mean of 6.2 to 8.4 ($p=<0.001$), in facilitating in the classroom setting from a mean of 6.1 to 8.2 ($p<0.001$) and in teaching in the clinical environment from a mean of 6.6 to 8.8 ($p<0.001$). Results from the 2024 – 2025 academic year will be added and presented.
Conclusion: This study demonstrated the incorporation of training inclusive teaching was well-received and resulted in improved teaching confidence in the didactic and clinical settings. Developing skills related to inclusive teaching in postgraduate trainees has the potential to have a positive impact in creating inclusive learning environments and reducing known healthcare disparities.

P117

Designing a culture of student centredness: Lessons from the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences, USA

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Introduction: School culture influences the hidden curriculum. Educators communicate unspoken values, beliefs, practices and norms to students through interactions, modelling, and behaviors that influence learning and academic success. The purpose of this study is to describe the process used by the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences (SSPPS) to intentionally design, implement, and sustain a school culture centred on student success.
Methods: In partnership with an organizational culture consultant, the SSPPS followed the Culture by Design 8-step framework to identify and articulate desirable elements of the school's culture. A faculty/staff survey was developed that established baseline metrics on these desirable behaviours to benchmark future improvements. Student feedback mechanisms were implemented to assure that the newly designed culture is reflecting positively on student learning and academic success.
Results: Twenty-four culture fundamental behaviours were identified on communication, interpersonal skills, equity, diversity, and inclusion, student-centredness, and approach to work. All fundamentals were directly applicable to faculty-student relationships. Several explicitly focused on how to best support students' long-term success and assure strong educational reputation. The student-centred fundamental received a score of 4.19 on a 5-point scale. Several student feedback channels were established to assess the impact of the designed culture on student learning and sense of belonging. These included regular meetings with faculty liaisons and the SSPPS Dean, feedback through class leadership, and course surveys. Conclusion: Feedback indicated that SSPPS faculty and staff behaviours were generally consistent with the newly designed culture. To further improve student-centredness and enhance learning experiences, the SSPPS hosts periodic townhalls to address concerns and support development of new initiatives. Multiple events aimed at enhancing connections amongst faculty, staff, and students are held to strengthen belonging. Continued practice of the SSPPS culture fundamentals is expected to lead to more consistent achievement of our desired culture.

P118

Equality, diversity and inclusivity: Evaluating the inclusivity of the Primary Care Pharmacy Education Pathway (PCPEP) assessment strategy.

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Introduction: The Primary Care Pharmacy Education Pathway (PCPEP) assessment strategy includes e-assessments, workplace-based assessments, reflective essays and an e-portfolio. Education providers should monitor inclusive assessment practices to ensure equitable opportunities with no group or individual unintentionally disadvantaged. Inclusive assessment aims to tackle assessment at point of design – looking at all aspects, from the development of marking criteria to method and mode of feedback – to ensure the ways in which we assess do not exclude students.
Method: We measured the extent to which the PCPEP assessment strategy facilitates inclusive assessment. Nine activities which facilitate inclusive assessment were derived from Quality Assurance Agency for Higher Education and University of Manchester guidance. Two researchers independently reviewed the extent to which these activities were considered in the PCPEP assessment strategy. Red-Amber-Green ratings were used.
Results: Performance of the PCPEP assessment strategy in relation to activities which facilitate inclusive assessment:
1) Adopting a range of assessment methods (Green)
2) Engaging student voice in assessment design (Amber)
3) Employing culturally inclusive assessment methods (Amber)
4) Considering religious observances and school holidays when setting deadlines (Green)
5) Considering students' previous educational background and assessment experiences (Green)
6) Considering the needs of students with disabilities or neurodivergence (Amber)
7) Ensuring students have variety in assessment and some individual choice (Amber)
8) Ensuring feedback is timely, constructive and developmental (Amber)
9) Developing students' assessment literacy and alleviating assessment bias (Green)
Conclusion: The PCPEP assessment strategy facilitates inclusive assessment (Five green and three amber activities) but could be improved. The biggest challenge was making assessments inclusive for learners with disabilities or neurodivergence. We planned to make the following improvements:
1) Reviewing e-learning software to improve accessibility.
2) Developing guidance on using computer assistive technology.
3) Reviewing e-assessment wording to be more accessible to learners who use screen readers.

P119

Cultural competence among healthcare professional educators: A mixed-methods study

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Introduction: As cultural diversity gains global prominence, healthcare professional educators (HPEs) are expected to exhibit a high level of cultural competence in education. Responding to this necessity requires the establishment of healthcare education that is oriented toward sustainability. This study aimed to investigate HPEs' perceptions of cultural competence at the Qatar University-Health Cluster (QU-HC).
Methods: A convergent mixed-methods design was applied. The quantitative phase involved 118 HPEs at QU-HC responding to the Multicultural Teaching Competencies Scale (MTCS). The qualitative phase included three Focus Groups (FGs) with 22 HPEs, guided by Campinha-Bacote's (1999) model of cultural competence. Thematic analysis was applied to analyze FGs data. Results: Seventy-one educators responded to MTCS (response rate was 60.2%), and 22 educators attended the FGs. HPEs demonstrated a moderate level of cultural awareness (Total MTCS mean= 57±7.8). The FGs revealed that the HPEs exhibited awareness and responsive teaching, but individual and institutional factors needed improvement.
Conclusions: This study expands upon the existing literature concerning the cultural diversity impacts on the teaching and learning aspects of health profession programs, specifically within the Middle East context. It is recommended that health professional programs intensify the cultural orienta-tion provided to educators, reanalyze the curricular content to serve diverse pa-tients, and explore innovative approaches that embrace cultural diversity and sus-tainability.

P120

Assessing the services and staffing of hospital pharmacy educators in Australia: A scope of practice analysis

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Introduction: Recent shifts in the healthcare landscape necessitate a re-evaluation of hospital pharmacy education roles. With increasing demands for skilled pharmacists, robust educational programs are crucial to prepare for dynamic clinical environments. However, the services provided by Australian hospital education pharmacists (EPs) are not well-defined. The 2013 Advanced Pharmacy Australia (AdPha) Standards of Practice for Clinical Pharmacy Services suggest a ratio of one education pharmacist per 10 interns or 50 pharmacists, which may not align with current needs.
Methods:This study aimed to investigate the educational services provided by Australian hospital EPs, their staffing levels, and satisfaction with service provision. A HREC-approved electronic survey was distributed to Directors of Pharmacy (DoP) at Australian healthcare services (HCS) in February 2024, targeting responses from senior EPs or DoPs, aiming at one response per HCS.
Results: Responses were received from 65 HCS nationwide. Notably, 86.2% had dedicated EPs. Common services included continued education (91.1%), intern programs (89.3%), recruitment/training (87.5%), and student placements (85.7%). However, many other additional services not covered by the 2013 Standards include research (71.4%) and residency programs (57.1%), technician education (53.6%), line management (48.1%), technology (37.5%) and extended scope-of-practice training (32.1%) were also provided. Alarmingly, 79.5% of services reported EP staffing below 2013 recommended levels, with a median of 1 [0.25;1.5] EP, compared to the expected 2.3 [1.1;3.2]. Only 37.5% of EPs consistently worked all allocated education hours.
Levels of satisfaction with service provision varied, with high satisfaction for registrar (78.6%) and intern programs (71.4%), but lower for work-based assessments (29.7%), research (30.4%) and extended scope-of-practice training (31.3%).
Conclusion: While Australian hospital EPs deliver a wide range of educational services, insufficient staffing and time constraints hinder their effectiveness. It is crucial for healthcare services to prioritise EP staffing to enhance workforce development.

P121

Could interprofessional learning experiences be beneficial for Australian prescribing podiatrists and pharmacists? A qualitative study

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Introduction: The number of podiatrists endorsed to prescribe is increasing. Prescribing podiatrists require mandatory continuing professional development (CPD) specific to their prescribing practice, however, CPD resources often do not meet prescribing podiatrists' needs in terms of content, relevance, accessibility, and meaningfulness. Furthermore, interprofessional collaboration, known to improve patient and organisational outcomes, requires understanding and appreciation of each other's roles. Interprofessional learning between podiatrists and pharmacists could address CPD needs and improve practice.
This study aimed to explore role understanding, perceptions of, and potential for, interprofessional learning between prescribing podiatrists and pharmacists.
Methods: Australian prescribing podiatrists and pharmacists participated in four homogenous focus groups via ZoomTM. Participants were asked about their opinions, feelings, experiences and knowledge relating to the roles of each discipline and interprofessional learning between the professional groups. Focus group discussions were transcribed verbatim and underwent reflexive inductive thematic analysis.
Results: Fifteen podiatrists and 15 pharmacists participated in the focus groups. Four themes were evident in the data: Experience drives understanding of each other; Exposure is influenced by work setting; Reflections on and frustrations with health system issues; The vision for interprofessional learning in the future.
Overall, prescribing podiatrists and pharmacists held positive about the potential benefits and feasibility of interprofessional CPD to support the clinical use of medicines, build stronger relationships, and collaborative healthcare practices. Both groups acknowledged awareness of the prescribing podiatrist role and training was lacking and contributed to common frustrations with system issues. Pharmacists advocated for interprofessional learning with podiatrists at undergraduate level to align with their positive experiences with other professional groups. Suggestions for learning modes, facilitators and topics were collated.
Conclusion: When developing undergraduate courses, CPD and advanced training programs, podiatry and pharmacy education providers should consider the benefits of interprofessional learning and the desire of the two professional groups to learn together.

P122

Entrustment of pharmacy learners: A survey of Australian pharmacists and pharmacy interns

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Introduction: This study aims to explore the level of entrustment (and associated level of supervision) expected of learners at defined time points in intern pharmacy training.
Methods: Registered and provisionally registered (intern) pharmacists in Australia were invited to participate in an anonymous online survey. Participants provided demographic information and articulated the level of supervision they expect an intern pharmacist to require for three entrustable professional activities (EPAs) using a 5-level entrustment scale. The three EPAs that are required in the Australian intern training program are dispensing, compounding, and providing medication counselling.
Results: A total of 302 responses were received (82 intern pharmacists and 220 registered pharmacists). Intern pharmacists' self-perceived level of entrustment was higher (entrustment levels of 4 and 5) compared to pharmacists' expected entrustment of interns at the midpoint and final point of intern training for dispensing ($p < 0.037$ and $p < 0.003$ respectively) and compounding ($p < 0.007$ and $p < 0.000$ respectively). Pharmacists in community pharmacy and hospital dispensary settings expected intern pharmacists to practice with more autonomy (entrustment levels of 4 and 5) compared with hospital clinical pharmacists at the final point of intern training for the compounding ($p = 0.015$) and counselling ($p = 0.000$). There was a medium consensus (50 – 74.9% overall agreement at any one entrustment level) reached by all pharmacists on the level of entrustment expected of intern pharmacists at different time points in training for all three EPAs.
Conclusion: There is a lack of consensus amongst registered pharmacists regarding the level of supervision expected of interns at defined time points in training. Entrustment decisions by registered pharmacists of intern pharmacists may differ with practice setting. Intern pharmacists' self-perceived entrustment of their performance was higher than that of registered pharmacists, suggesting a potential gap in metacognitive skills amongst intern pharmacists.

P123

Usability testing of an online, evidence-based pharmacogenomics education program for pharmacists working in cancer care

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Introduction: Usability testing provides valuable information when ensuring newly developed education programs are deemed acceptable to the target audience prior to implementation. The aim is to evaluate the usability of an online, evidence-based pharmacogenomics education program, developed in-house, according to the POUR principles (perceivable, operable, understandable, robust), in order to subsequently improve the user experience before wide scale implementation to pharmacists at an Australian public hospital.
Methods: The methodology was adapted from Benedict et al. (2022) with permission. Five pharmacist-users tested up to two of eight modules utilising the think-aloud method. Participants' video, audio and screens were recorded, with automated audio transcription. A facilitator was present during testing to prompt verbalisation of thoughts when needed, ask standard pre- and post-usability testing questions, and guide users to complete three validated quantitative instruments; System Usability Scale (SUS), Standardised User Experience Percentile Rank Question (SUPR-Q) and WebQual. Two researchers employed reflexive thematic analysis through confirming accuracy of transcriptions, immersing themselves in the recordings, and determining codes independently prior to themes being jointly agreed upon.
Results: Four themes were finalised based on generated codes; recognition of usefulness of content, factors inhibiting understanding, acceptable user experience and poor user experience. The mean SUS and SUPR-Q scores were 83.1 (SD 14.9) and 4.6 (SD 0.2) respectively, and the overall mean WebQual score was 6.1 (SD 0.2), all indicating good usability. Overall, pharmacists valued the program content and found the format visually satisfying and engaging. Subsequently, optimisation of the layout and refinement of the information and instructions were made to improve the user experience.
Conclusion: Our program appears to meet three of four POUR principles, where the education program was built to meet accessibility criteria, however robustness was not specifically tested for in this study. Process, outcome and implementation evaluation will be conducted after program rollout.

P124

Understanding barriers and competencies in hospital pharmacist prescribing: An ethnographic study

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Introduction: Pharmacist prescribers play a critical role in enhancing patient care in hospitals, working closely with multidisciplinary teams (MDTs) to improve patient outcomes. However, there are systemic and organisational challenges that impact the application of their competencies outlined in the Royal Pharmaceutical Society's (RPS) Competency Framework, in England, UK. This study explores the barriers and facilitators affecting pharmacist prescribers' daily practices in an inpatient ward environment.
Methods: An ethnographic approach was employed, with non-participant observations conducted over six half-day sessions involving three prescribing pharmacists in an NHS inpatient ward, in Englad UK. Data was typed in an encrypted password-protected file. Data were analysed using framework and thematic analysis. The RPS Competency Framework guided the framework analysis, mapping observations to the behavioural indicators and corresponding contextual practical facilitators and barriers.
Results: Framework analysis highlighted frequently applied competencies, such as accessing and interpreting patient records, MDT collaboration, and adapting prescribing decisions based on clinical assessments. Facilitators included a collaborative MDT culture and access to comprehensive patient information. Barriers, however, such as fragmented IT systems, time constraints, and hierarchical dynamics, limited the consistent application of these competencies, impacting workflow. Thematic analysis revealed two primary themes: Emotional Responses to Systemic and Interpersonal Challenges, where pharmacists faced frustration with IT inefficiencies and high workloads, and Navigating Professional Identity and Hierarchies, which illustrated the challenges pharmacists encounter in asserting expertise within MDT hierarchies.
Conclusion: The findings highlight the importance of addressing systemic barriers and fostering supportive MDT environments to enable prescribing pharmacists in optimising their competencies in practice. Improvements in role integration, emotional intelligence, and interdisciplinary support could enhance prescribing practices and empower pharmacist prescribers to deliver safer, improved patient outcomes in hospital settings.

P125

Introduction of EPA based learning programme for community pharmacy interns at Bargain Chemist New Zealand

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Introduction: Bargain Chemist operates 22 community pharmacies in New Zealand. Tasked to develop a national intern training programme that complements the PSNZ intern training programme. Providing clear learning and training expectations; and to supporting interns and preceptors. EPAs provide an opportunity for interns to watch their progress develop to independent practice.
Method: Competency and milestone-based training tasks were identified and assessed for adaption to EPAs. EPA were assessed via the EQual rubric to evaluate quality and structure. Tasks were categorised as appropriate EPAs with a score of ≥ 4.07. Scores of <4.07 required further refinement and/or alternative assessment methods.
The Bargain Chemist Intern Training Programme starts with foundation EPAs with additional EPAs being added each month. In June all EPAs are included. From July the preceptor and intern review EPAs at ≤3 until all EPAs have achieved Level 4. By September all EPAs should be achieved at level ≤4 and the intern should be working at the level expected of a first-year pharmacist.
Training is provided for both interns and preceptors on how the EPA levels will be used for assessment.
Results: 94 tasks were identified and assessed via the EQual rubric. 22 were duplicates. Three were not suitable EPAs. 14 scored < 4.07 of those 10 were given alternate assessment and 4 were included. 52 EPAs were included in the final programme. Each EPA was categorised as: Dispensary, Clinical and Communication.
Conclusion: The activities and training needed to design an intern training year cannot be covered by one teaching style. Incorporating EPAs, learning milestones, and intensive weekly teaching programme work together to create a well-rounded learning environment. Using the EQual rubric helped to identify how to create and writ professional activities.

P126

Career intentions of pharmacy students: Understanding student preferences and factors influencing degree and career choice

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Introduction: More graduates entering diverse employment sectors and shortages of pharmacists to fill patient-facing roles has meant improved predictors of pharmacy workforce capacity are needed. Better understanding of student career preferences will help refine such predictors while also aiding educators to refine pharmacy programme curricula. This study aimed to understand student career intentions and factors influencing both degree and career choice.
Methods: This study gathered data through an online survey consisting of both Likert-scale and multiple-choice questions. The survey was distributed to all students of a pharmacy programme in Ireland in November 2023. Data was coded and analysed quantitatively using descriptive and inferential statistics, whereby $p<0.05$ denotes statistical significance.
Results: Data from 90.1% (311/345) of the university's pharmacy students was collected. Over half (56.5%) of students intend on perusing community pharmacy, followed by industry (18.4%) and hospital pharmacy (10.6%). Important factors for choosing to study pharmacy included interest in science/health-related field, desire to help people, career opportunities and knowledge of salaries. Work experience placement was a significant factor for choosing a career for almost all students (98.7%). Factors considered when choosing a future career were compared between students intending to enter patient-facing (community/hospital pharmacy) and non-patient-facing roles. Direct patient contact, impact of job on health and wellbeing and use of pharmacy skills were significantly more important to those intending to pursue patient-facing roles ($p<0.05$). While, benefits, promotion opportunities and training opportunities were significantly more important to those intending to enter non-patient facing roles ($p<0.05$).
Conclusion: This study provides an in-depth analysis of intended career choices of students from an Irish pharmacy programme. Information regarding important factors for degree and career choice will be of interest to educators, future employers, and policymakers. The research represents a springboard to refine pharmacy workforce capacity predictions and pharmacy curricula based on student career preferences.

P200

Evaluation of electronic health record training within a clinical capstone course and impact on advanced pharmacy practice experience readiness

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Introduction: Pharmacists require experience and expertise with electronic health records (EHR) to provide efficient and effective care to their patients. A 2017 study demonstrated only 63% of schools were using an EHR in their standard educational programming. This results in an experience gap as 99% of US hospitals use an EHR and 96% are using computerized order entry for medications.
Methods: Third year pharmacy students were trained on the EPIC® EHR during a clinical capstone course including 8 hours of EPIC® training paired with 4 course activities and assessments. Training included EPIC® navigation, live/remote patient evaluation to identify pharmacotherapy interventions. We evaluated preparedness to perform on advanced pharmacy practice experience (APPE) rotations that utilize EHRs for patient care.
Results: In academic year 2023- 2024, 73 students responded to the survey. Fifty-five percent agreed or strongly agreed that EPIC training within the course increased their proficiency with the EHR. Sixty-one percent of students thought the clinical capstone training adequately prepared them for their APPE EHR (24% were neutral); 67% of students 'Somewhat or strongly agreed' the EPIC experiences in the capstone course improved their ability to perform on their APPE rotation. Seventy-three percent of preceptors 'somewhat or strongly agreed' that compared to previous students, their student was more familiar with EPIC functionality. Eighty percent agreed they spent less time teaching the student how to use the EHR compared to previous years and 56% agreed their student's performance on the rotation was improved based upon their EPIC proficiency/experience prior to starting the APPE. Results from the 2024 – 2025 academic year will be added and presented.
Conclusions: Incorporation of a real world EHR into a controlled classroom environment prior to clinical rotations was feasible and resulted in improved APPE readiness and student performance as perceived by both students and preceptors.

P201

LEAPs and bounds: Strategies for co-curricular ADVANCE-ment and measurement of professional identity formation

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Introduction: Professional identity formation (PIF) represents a critical aspect of a pharmacist's journey and extends beyond the classroom and clinical environments. The active engagement of students in co-curricular experiences ensures preparation of confident and competent future pharmacy professionals. The objective of this poster is to compare three institution's methods to engage and track student achievement of co-curriculars, student reflections, and PIF.
Methods: Schools and colleges of pharmacy have considerable challenges to implementing and evaluating co-curricular expectations, with the most frequently identified areas of concern including documentation of impact of experiences on student learning and assessment. The institutions reflected in this project describe how various tools are utilized in the documentation of students' achievement and development.
Results: University of Maryland School of Pharmacy partnered with the American Pharmacists Association (APhA) to implement ADVANCE as an engagement tool where students evaluate themselves on various skills, design personal goals, and track and document completion of various required and optional tasks. Rutgers University incorporated a non-credit bearing required longitudinal co-curricular workshop sequence entitled, Leadership, Entrepreneurship and Innovation, Awareness of Self and Professionalism (LEAP) and an annual student professional inventory document in order to cultivate student PIF in alignment with ACPE standards. Through collaborative networking, Northeastern University modified and adopted the LEAP seminar series and integrated APhA ADVANCE as the documentation platform for the co-curricular activities.
Conclusions: Although methods and execution were customized for each institution, student self-reflections provided annual snapshots of PIF and assisted in the relationship between self-confidence, curricular performance, and its relation to APPE-readiness. Development of a structured co-curricular experience and implementation of a solution to longitudinally track student progression and development across the co-curriculum requires consideration for available resources, including time, budget and technology.

P202

Getting every student to open the book and do assigned readings: An integrated workshop design in first-year pharmacy

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Introduction: Pre-work completed before class aims to provide students with foundational knowledge. However, we struggle to get students to complete assigned readings and pre-work and therefore a large portion of class time is spent addressing students' knowledge gaps. Importantly, without this foundational knowledge, students often arrive in class unprepared to participate in counselling role play activities, which call for higher-order thinking skills. Additionally, we need to professionally socialise first year students into the pharmacy profession by helping them to acquire pharmacists' ways of thinking and ways of doing. The introduction of a new integrated curriculum provided an opportunity to re-think transition and professional socialisation in tandem.
Methods: We redesigned weekly pharmacy practice workshops in a new first-year integrated unit to scaffold learning and help students gain mastery of threshold concepts within a therapeutic topic in an authentic way. Key features include: targeted assigned readings from key professional resources, the introduction of an invigilated restricted open book quiz at the start of each class, clinical roleplay, peer feedback and tutor debrief, and timely quiz feedback.
Results: The new workshops were implemented from August 2023. Students engaged in five cycles of learning in this new format. Using the therapeutics quiz as a proxy measure for pre-work completion, average marks over the five quizzes was 90% or 7 out of 8 questions correct per quiz, suggesting a high level of student engagement with pre-work readings (since answers come directly from the assigned readings). From the students' perspective, their quiz performance provided a source of positive reinforcement that motivated them to complete the next set of readings in the subsequent week.
Conclusion: Relatively low-stakes assigned readings and associated assessment tasks illustrated to students the direct alignment between class exercises and assessment. This approach boosted student confidence in task completion while consolidating necessary threshold concepts.

P203

Enhancing research competency in pharmacy practice: An interactive workshop for hospital pharmacists

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Introduction: Research is essential to the National Competency Standards Framework for Pharmacists in Australia, however, participation remains low due to barriers such as limited research knowledge, training, and support. To address this, the pharmacy department of a large Melbourne health service prioritised developing research skills through an organisation-wide workshop.
Methods: In September 2024, a one-hour face-to-face workshop was conducted, featuring three group activities: 1) literature searching and research question development, 2) project implementation, and 3) results analysis and discussion. A case study and questions were created to promote discussions with a facilitator. Pharmacists participated in one activity and completed pre- and post-workshop surveys to assess their confidence and the workshop's quality.
Results: A total of 88 participants (32% of the rostered staff) attended the workshop across seven sites. In total, 74 pre-workshop and 59 post-workshop survey responses were received. Thirty-six participants completed both surveys. In the pre-workshop survey, participants requested knowledge or improvement across four key themes: general research knowledge, specific research skills, research resources and local submission processes. Participants who completed both surveys (n=36) self-reported improvements in confidence (with 'agree' or 'strongly agree' responses) across all questions, the highest increases for 'I can formulate research questions' (33% to 94%), 'I understand different categories of data' (11% to 61%) and 'I am familiar with avenues to present or publish a research manuscript/abstract' (22% to 67%). The majority of the 59 participants who completed the post-workshop survey 'agreed' or 'strongly agreed' that the workshop was engaging (97%), worthwhile to attend (95%), and provided knowledge that will impact on practice (93%). Participants also requested additional time and sessions for research education in their feedback.
Conclusion: The workshop improved pharmacists' self-reported confidence in research skills and was well-received. Attendance rates and feedback demonstrated broad engagement and an appetite for further research education.

P204

Lifelong learning and Advanced Pharmacy Australia (AdPha) standards: A year in review

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Introduction: Lifelong learning is required for contemporary pharmacy practice, regardless of practice settings. AdPha's Clinical Pharmacy Standards and suite of specialty standards support best practice and reflect the continuous evolution and extended scope of clinical pharmacy practice in Australia. Through lifelong learning, pharmacists and pharmacy technicians develop and contribute to AdPha standards. Lifelong learning via AdPha standards ensures pharmacists' and technicians' practice reflect changing needs of person-centred and culturally responsive approaches to patient care, from the hospital to wherever medicines are used.
Methods: A year of published AdPha standards were reviewed to determine the level of engagement with and contribution to AdPha standards. Number of citations, full text views, and attendance at webinars and workshops were analysed to evaluate utilisation of AdPha standards as a tool for lifelong learning. Previously published AdPha standards were mapped to updated AdPha standards to investigate how these standards have evolved over time to support lifelong learning, practice change, and extended scope of pharmacy practice.
Results: Six AdPha standards were published in 2024. In total, there were 56 co-authors, 244 reviewers, oversubscribed attendance at webinars and workshops, and continued growth in the number of full text views and citations. The format of AdPha standards has changed over time to better support lifelong learning and to reflect the evolving landscape of pharmacy practice, extended scope of practice, and the changing needs of person-centred and culturally responsive approaches to patient care.
Conclusion: Ongoing revision and expansion of AdPha standards cultivate and support lifelong learning on multiple levels, especially as the scope of practice continues to evolve and expand. Pharmacist and technician engagement in the development and utilisation of these standards ensure changing needs of person-centred and culturally responsive patient care and advances in healthcare are reflected, and the pharmacy workforce is informed and able to adapt.

P205

Evaluating post-registration pharmacist education in Australia: A systematic review

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Introduction: In an era of expanded practice for pharmacists in Australia, the impact of further education purporting to improve or expand such practice remains uncertain. This systematic review endeavours to summarise existing evidence, focusing on evaluations, barriers, and facilitators of formal education programs for registered pharmacists in Australia.
Methods: To explore evidence of outcomes, barriers, and enablers of formal postgraduate education programs for registered pharmacists in Australia, a systematic search of English-language primary literature (1997-2024) was conducted across Medline, Embase, A+ Education and ERIC, supplemented by grey literature, and backward and forward citation searches. Two separate researchers reviewed and reached consensus agreement for all included studies. Data was systematically reported using the Kirkpatrick Model of Learning Evaluation.
Results: After removing duplicates, 1344 studies were screened. Title and abstract screening eliminated 1249 studies, with 79 excluded following full-text screening, identifying 16 studies for data extraction. The most common programs reporting evaluations were hospital-based residency (n=6), specialised asthma service (n=3), and clinical pharmacy programs (n=2). Outcomes were largely positive across studies; participants improved and consolidated clinical knowledge and critical thinking skills, developed capacity for novel roles and greater understanding of existing roles, and there were perceived improvements to role enthusiasm and workforce retention. Notable barriers included time constraints, the need for flexibility to suit local and individual needs, and sufficiently skilled educators. Effective programs were facilitated by experiential learning and mentorship modalities.
Conclusion: There is limited published research regarding post-registration education for Australian pharmacists, with a hospital-based residency program most frequently evaluated. Future research should evaluate a wider range of education programs to evaluate the impact on learners, organisations, and health systems more broadly. Barriers and facilitators noted across studies may inform future program development.

P206

Growth and impact of the AdPha Resident Training Program: Advancing early-career pharmacists in Australian Hospital Pharmacy

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Introduction: The Advanced Pharmacy Australia (AdPha) Resident Training Program, formerly known as the Society of Hospital Pharmacists of Australia Foundation Residency Program was launched in 2017 as Australia's first practice-based training program for early-career pharmacists or pharmacists entering hospital pharmacy. The Resident Training Program is a 2-year program which includes 6-month rotations across medical, surgical, operational and breadth practice areas. Across these rotations Resident candidates complete a structured framework of workplace-based assessments (WBAs), reflective practice, peer feedback, seminar attendance and research.AdPha is responsible for the accreditation of each hospital network and ensures that they have the commitment, capacity and capability to deliver the Resident Training Program framework and support the professional development of each candidate to reach Australian and New Zealand College of Advanced Pharmacy (ANZCAP) Pharmacist Resident recognition.
Methods: A comprehensive review of the program over its first 7 years was conducted, focusing on site accreditation and candidate completion, which facilitated the identification of trends in the program's expansion across Australia.
Results: The number of accredited training sites across Australia has increased from 27 to the current 53 (National = 2, Australian Capital Territory = 2, New South Wales = 9, Northern Territory = 2, Queensland = 15, South Australia = 1, Tasmania = 3, Victoria = 15, Western Australia = 5). Over the 7 years, 400 pharmacists have completed the program (National = 10, Australian Capital Territory = 23, New South Wales = 12, Northern Territory = 2, Queensland = 172, South Australia = 32, Tasmania = 7, Victoria = 136, Western Australia = 6).
Conclusion: The AdPha Resident Training Program has demonstrated significant growth in its first seven years, which reflects a robust commitment from the pharmacy profession to enhance the professional development of early-career pharmacists in hospital settings.

P207

DFP 2.0: Enhancing the development framework for pharmacists in Singapore

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Introduction: The Development Framework for Pharmacists (DFP) was published by the Ministry of Health in 2020. It was developed to illustrate the competency continuum of pharmacists, with the addition of foundation level competencies to the originally published Advanced Practice Competency Framework (APF). Since its implementation, the DFP serves as guide for career conversations and a tool to identify developmental needs. It is necessary that the DFP remains aligned with current pharmacy professional practices.
Method: Preliminary inputs for changes to the DFP were gathered from past training workshops. The One Ministry of Health Holdings Leadership Framework and blueprint of Day-1 Pharmacist were referenced. A World Cafe workshop was then organized to collectively review the existing competency standards to ensure that the content of the DFP reflect current and emerging professional practice. The workshop sought to provide clarity on the competencies required for progression in the career development pathway. The World Cafe method provided a structured yet informal setting for participants to collectively explore and address these objectives. Subsequent refinements for DFP were gathered from key stakeholders including Pharmacy Managers and the Pharmacist Training and Development Committee.
Results: Over 80 pharmacists from diverse healthcare settings such as public healthcare institutions, regulatory authorities, community pharmacy, pharmaceutical industry, and academia, were consulted. The refinements proposed included streamlining performance criteria and evidence to prevent duplication across domains, as well as further defining the progression from foundational to expert levels in the performance criteria tiering. To support better understanding, a glossary of terms has been included, along with additional evidence examples where applicable. The revised DFP, version 2.0 was published in June 2024.
Discussion: Continued collaboration among key stakeholders is vital for a successful implementation of the DFP. The DFP needs to be regularly updated to be aligned with changing competencies of the pharmacy profession.

P208

Perceptions and experiences of undergraduate pharmacy students and alumni toward research after exposure to undergraduate research courses

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Introduction: Academic institutions have a duty to equip health professional students with the requisite research skills to ensure the implementation of evidence-based practice. This study aims to determine the perceptions of pharmacy students and alumni toward research after completing Undergraduate Research in Pharmacy Courses (URPCs) at the College of Pharmacy–Qatar University (CPH–QU).
Methods: A cross-sectional survey was conducted. All CPH-QU alumni (n = 238), and all third- and fourth-year professional students who had completed at least one URPC at the time of conducting the study (n = 42) were approached. The questionnaire contained items relating to research experience and perceptions of significance, confidence in conducting research, actual and anticipated outcomes, and motivation for future research. A Theoretical Domains Framework informed the development of selected items.
Results: The response rate was 72.1% (202/280); however, the usable rate was 95.5% (193/202). The participants gave positive responses relating to their perceptions of research significance {Median 5.0 [Interquartile range (IQR) = 1.0], Minimum–Maximum = 1–5}, confidence in conducting research [Median = 4.0 (IQR = 1.0), Minimum–Maximum = 1–5], actual and anticipated outcomes [Median = 4.0 (IQR = 1.0), Minimum–Maximum = 1–5], and motivation for future research plans [Median = 4.0 (IQR = 1.0), Minimum–Maximum = 1–5]. The majority of participants perceived non-confidence in using data analysis software [72 (39.4% non-confidence)] and a high proportion of participants were non-confident in conducting data analysis [45 (24.6% non-confidence)]. More than half reported publishing at least one peer-reviewed article [99 (54.4% agreement)] from their courses and were highly motivated to consider post-graduate degrees in pharmacy [132 (73.3% agreement)].
Conclusions: Incorporating URPCs into CPH–QU curriculum has potentially improved students and alumni's perceptions of research. Action is needed to improve confidence in di erent aspects of research.

P209

Unravelling laboratory results: A dynamic, interactive pharmacy workshop across multiple sites

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Introduction: A novel multi-site interactive education workshop was developed at a large Australian metropolitan health service in June 2024. The one-hour workshop encompassed live-streamed presentations, a case study and in-person facilitator-led discussions, conducted simultaneously across seven sites. It aimed to support pharmacists' professional development in interpreting patient laboratory results and address challenges with engaging a diverse workforce in education. This study evaluated participants' workshop experiences, as an opportunity to cultivate life-long learning in pharmacy.

Methods: This retrospective convergent mixed-methods study analysed pharmacists' responses to an online post-workshop survey and anonymous word cloud reflection, visually depicting response frequency by word size. A 5-point Likert scale evaluated presentation content, case-study suitability and delivery mode. Open ended questions gathered information on attendee learning experiences and future topic suggestions. Quantitative data was analysed using descriptive statistics and qualitative data through inductive thematic analysis.

Results: The workshop had 139 attendees of 428 department pharmacists. The post-evaluation survey was completed by 101 (73%) participants and 82 (59%) responses submitted via word cloud reflection. Respondents strongly agreed or agreed that the workshop achieved learning outcomes (96%), was worthwhile (95%), well presented (94%), up-to-date (94%) and satisfactory overall (93%). Ninety-two percent of participants found the workshop stimulated meaningful discussion, engaging and suitably delivered with supportive facilitators. Word cloud responses revealed that participants enjoyed the workshop's collaborative and interactive nature. Learning highlights included evaluating results for paediatric patients and developing renal and hepatic function assessment skills. Suggestions for future sessions included allocating more time for case discussion, extension to other laboratory tests (including therapeutic drug monitoring), and topics tailored to clinical practice areas.

Conclusion: This dynamic, interactive pharmacy workshop achieved overall satisfaction, learning outcomes and supported collaborative learning. The workshop provides a framework for large organisations to support workforce education across many sites and engage practitioners in life-long learning.

P210

Identifying the educational needs of pharmacists engaging in professional development: A systematic review

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Introduction: Significant scope of practice change for pharmacists has precipitated a need for pharmacy governing bodies to update professional development frameworks and support structures to meet the challenge of future-proofing the workforce. It is therefore essential to determine the educational needs of pharmacists. This study aimed to review the literature identifying the educational needs of pharmacists engaging in professional development.
Methods: A comprehensive search was undertaken in MEDLINE, Embase, IPA and ERIC on 31 March 2024. A search strategy constructed from the concepts “pharmacists”, “continuing professional development” and “priorities, interests and preferences” was used to identify relevant literature published between January 2004 and March 2024. Results were screened against eligibility criteria and data from the retrieved records were extracted into a table, appraised for quality, and synthesised narratively.
Results: Thirty-one studies were identified for inclusion that utilised either quantitative (n = 16), qualitative (n = 8) or mixed method (n = 7) study designs. There were 13 studies that described the needs of pharmacists from the Middle East, and a majority of all the studies (n = 19) included pharmacists from more than one practice setting. Three key domains of need were identified: priority topics for education, which included disease management, pharmacotherapy and skills-based topics incorporating clinical, counselling and communication skills; the need for reinforcement of learning, such as through summary documents, assessments, evaluations, feedback and peer-sharing; and the need for support for successful engagement, across all levels of governance from employers and organisations to professional bodies and regulatory authorities.
Conclusions: This review identified commonalities of need despite diversity of location and practice setting. The promotion of skill learning over simple knowledge acquisition, strategies to reinforce this learning, and the implementation of support frameworks were revealed as essential areas of focus for continuing pharmacy education providers and regulators.

P211

The recruitment riddle: Using escape rooms to hiring lifelong learners

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Introduction: In recent years, the number of applications for pharmacy internship applications at Queensland Health Facilities has far outweighed the number of positions available. Applicants are all similarly qualified and present comparable curricula vitae making it increasingly difficult to differentiate applicants using traditional methods of recruitment. Traditional methods of recruitment do not assess soft skills necessary for successful professional team integration. The aim was to identify if the implementation of an escape room in pharmacy intern recruitment provided a problem solving-based method to differentiate candidates' nonacademic attributes and clinical knowledge.
Methods: In 2022, Metro North within Queensland Health conducted a two-step intern recruitment process. The use of an escape room was used for the first stage of the interview process. Interviewees (n=48) were divided into groups of four and provided with 20 minutes to 'escape' from the pharmacy. Applicants were assessed based on communication, teamwork, leadership, and their ability to problem solve.
Results: The use of an escape room allowed applicants to demonstrate their soft and clinical skills in a group setting. Candidates reported feeling more comfortable, that their skills and their 'team fit' were more accurately assessed.
Conclusion: The implementation of an escape room for an interview proved to be a useful tool to differentiate intern candidates. Panelists were provided with insight into the areas of teamwork, leadership, communication, and clinical knowledge of each of the candidates through problem-based group work questions.

P212

Singapore’s Pharmacy Leadership Development Strategy

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Introduction: Pharmacy in Singapore encompasses diverse roles crucial for safe medication use and patient well-being. While clinical competencies have been emphasised, leadership skills development has been less prioritised. This was highlighted during a retreat organised by the Chief Pharmacist's Office in March 2022. A landscape survey was conducted in 2023 to map out existing leadership frameworks, pharmacy-specific leadership support structures and identify opportunities for improvement.
The Pharmacy Leadership Development Strategy (PLDS) was developed to cultivate healthcare leaders within and beyond pharmacy, capable of providing holistic perspectives in key decision-making and leading health ecosystems.
Methods: PLDS adapts leadership skillsets and levels from the Ministry of Health Holdings ONE Healthcare Leadership Framework, incorporating domains and performance criteria from the Ministry of Health’s Development Framework for Pharmacists (DFP). Recommendations were also based on inputs from healthcare professionals, organisational and human resource leaders with integrated findings as an addendum from the landscape survey.
Results: The PLDS outlines a Leadership Development Journey, beginning with cultivating Self-Leadership as the cornerstone of leadership development, before transitioning into Leading Others to build a supportive and high-performing team environment. It employs a “Why-How- What” Approach. “Why” involves discovering individual purpose, creating a personal mission statement for leadership development. “How” describes a systematic targeted approach focusing on leadership skillsets and competencies for specific goals at each leadership level. Lastly, “What” highlights opportunities to develop and practice leadership skills, advancing the pharmacy profession. The PLDS was successfully launched in October 2024.
Conclusion: The framework aims to build a pool of self-motivated leaders across the pharmacy workforce, equipped with strong professional identity and necessary skills to navigate the evolving healthcare landscape, drive innovation, and advocate for pharmacy practice and healthcare advancement in Singapore.

P213

Cultivating lifelong learning to build trust in pharmacist prescribing

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Introduction: Theoretically, one of the ways to make primary health care systems more efficient would be to increase the scope of practice of pharmacists. In Australia, several state-led trials are already underway to support pharmacist prescribing. The literature alludes to many successful global models of pharmacist prescribing practices, that have potential to provide efficient, trustworthy care to patients. In the process of developing this scope of practice, the view of the patient/consumer is one of utmost importance in order to build and support a trusting patient-pharmacist relationship. To build and maintain trust in pharmacist prescribing, there is a need to inculcate teaching and learning of how to build a trustworthy relationship with our patients.
Methods: Literature search and inductive analysis of the literature to explore important aspects of trust in professional relationships for inclusion in an educational module.
Results: Data collection underway
Conclusion: Further information in the pipeline

P214

Bringing together the HOW and WHY of GenAI in OSCE preparation through Unified Theory of Acceptance and Use of Technology

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Introduction: Generative Artificial intelligence (GenAI) use in Objective Structured Clinical Examination (OSCE) preparation has not yet been deeply explored. This study investigated how and why pharmacy students use or choose not to use GenAI in OSCE preparation.
Methods: A retrospective cohort study.
The study retrospectively collected OSCE scores and the seven criteria in the OSCE communication rubric for the primary care (community) station and responses regarding student AI use from a mandatory written self-reflection; students were not privy to the research project when writing their responses. Pharmacy students from second to fourth-year (over 2023-2024) undergraduate pharmacy degrees at Monash University across Australia and Malaysia campuses were included.
A summative content analysis converted qualitative data from the OSCE reflections to quantitative data. Qualitative data were deductively coded to The Unified Theory of Acceptance and Use of Technology (UTAUT) model to understand reasons for use. Wilcoxon rank sum and t-tests compared quantitative data from reflections to OSCE scores, whilst Fisher exact tests compared categorical themes.
Results: Of 997 student reflections, 163 used GenAI for OSCE preparation. Non-AI and AI users on Australian and Malaysian campuses performed similarly overall. However, non-AI users excelled in four of seven rubric criteria. Six themes were identified, with themes 1-3 focusing on AI use for creating OSCE simulations and receiving instant feedback, while themes 4-6 discussed reasons for not using AI. Mapping students who used AI to the UTAUT model showed a large alignment with the belief that students would consequently improve their OSCE grades.
Conclusion: The study showed that using open AI for OSCE preparation led to overall similar academic success in OSCEs, suggesting educators still have a role in guiding students to optimise AI use. Further research is needed surrounding how students use AI for OSCEs.

P215

Pharmacy licensure examinations for pharmacist interns: Evaluating AI Chatbots' Performance on High-Stakes Assessments

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Introduction: Artificial intelligence (AI) with natural language processing is believed to have a major impact on higher education providing innovative tools and approaches to learning. Despite the potential uses of AI chatbots, there is still concern regarding the accuracy of the information provided and ethical considerations. Limited information exists on the use of AI chatbots in pharmacy assessments including licensure examinations. With this in mind, the aim of this study was to compare the performance of various AI chatbots across licensure examinations.
Methods: Four sample licensure practice examinations, available on the websites of the Australian Pharmacy Council, Pharmacy Examining Board of Canada, Singapore Pharmacy Council, and South African Pharmacy Council, were evaluated. These examinations use multiple-choice questions (MCQs) which were answered by ChatGPT 4.0, MetaAI, and Perplexity. The answers from each chatbot were recorded and compared to the model answer. The results were descriptively analysed.
Results: In total 297 MCQs were answered by each chatbot. Overall ChatGPT (86.20%, n=256) performed better than Perplexity (80.47%; n=239) and MetaAI (75.76%; n=225). A similar trend was seen when reviewing the performance of the chatbots within each exam, where ChatGPT answered a higher percentage of questions correctly (79.13–94.12%) followed by Perplexity (72.00–84.35%) and MetaAI (70.67–88.24%). In 20 questions all three chatbots differed from the model answer provided, and of these, the three models provided the same "incorrect" answer for eleven questions.
Conclusion: Overall the three AI-powered chatbots fared well in MCQs used in pharmacy licensure examinations. Given this information, it is critical that regulators take measures to restrict access to AI-powered tools during high-stake examinations such as licensure examinations. In contrast, the role of chatbots in preparing pharmacist interns for writing the examinations, as well as, in the setting and moderation of questions should be explored.

P216

Unlocking outcomes of entrustable professional activities for workplace-learning: Development, entrustment, and practice-readiness in pre-registration pharmacy training – a systematic review

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Introduction: Entrustable professional activities (EPAs) are readily used in workplace-based learning to support competency development in pre-registration pharmacy training. To date, no systematic review has brought together outcome data EPA use in pre-registration pharmacy training.
Methods: English-language searches of primary literature describing outcome evaluations for EPAs in pre-registration pharmacy training were conducted in five databases (MEDLINE, Embase, CINAHL, Scopus, Emcare), from the inception of EPAs in pharmacy education until August 2024. A manual search of the included references was also conducted. Two reviewers independently screened articles for eligibility including studies reporting on entrustment, development, and practice readiness to reach a consensus on all included articles, and subsequently extracted the data. The Mixed-Methods Appraisal Tool (MMAT) Version 2018 was used to conduct the quality assessment of the studies.
Results: A total of 577 articles were screened, of which 28 met the inclusion criteria. Of these, 19 were quantitative-descriptive, 6 were mixed-methods, and 3 were qualitative studies. Three major outcomes were evident in the literature: EPAs support self-regulation and self-development in pre-registration pharmacy training, entrustment progresses throughout defined periods in training, and factors influencing entrustment decisions vary amongst pharmacy preceptors. The quality assessment showed most studies were of medium to high quality in strength of study design.
Conclusions: EPAs serve as an effective tool in pre-registration pharmacy training to support learners develop self-evaluation and self-development skills, which are necessary for lifelong learning. Nonetheless, there is variability in how pharmacy preceptors make entrustment decisions and the factors they consider when making these entrustment decisions. EPAs are an effective mechanism in supporting competency-development in pre-registration pharmacy students to enable them to work unsupervised upon registration and develop the appropriate self-awareness skills required for advancing practice.

P217

Does artificial intelligence use in higher education impact healthcare students' motivation and self-efficacy? A narrative literature review

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Introduction: AI is being increasingly used in healthcare and healthcare education. Clinical applications include detecting drug-drug interactions, making dose recommendations, medication counselling, diagnosing and taking a clinical history. Meanwhile, educational applications include providing personalised feedback, summarising relevant literature, assisting writing through spelling and grammar checks and helping students prepare for exams by generating practice questions. This study aimed to understand the impact of AI on self-efficacy and intrinsic motivation in healthcare students.
Methods: Literature was searched across databases including Pubmed, Medline, Scopus and Eric with keywords including “self-efficacy”, “artificial intelligence”, “intrinsic motivation”, “healthcare students” and “learning”.
Results: Six studies were identified relevant to AI and self-efficacy in higher education students, ranging from all university students to nursing, pharmacy and medicine. Studies showed that several AI tools increased self-efficacy by different means including fostering a positive attitude, increasing students’ confidence and lowering anxiety levels. Five studies were identified as relevant to AI and intrinsic motivation in higher education students. AI helped students to understand their learning contents, provided feedback and helped to engage with their peers which gave confidence and interest in learning.
Conclusion: AI increased the self-efficacy and intrinsic motivation of students’ academic achievement and should be utilised in student learning.

P218

CPPE pharmacy conversations: Engaging pharmacy professionals in lifelong learning through a podcast series

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Introduction: The CPPE Pharmacy Conversations podcast series was launched by the Centre for Pharmacy Postgraduate Education (CPPE) in September 2024 to address the evolving educational needs of pharmacy professionals in England. This accessible learning platform features monthly, 45 to 60 minute episodes on topics essential to professional growth, including leadership, antimicrobial stewardship, patient safety, deprescribing, and genomics.
Methods: The podcast series employs an interview-based format with subject matter experts to deliver real-world insights on pressing topics and challenges within pharmacy. Promotion leverages CPPE's communication channels, including newsletters and social media, while listener engagement is tracked through Spotify analytics. A feedback mechanism via online forms invites reviews, guiding content improvement. However, evaluating the educational impact of this novel format presents challenges, as listener metrics and qualitative feedback alone may not fully capture learning outcomes or application in practice.
Results: Initial responses indicate strong engagement with positive qualitative feedback, with listeners reporting benefits to their continuing professional development (CPD). While preliminary data suggest high engagement rates and relevance, evaluating long-term educational impact remains complex, as it is difficult to directly measure changes in knowledge application or practice improvements solely through engagement metrics and self-reported feedback.
Conclusion: CPPE Pharmacy Conversations shows promise as a CPD tool, promoting professional growth and knowledge sharing among pharmacy professionals. Despite the challenges of evaluating this format, the series highlights the potential of podcasts as flexible learning resources. Ongoing refinement of feedback mechanisms and analytic strategies will be key in ensuring that future podcast content effectively supports lifelong learning needs and can be more accurately evaluated in terms of real-world impact on professional practice.

P219

Evaluating the effectiveness of online team-based learning in teaching clinical pharmacy practice: Student satisfaction and perspectives

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Introduction: As online education becomes more prevalent, team-based learning (TBL), a collaborative and active learning approach, is increasingly utilized in digital environments. Despite the advantages of online learning, challenges such as technological issues, limited face-to-face interaction, and maintaining student motivation persist. TBL can help address these challenges and improve the effectiveness of online learning. This study aims to evaluate pharmacy students' satisfaction, engagement, and perspectives regarding online TBL in the Clinical Pharmacy Practice course, focusing on its impact on student learning outcomes.
Methods: The study was conducted with pharmacy students enrolled in the Clinical Pharmacy Practice course during the second semester of the 2023–2024 academic year at the Future University in Egypt. Students' perceptions and performance were assessed using a structured questionnaire and the Team-Based Learning Student Assessment Instrument (TBL-SAI). Data were collected via Google Forms and analyzed using SPSS version 29.0.2 and Microsoft Excel. The Kolmogorov-Smirnov and Shapiro-Wilk tests were applied to assess the normality of the data, and non-parametric tests were used for non-normally distributed data, with a significance level set at $p < 0.05$.
Results: A total of 50 students responded to the survey. Of these, 76% reported higher levels of satisfaction, a better understanding of the material, and increased participation in TBL sessions compared to traditional methods. Over 60% of students recommended increasing the proportion of TBL sessions in the curriculum to enhance student engagement and overall learning outcomes. Students also preferred the online format due to its flexibility, accessibility, and convenience.
Conclusion: The study demonstrates that online TBL is an effective and engaging method for teaching clinical pharmacy practice, leading to improved learning outcomes and higher student satisfaction. Based on these positive findings, students suggested expanding the use of TBL in the curriculum, particularly in the online format, for its adaptability and accessibility.

P220

Role-playing a simulated patient experiencing psychosis-related symptoms with pharmacy students: Actors' perspectives

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Introduction: Simulated patient (SP) role-plays in pharmacy education are often enacted by student peers or tutors; trained actors may provide more authentic learning experiences. This study involved engaging and training actors to enact co-designed psychosis-related scenarios to assess pharmacy students, post-Mental Health First Aid (MHFA) training. The aim of this study was to explore actors' perspectives of being trained for this purpose and participating in the role-plays.
Methods: Actors were recruited via social media and an acting agency. Actors were briefed and trained, rehearsing scenarios with two MHFA-trained pharmacists from the research team who had led the scenario co-design process. Final year pharmacy students completed MHFA training (n=209). Post-MHFA training, all students attended a SP workshop, where students volunteered to engage in role-plays of psychosis-related scenarios with trained actors. Role-plays were observed by student peers, tutors, and mental health consumer educators (MHCEs). Focus groups were conducted with actors and transcribed verbatim. Transcripts were inductively thematically analysed.
Results: Ten actors were trained and participated in 86 role-plays between May-November 2022. Two focus groups were conducted with actors (n=7) in 2022. Actors shared favourable experiences of briefing and training with research team members. Actors described how they prepared for their roles, harnessing personal experiences to connect with their character. Actors voiced conflict they felt between purely performing and attempting to assist students navigate the role-plays. Suggestions to improve the actor training process included involving MHCEs in rehearsals and providing additional resources to guide self-directed preparation.
Conclusion: Actors appreciated the training process and support provided by the research team, also sharing personal experiences of preparation, performance, and suggestions to improve future experiences for SP actors enacting mental health scenarios. Future research exploring the impact of trained SP actors on pharmacy students' confidence and skills in providing mental health support is warranted.

P221

Standards 2025: The evolution of accreditation standards for pharmacy education in the United States

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Introduction: The Accreditation Council for Pharmacy Education (ACPE) is the agency responsible for accreditation professional degree program in pharmacy in the United States and for the development of accreditation standards which define minimum levels of educational quality. This work describes the Standards 2025 development process and the resulting changes to align accreditation standards with learner needs and current pharmacy practice in the United States.
Methods: The Standards 2025 development process began January 2021, where communities of interest invited to provide written comments via email and/or participate in a web-based survey. The initial survey garnered 138 responses, and additional feedback was collected via emails, multiple town halls, and an additional web-based survey distributed following the release of draft standards in January of 2024. Finally, nine open hearings were conducted for members of pharmacy professional organizations in Spring 2024. Over 160 pages of comments were considered, with a final discussion, review, and approval of Standards 2025 completed by the ACPE Board at their June 2024 meeting.
Results: Standards 2025 introduces significant changes, including: reducing the number of standards was reduced from twenty-five to seven, the clarification of guidance documents and supporting materials to provide programs with information necessary to address key elements and monitoring requirements, increased emphasis on the incorporation and assessment of educational outcomes identified in the Curricular Outcomes and Entrustable Professional Activities (COEPA) 2022 document, and emphasis on the importance of valid and reliable assessment mechanisms to enhance educational quality, with assessment outcome data used to guide program improvements (i.e., curriculum revisions).
Conclusions: Standards 2025 were developed using environmental factors and feedback from interested parties across the pharmacy education landscape to optimize accreditation standards. Emphasis on COEPA 2022 and assessment of programmatic outcomes support both program improvements as well as learner competence related to established entrustable professional activities.

P222

Tailored training: Early experiences from a bespoke clinical pharmacist training initiative

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Introduction: At our large, metropolitan health service, training of newly employed clinical pharmacists (NECP) was previously the responsibility of clinical team leaders (CTL) in addition to their regular workload. In July 2023, we implemented a super-numerary clinical educator pharmacist (CEP) initiative to support our expanding department.
Methods: An experienced clinical pharmacist was appointed as the first full-time, rotational CEP. The CEP provided 1:1 training in a protected, super-numerary capacity. Training content and delivery was dynamic and tailored to the individual learning requirements of the NECP. Ward-based training was paired with a suite of training cases, facilitating demonstration and application of optimal pharmacy practice. Where several NECP commenced simultaneously, CEP activities were shuffled to maintain the 1:1 ratio, prioritising those with least experience. After completing the CEP training, NECP and CTL were invited to provide informal feedback.
Results: Over the first 10 months of the CEP initiative, an average of 6.3 days of 1:1 training was provided to 20/24 (83%) NECP. NECP had a variety of prior professional experience: 8/20 (40%) Australian public hospitals; 6/20 (30%) international settings (New Zealand and the United Kingdom), 4/20 (20%) Australian private hospitals; and 2/20 (10%) community pharmacy. Feedback from NECP and CTL regarding the CEP service was overwhelmingly positive.
Conclusion: Working independently provided freedom for the CEP to continually adapt and implement new training strategies. The individualised approach allowed the CEP to troubleshoot the unique challenges encountered with each NECP and provided learnings to evolve the service. Our CEP initiative has shown that practical, high-quality, experiential learning can be delivered with limited resources. The next phase will refine and consolidate the service, with further exploration to assess staff development and satisfaction outcomes.

P223

Prescribing confidence comparison between overseas trained pharmacist prescribers and Australian pharmacists who are learning to prescribe

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Introduction: The Queensland University of Technology (QUT) delivers a Program titled “Safe Prescribing and Quality Use of Medicines” to pharmacists in Queensland to expand their scope of practice to enable the prescribing of scheduled medicines within the parameters of the Queensland Community Pharmacy Full Scope Pilot. One component of the Program is a daylong prescribing skills workshop (PSW).
Methods: Students were invited to complete a survey before and after the PSW. A 7-point Likert scale (1= no confidence whatsoever, 7 = completely confident) evaluated confidence in prescribing including: (1) Consultation skills when interacting with patients/carers; (2) Taking a best possible medication history (BPMH); (3) Being involved in preventing or reporting medication error; (4) Identifying appropriate therapeutic options; (5) Communicating with other healthcare professionals; (6) Discussing a patient’s treatment plan; (7) Writing a prescription. A quantitative analysis of the data was conducted using MS Excel comparing the confidence in prescribing skills between overseas trained prescribing pharmacists and non-prescribing pharmacists undertaking the Program, before and after the PSW.
Results: 266 pharmacists participated in the PSW. Of these, 95% (251/266) completed the before and after evaluation used in the analysis. 9 of the 251 (3.6%) pharmacists had international prescribing qualifications. The pharmacists without prescribing qualifications evaluated that their prescribing confidence had increased in domains 1 with the average confidence increase being 0.2, domain 2 (0.3), and domain 5 (0.1). The overseas qualified prescribing pharmacists gained more confidence in domain 3 with the average confidence increase being (0.2), in domain (0.1) and domain 7 (0.1). Both groups had no difference in change confidence in domain 4.
Conclusion: The PSW successfully increased confidence in prescribing skills for pharmacists regardless of their previous prescribing experience. The PSW is an imperative education component for non-medical prescribers’ skills development.

P224

Impact of a short-term study abroad pharmacy programme: Students' perspectives and programme evaluation

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Introduction: A Short-Term Study Abroad Program (STSAP) is increasingly recognized in higher education as a valuable means to extend learning beyond traditional classroom activities and promote cross-cultural interactions. Offering international experiences to healthcare students, particularly pharmacy students, can help contextualise coursework within global healthcare systems. The aim of this study was to examine the impact of an annual two-week STSAP collaboration for pharmacy students between Future University in Egypt (FUE) and University College Cork (UCC) in Ireland, since its inception in 2016.
Methods: In October 2023, an online survey consisting of nineteen questions of either multiple choice or Likert scale format was disseminated to previous attendees of the STSAP since 2016. Survey responses were reviewed, coded, and analysed quantitatively using descriptive statistics (SPSS Version 29.0.2).
Results: Survey responses were obtained from 40.9% (38/93) of FUE students who completed the STSAP in UCC since 2016. Overall satisfaction with the programme was high at 84.2%. Participants gained essential skills, including time management and intercultural communication. This was coupled with lectures, tutorials and workshop sessions concerning both clinical pharmacy and pharmaceutics-related content. Hands-on workshops and field visits to both clinical pharmacy and pharmaceutical industry settings were valued by participants, with high satisfaction rates of 89.47% and 86.8%, respectively. While the overall evaluation of the content and delivery of the STSAP was positive, suggestions for improvements were provided. These included more time spent in clinical settings and minor alterations to the programme length.
Conclusion: This survey study highlights the positive impact of a two-week pharmacy STSAP in Ireland for students from an Egyptian university. A STSAP can provide pharmacy students with an invaluable experience to be immersed in both pharmacy education and clinical pharmacy practice in an international context. This evaluation and recommendations obtained will help to refine the STSAP curriculum going forward.

P225

Explorative learning as a compass for lifelong learning in a changing healthcare ecosystem – experience with interdisciplinary lectures

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Introduction: Lifelong learning is a must in changing systems with smart new technologies, pandemics, deglobalisation, demografic changes including longer lives. Education must adapt to support economic growth, inclusive prosperity and better health outcomes. Curricula need to be adapted and to enriched. Aim of this investigation is to understand whether explorative learning in interdisciplinary lectures bridging the gap between economics and pharmacy practice and pharmaceutcial sciences could support the understanding of continuing professional development in healthcare professions, and of the need to enrich curricula with interdisciplinary courses.
Methods: Concepts, models and principles of economics, business studies, pharmacy practice and pharmaceutical sciences are combined. Aspects of explorative learning and the various meanings of interdiscciplinary teaching are applied and assessed by both students and educator. Topics are lifecycle management, dynamics of the markets, vaccine development, pandemic governance, access and planetary health. The courses are created by a portfolio pharmacist (biopharmaceutical industry expert,community pharmacist) and delivered at German universities.
Results: The integration of economics and pharmacy facilitates a good understanding of the transformation and innovation within both fields and in healthcare ecosystems. Students feed back their gained insights on the complexity of healthcare innovation, responsibilities of stakeholders involved, dimensions in decision making, governing future healthcare systems, overall their more comprehensive and cohesive learning experience and the need for lifelong-, interprofessional- and interdisciplinary learning.The student-centred explorative learning approach provided a framework for both students, their learnings on future skills, needs and their pivotal role as healthcare providers, and for the educator on future education, guiding research and future curriculum design.
Conclusion: Interdisciplinary and explorative teaching and learning is crucial in contemporary healthcare education to navigate the complex landscape in healthcare. Further research is needed to learn in which extent explorative learning approaches should be applied in 60year curricula and in models of lifelong learning.

P226

Curriculum development in geriatric medicine for pharmacists – ensuring a pharmacy workforce fit for the ageing population

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Introduction: Global population ageing is a defining challenge of our time; the global population aged 65 years and over is projected to increase by 120% between 2019-2050. This necessitates a healthcare workforce equipped with the knowledge, skills, and attitudes to care for older people with complex needs. The World Health Organization advocate for high-quality undergraduate health professions education in geriatric medicine as a means of anticipating these pressures. Yet, it remains that geriatric medicine is frequently under-represented in health professions education, the reasons for which are multi-faceted, but include lack of specialty- and profession-specific guidelines.
Methods: Therefore, our aim was to understand the global landscape of geriatric medicine education in pharmacy, with a view to developing a recommended undergraduate curriculum to guide and encourage evidence-based educational practice. We propose to undertake this curriculum development in three stages, using established methods previously employed in national medical curricular development:
1. We will establish current practice in undergraduate pharmacy education in geriatric medicine by undertaking a systematic review of the published literature, and a survey of UK pharmacy schools on the content, methods, and duration of teaching on ageing and related topics.
2. We will undertake several curriculum mapping exercises: firstly, of the General Pharmaceutical Council standards for the initial education and training of pharmacists to existing undergraduate geriatric medicine curricula, to identify Learning Outcomes (LOs) that are applicable to pharmacy. These LOs will then be mapped to the results of our national teaching survey, in a gap analysis identifying which areas are most and least commonly taught.
3. These curriculum maps will be used to develop a blueprint for a new pharmacy-specific undergraduate curriculum in geriatrics. This blueprint will be shared with key stakeholders, including members of the public, in a consensus panel to reach agreement on LOs for inclusion in the final curriculum.

P227

Can cinemeducation influence pharmacy students' perception of the affective dimensions of patient safety: A mixed method study

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Introduction: Medicines and invasive medical devices are being increasingly used among the population worldwide and pharmacists are expected to be knowledgeable in these areas. Curriculum coverage on pharmacovigilance is minimal and often does not provide an in-depth examination of human suffering due to the harmful effects of medicines and invasive medical devices. The present study aims to assess pharmacy students' perception of affective dimensions of patient safety after a cinemeducation module and assess their feedback on the module.
Methods: A pre-post single-arm study is being conducted among 7th semester (9 semesters programme) Bachelor in pharmacy students (n=37) at Ajman University, United Arab Emirates, currently undertaking a 3 credit hour course on pharmacovigilance and pharmacoepidemiology. During the cinemeducation session students watch movie clips related to patient safety and engage in group work and facilitated discussions. Emphasis is placed on the affective domain and the impact of adverse effects on patients, their families, and society. The pre-post perception change will be assessed using a 10-point Likert-type questionnaire, and feedback obtained quantitatively (using a 10-point Likert questionnaire) and qualitatively (using in-depth interviews). Mann-Whitney U test, Kruskal-Wallis test, Wilcoxon signed-rank test and Kendall correlation will be used as appropriate at alpha=0.05. Thematic analysis will be used to assess qualitative feedback.
Results: The study is currently underway, and the results will provide the total perception scores pre- and post-intervention, the difference between the pre-post scores, and the association between the scores and student demography. Further, the correlation between demographic variables and individual statements will also be available. The total feedback scores and scores for individual statements will be obtained. The findings of the qualitative interviews will be presented.
Conclusion: The conclusion will be based on the study findings. Further, recommendations will also be made based on the study findings.

P228

On the clock: Time implications for pharmacist assessors for medical intern prescribing entrustable professional activities

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Introduction: Entrustable Professional Activities (EPAs) are structured, observable units of daily work used internationally to assess the ability of a learner to complete a variety of workplace tasks . The Australian Medical Council is introducing EPA assessments for first and second-year graduate doctors. Recognising pharmacists' role as medication experts, pharmacists were proposed as one of the health professions appropriate to assess medical interns prescribing EPAs. While EPAs are popular and have been studied extensively, this is the first reported instance of interprofessional EPA assessment in health professional education. This pilot study investigates the time impact on pharmacists' workloads of conducting these EPA assessments.
Methods: Six units (across medicine, emergency, surgery and mental health) within a multisite hospital network participated in a pilot study where pharmacists assessed medical interns' undertaking prescribing EPAs. Medical interns could approach either pharmacists or medical staff to assess prescribing EPAs. Assessors completed Microsoft Forms at the time of the EPA, including rating level of entrustability, providing qualitative feedback, assigning case complexity based on clinical judgement and recording time taken for EPA assessment and feedback. Data collection was conducted between May to October 2024. Descriptive statistics were performed using Microsoft Excel.
Results: Ten pharmacist assessors completed 28 assessments over 6-months; a median of 1.5 (range 1-6) assessments per pharmacist . The median time taken for each assessment was 10 minutes (range 3-21 minutes). Five EPAs were reported as high-complexity cases. Low-complexity cases took a median of 15 minutes (range 7-21 minutes), medium-complexity 10 minutes (range 3-20) and high-complexity 15 minutes (range 10-20).
Conclusion: Pharmacists typically required less than 15 minutes per EPA assessment and completed a median of 1.5 assessments in 6-months, indicating a feasible workload. Future studies should evaluate the impact of the complete roll out to determine scalability and sustainability for the pharmacy workforce.

P229

The candidate core concepts of pharmacotherapy education in Australia

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Introduction: Pharmacotherapy education faces challenges from rapidly evolving therapeutic knowledge and the need to bridge pharmacology concepts with clinical applications.. While core concepts—fundamental, enduring, and discipline-specific ideas—enhance learning across many disciplines, pharmacotherapy lacks systematically identified core concepts. This study aimed to generate candidate core concepts for pharmacotherapy education in Australia.
Methods: A qualitative multimethod approach was employed through: 1) Document analysis (text mining) of pharmacotherapy textbooks using Python Natural Language Processing Toolkit and Generative Artificial Intelligence interpretation; 2) Virtual brainstorming sessions with 10 pharmacotherapy educators from seven Australian pharmacy schools; and 3) Expert consultation for output refinement. Data were analysed using reflexive thematic analysis supported by NVivo.
Results: Initial text mining (Step 1) yielded 30 terms, while expert brainstorming (Step 2) generated 52 additional terms. After consolidation and removal of duplicates, 49 unique terms emerged as potential core concepts, organized into four themes:
1. Evidence-based pharmacotherapy (9 concepts) including patient factors, preferences and values.
2. Quality use of medicines in pharmacotherapy (17 concepts) including principles of stewardship
3. Sciences underpinning pharmacotherapy (10 concepts) on comprehensive knowledge for application of pharmacological and pathophysiological key concepts
4. Skills/activities that enable pharmacotherapy(13 concepts) including clinical reasoning and therapeutic decision-making
Expert refinement (Step 3) of these potential core concepts is ongoing.
Conclusion: This preliminary study is part of a biphasic mixed-method research project aiming to identify and generate consensus on core concepts in pharmacotherapy education through an international panel of pharmacy educators. Identification of core concepts is largely an iterative and expert-driven process. The identified concepts will provide pharmacy educators with pedagogical tools to assess conceptual attainment, improve teaching practices, and support curriculum design.

P230

An integrated pharmaceutical chemistry laboratory on suspension dosage formulations with pharmacist role-play incorporating patient counselling, supply, and product recall

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Introduction: Basic training of pharmacists includes knowledge and application, of fundamental scientific concepts to enable effective and competent clinical pharmacy practice. This often focuses on building fundamental scientific knowledge at the start of a pharmacy degree, which comes at the expense of student satisfaction; many students feel that there is too much emphasis on science and not enough on practice. One way to alleviate this problem is through integrated curricula that combine science with practice. At our institution, a new Bachelor of Pharmacy curricula was developed incorporating science and practice integration throughout the degree program. We therefore developed a new educational activity that integrates a pharmaceutical chemistry laboratory (team-based learning) with pharmacist role-playing (simulation) that involves patient counselling, supply, and product recall elements.
Methods: Students prepared three paracetamol suspension formulations then measured and drew conclusions on the stability of each formulation when select ingredients were missing. Each student then undertook a role-play where they were required to counsel a parent requesting paracetamol for their child, supply the medicine, and then undertake a recall of the product and explain why it was recalled. Students' knowledge was tested through four multiple choice questions in their end of semester exam.
Results: Collectively, the students' results demonstrated that removing viscosity-enhancing ingredients from the formulations caused the particles to settle faster. For the role-play exercise, just over half of students made at least one mistake with some supplying the wrong medicine or recommending the wrong dose. The exam results showed students understood the role and impact of key ingredients in a suspension formulation and could make general over-the-counter supply recommendations based on the scenario of the role play.
Conclusion: This integrated lab-based counselling practice effectively integrates pharmaceutical chemistry with practice, allowing students to apply scientific knowledge in the context of supplying an over-the-counter medicine.

P300

Embedding experiential learning into the curriculum: Pharmacy students supporting the delivery of the Seasonal Flu Vaccination Programme in the UK

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Introduction. The 2021 General Pharmaceutical Council (GPhC) Standards for the initial education and training of pharmacists focus on training that supports a more integrated health and social care system, with pharmacists supporting patients to access the care they need in the right setting at right time. To ensure that pharmacists have the correct skills and attributes to deliver this care, undergraduate curriculums need to change and provide more opportunities for hands-on experiential learning UK pharmacy students must also show how they can participate in the promotion and protection of public health.
In the UK, community pharmacies provide vaccination services and are central to delivering the National Influenza Immunisation Programme.
Method: This programme/project aimed to embed pharmacy students into vaccine programmes while achieving key objectives within their education and training. Following taught sessions regarding how pharmacists lead on pharmaceutical public health, including the provision of influenza vaccination services, third year (Level 6) pharmacy students were trained to be vaccinators and deployed to support flu vaccination services in community pharmacies across Leicestershire. In October-November 2024, students attended a local community pharmacy for 2 days. Under supervision, students were able to administer flu vaccinations under the UK National Protocol and support the team with associated record keeping. Additionally, students were expected to proactively support with identifying patients eligible for vaccination and encourage uptake.
Results: This pilot demonstrated that pharmacy students were able to effectively support with the administration of influenza vaccinations under supervision and provide valuable support in public health services in a community pharmacy setting.
Conclusion: In their evaluation of the placement, supervisors commented on the professionalism of students and that the students' confidence grew over the 2 days. Future evaluation of patient experience and pedagogical outcomes will support development of other related public health services in the future.

P301

A nationwide study on community pharmacist's perception, practice, and perceived barriers toward pharmaceutical care practice in the United Arab Emirates

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Introduction: Pharmaceutical care (PC) is less practiced in United Arab Emirates (UAE) community pharmacies. This study assessed community pharmacists' (CPs) perceptions, practices, and perceived barriers to providing PC.
Methods: A nationwide cross-sectional survey was conducted from October 2023 to October 2024 among CPs across the country. A previously validated 5-point Likert-type questionnaire was adopted with minor changes (Cronbach alpha=0.93). Individual Likert statements were scored 1-5, and Manwhittney and Kruskal Wallis tests were performed to find the association between total perception, practice, and barrier scores with demographic variables. Post hoc analyses and Kendall's correlation were performed wherever applicable, at alpha=0.05.
Results: A total of 227 CPs, with 70.9% (n=161) of bachelor in pharmacy degree holders responded. The total median (IQR) scores for perception, practice, and barriers were 24 (22-26)/30, 40 (34-45)/50, and 76 (63-86)/125 respectively. Most of the CPs felt that patients' medications should be reviewed by them to prevent medicine-related errors and promote the appropriate use of medications [median (IQR) 5 (4-5)]. They also felt that CPs are professionally skilled in providing PC [median (IQR) 5 (4-5)]. Major barrier reported was lack of support from other health professionals toward PC [median (IQR) 4 (3-5)]. There was a statistically significant association between total perception scores with age (p=0.023), work experience (0.036), and working hours (p= 0.012), total practice scores with work experience (p= 0.035), and training in PC (p= 0.009), and total barrier scores with the average number of CPs available in the shift (p= 0.002). A Significant correlation was noticed within a few perception, practice, and barrier constructs and between these constructs and participants' demographic characteristics, $p<0.05$.
Conclusion: Specific interventions targeting the barriers identified in this research are urgently needed with the incorporation of patient-centered care and interprofessional collaboration in academia and practice settings as the starting point.

P302

Preparing to train as an independent prescriber: CPPE's programme to support pharmacists

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Introduction: From August 2026 every pharmacist graduating in the UK will be ready to prescribe. This means that there is recognition now that current practitioners need to become prescribers if they are to compete with future graduates and be able to offer the same services. Discussions with the current workforce highlighted barriers including knowledge gaps, limited confidence and uncertainty over applying for postgraduate training programmes. CPPE developed a 12 week programme to address these barriers. The programme aligns self assessment with the prescribing competency framework, provides active education through e-learning modules and fosters peer networks through face to face workshops. The programme comprises three main themes: preparing for prescribing, integrating prescribing into practice, and extending competence.
Methods: Quantitative and qualitative data collection, including tracking engagement metrics and surveys on confidence and competence, will be used for evaluation collected from post workshop survey feedback.
Results: Since its launch in September 2023, over 900 pharmacists have enrolled. Preliminary data indicate increased self-reported confidence and competence in accessing IP courses and implementing prescribing skills in practice. The data also shows that learners developed an increased awareness of personal development areas which meant they could focus on these before starting their IP training and be more ready to start their IP training. In some cases HEIs now include the CPPE programme as a prerequisite for their course.
Conclusion: CPPE's preparatory programme effectively supports pharmacists in transitioning toward IP roles. By providing accessible resources and fostering supportive networks, the programme is playing a crucial role in expanding the workforce of pharmacist prescribers, enabling pharmacists to access IP training who may otherwise have chosen not to and ultimately benefiting patient care across the healthcare system. Future analyses will further clarify its long-term impact and effectiveness in meeting evolving healthcare demands.

P303

The use of linguistic modifiers in simulated pharmacy education shared decision making discourse

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Introduction: Effective communication is essential for pharmacists delivering information to patients and healthcare professionals. Objective Structured Clinical Examination (OSCE) is a gold standard tool for evaluating the competency of pharmacist-in-training communication skills. Alsubaie et al.[1] identified the effectiveness of pharmacy students using politeness strategies to avoid imposition on patients and causing embarrassment during OSCE. Currently, teaching linguistic tactics isn't part of the Australia pharmacy education curriculum and there has been limited research into their impact of use. This study investigated the impact of the use of linguistic modifiers i.e. hedges and intensifiers by pharmacy students on their communication grades in an OSCE assessing shared decision making.
Methods: A retrospective study was conducted of 30 OSCE videos (10 from each of good, average and poor communication grade) of fourth year undergraduate pharmacy students who completed teamwork OSCE that required them to speak to both simulated doctor and carer. Discourse analysis was conducted to elicit the number and types of hedges and intensifiers used.
Results: Overall, students used more hedges than intensifiers when interacting with others. There were less hedges amongst good communicators in carers' interactions whereas a consistent number of hedges in doctors' interaction amongst all communication grades. However, there were no trends for intensifiers used in both interactions.
Conclusion: There was a potential impact in carer-student interactions regarding the number of hedges used. Good communicators were able to adjust their use of hedges to soften the communication and avoid imposing on carers' preferences whereas poor communicators couldn't. Purposive use of politeness theory in teaching helps raise awareness in students' communication. Future research could investigate whether use of linguistic strategies lead to better uptake of pharmacist-led recommendations.
1. Alsubaie S, Grant D, Donyai P. An Applied Linguistics study of how students prevent embarrassments and Impositions during interactive Examination OSCEs. AJPE 2023;87(8):100-3.

P304

Entrustment in action: Key factors shaping entrustment decision-making for provisionally registered pharmacists across Australia.

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Introduction: The process of entrustment where a provisionally registered (intern) pharmacist is gradually granted greater autonomy to practice is at the core of entrustable professional activities (EPAs). This study aims to explore the perceptions of intern and registered pharmacists on what factors influence the level of entrustment (and associated level of supervision) required of interns to perform different EPAs.
Methods: Registered and intern pharmacists in Australia were invited to participate in an anonymous online survey. Participants were asked to describe what factors they consider when making an entrustment determination for an intern for each of the three Australian Pharmacy Council EPAs: dispensing medicines, compounding products, and providing counselling. The free-text responses were analysed using an inductive approach coded by two independent researchers. Relevant codes, subthemes, themes were developed from the qualitative data, and supporting quotes were extracted to support the findings.
Results: A total of 215 responses were received. Three key themes were evident: intern's competency and skill proficiency, intern's growth orientation, and entrustment process dynamics. Participants noted that while knowledge and understanding are important factors in making entrustment decisions, humility and metacognition are equally as important as learners must be capable of guiding their own learning and self-reflecting on their performance in order to be able to practice autonomously. The entrustment process considers the stage of training, direct observation, and complexity of tasks, while trust propensity amongst preceptors is variable.
Conclusion: Entrustment of an intern pharmacist has multifaceted considerations that extend beyond the intern's own knowledge and understanding. Entrustment in learners is the outcome of the capabilities of a learner, and evidence of a learner's ability to practice with less supervision influences prospective entrustment decisions. It is not clear whether registered pharmacists' trust propensity for intern pharmacists creates variability in entrustment decisions, which may impact an intern pharmacist's development.

P305

Examining pharmacy educators' perspectives on assessing feasibility of implementing entrustable professional activities using the Quality of Entrustable Professional Activities rubric

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Introduction: Entrustable professional activities (EPAs) are a defined set of tasks that a learner is expected to perform unsupervised upon registration. Development of EPAs require a rigorous methodological process to ensure that the tasks accurately represent the profession and practice setting. While health disciplines have used different research approaches to develop EPA statements, a gap exists in understanding the considered factors when developing and implementing such statements. The aim is exploring the feasibility of adapting 15 EPA statements from the American Association of Colleges of Pharmacy (AACP) to define entry-level pharmacy practice in Qatar and identify facilitators and barriers to introducing EPA statements within experiential-education training.
Methods: Pharmacy faculty and experienced educators were recruited into focus group interviews to evaluate their perspectives on the feasibility of 15 EPA statements utilized by the AACP for use within Qatar entry-level pharmacy practice. Focus group interview questions were derived from the validated Quality of EPAs (QUEPA) rubric. Participants were asked to note their perspectives on facilitators and barriers to introducing EPAs in experiential-education settings.
Results: 23 participants participated across five focus group interviews. Four themes emerged from the focus group interviews: (1) Clarity and measurability of entry-level tasks, (2) Limitations and restrictions for implementation of EPAs, (3) Environmental facilitators (4) Environmental barriers. Participants commented on the applicability of AACP EPA statements in the Qatari pharmacy setting, and the opportunity to expand the profession's scope.
Conclusion: The validated QUEPA rubric provided systematic means of exploring incorporation of EPA statements into a Qatari pharmacy setting. Participants noted that while many EPA statements are transferrable to the Qatari setting, certain local laws and regulations prevent the application of such statements in Qatar. Nonetheless, EPA development and adaptation provides an opportunity to expand the pharmacist scope of practice and re-evaluate the expected duties of new-graduate pharmacists.

P306

Exploring preceptor assessment practices in Australia

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Introduction: Preceptors play a vital role in the educational journey of health professionals. A preceptor is an experienced practitioner who supervises a preceptee, such as a student or intern, during clinical practice. In recent years the assessment of clinical competence and professional behaviours of preceptees has shifted from traditional written exams to Workplace-based assessment (WBA) a more authentic method of assessment . For WBAs to be a reliable, valid assessment, there needs to be quality assurance of pharmacy preceptors who have the responsibility for assessing students and interns. The aim of this study is to explore current preceptor assessment practices in pharmacy education and how the results are used by educational organisations.
Methods: An online survey was designed and deployed via Qualtrics to gather data from heads of pharmacy schools, placement coordinators, and intern training program managers. The survey was adapted from a previously published instrument to suit the Australian context. The survey aims to identify whether preceptor competency is assessed, who performs the assessments, and the barriers to implementing preceptor assessment processes. It contains items about preceptor assessment methods, frequency of assessments, and the use of assessment results.
Results: The survey results will describe current preceptor assessment practices among pharmacy education providers and intern training providers. We anticipate finding variability in assessment practices and a lack of formal quality assurance processes. We also anticipate educational organisations face barriers such as lack of resources and standardised assessment tools.
Conclusion: The study aims to uncover the need for standardised preceptor assessment practices in pharmacy education. Recommendations will be made to accreditation bodies to develop a quality assurance system for preceptors, ensuring consistent and reliable assessments. This will support the professional development of preceptors and enhance the quality of pharmacy education through effective WBAs.

P307

Transferring pharmacy practice from the UK and NZ down under. Is it just a hop and a skip?

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Introduction: Workforce shortages remain problematic across all pharmacy sectors in Australia. To address this, one strategy is to recruit experienced pharmacists from overseas including the United Kingdom (UK) and New Zealand (NZ). The Australian Health Practitioner Regulation Agency (AHPRA) governs the registration standards for practice in Australia. UK pharmacists are assessed by AHPRA to undertake supervised practice hours and an oral exam for general registration. NZ registrations are mutually recognised without either requirement. Local health services determine workplace-based training needs. We reviewed feedback provided by pharmacists transitioning to Australian hospital practice to identify opportunities to further enhance our orientation program.
Methods: From January 2023 to present, twelve clinical pharmacists were recruited from the UK and NZ to a Victorian metropolitan tertiary referral hospital. All pharmacists received standard orientation to the service, which included completion of mandatory training, dispensary orientation, attendance at face-to-face orientation sessions and ward-based training completed by a senior pharmacist or dedicated clinical educator (where available). Written and verbal feedback responses were collated for continuous quality improvement.
Results: UK pharmacists remarked that the key challenges in transferring practice to Australia were exam preparation and administrative processes accompanying AHPRA registration. A suggestion was to consolidate resources to assist familiarisation with the Australian pharmacy legislation, including the Pharmaceutical Benefit Scheme, Special Access Scheme and Real Time Prescription Monitoring. Both UK and NZ pharmacists highlighted variations to formulary and scope of practice. Their workflows required adjustments as they were accustomed to independent prescribing practices and advanced pharmacy technician roles.
Conclusion: Overseas trained pharmacists can be valuable assets to Australian hospitals and their training requires bespoke considerations. Tailoring their training may increase job satisfaction, confidence and potentially expedite time to independent practice. A mentoring system and a customised module on Australian legislation may help to support their hop and skip down under.

P308

Advancing environmental sustainability in community pharmacy by bridging gaps in education, training, and practice

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Introduction: Pharmacy operations affect the environment through energy consumption and waste generation, including packaging and plastic waste, expired and unused medicines. Improper disposal of medicines can harm ecosystems, wildlife, and contribute to antibiotic resistance. Community pharmacies can mitigate these impacts by adopting sustainable practices, such as safe disposal programs, consumer education, and effective inventory management. This study aims to examine the current practices and attitudes of community pharmacy professionals toward environmental sustainability and to identify barriers and enablers in promoting sustainable practices.
Method: A cross-sectional online survey was conducted with pharmacy students, interns and pharmacists including proprietors and managers working in local community pharmacies. The survey contained twenty Likert scale multiple choice and open-ended questions. Internal consistency of the results was measured using the Cronbach's alpha test. Ethics approval was obtained from the Monash University Human Research Ethics Committee.
Results: 80% of participants (86) agreed they had a professional responsibility to adopt and promote sustainability practices in their community pharmacy workplace. Key barriers to implementing sustainable practices included lack of time (86%), limited knowledge and awareness (73%), lack of incentives (66%), difficulty sourcing eco-friendly supplies (47%), and limited space or facilities (44%). 15% of pharmacists reported they had specific plans to adopt more sustainable practices. Commonly adopted measures included reducing paper use, recycling, and proper waste disposal. One-third of participants responded non-pharmacological and lifestyle recommendations as a means to help reduce medication use and its environmental impact. Pharmacy students identified a gap in their knowledge and understanding of sustainable practices, highlighting the importance of integrating environmental sustainability education into the pharmacy curriculum
Conclusion: Our study highlights a gap in sustainability education within the pharmacy curriculum and emphasizes the need for guidelines, training programs, and educational resources to support community pharmacy workforce in adopting environmentally sustainable practices.

P309

Supporting pharmacy assistant/technician certification and training through collaborative tutorials with pharmacist mentors

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Introduction: With the expanding scope of practice in hospital pharmacy, upskilling pharmacy assistants/technicians has become a priority. Completion of the Certificate III/IV in Hospital/Health Services Pharmacy Support, a course which involves several self-paced modules, is required to provide a foundation before further credentialling for expanded roles. Previous students received ad hoc support from their mentor, assessor and colleagues, yet completion rates were variable and some found the modules difficult to complete. Therefore, there is a need to develop more proactive, structured support.
Method: Fortnightly tutorials were implemented for technicians undertaking the course at a tertiary hospital. The impact was explored through feedback from the technicians and their pharmacist mentors. Pharmacists who were already mentoring the assistants/technicians and therefore familiar with the course requirements were assigned tutorial topics to deliver. Each tutorial was constructively aligned to the content in a module, and incorporated department-specific information. Technicians were encouraged to ask questions and share ideas during the tutorial. After 6 tutorials, semi-structured interviews were conducted with all the technicians (n=4) and their pharmacist mentors (n=3), and the data were thematically analysed.
Results: Several themes were identified from the interviews: (1) richer learning experience through discussion, (2) increased support and accountability to complete the course, (3) greater collaboration and awareness of the technician role, and (4) opportunity for pharmacists to develop other skills. All participants reported that the tutorials were a positive experience and favoured continuing this structured approach, but raised that attendance can be challenging due to busy workloads. The tutorials also provided an opportunity to develop training materials that could then be used for future assistants/technicians.
Conclusion: This initiative reinforced the benefit of providing proactive, structured support in a group setting, especially when technicians are undertaking self-paced courses. It highlighted that involving pharmacists in technician training has benefits for both groups.

P310

Evaluation of mental health first aid training and simulated patient role-plays for healthcare students

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Introduction: Mental Health First Aid (MHFA) training has shown to improve healthcare students' mental health knowledge and confidence. Simulated patient role-plays (SPRPs) provide a safe environment for students to practise MHFA skills, assessing their behaviours before they face real-life situations. This study aimed to explore students' role-play performances post-MHFA training, and student experiences of participating in role-plays with trained actors.
Methods: MHFA training was provided to student cohorts across medicine, nursing, occupational therapy, and pharmacy programs at The University of Sydney. Post-MHFA training, students participated in SPRPs with trained actors. These sessions were observed by peers, tutors, and lived experience educators (LEEs), with students immediately engaging in self-assessments using validated rubrics, feedback, and debrief discussions. Scores from self-assessment, tutors, and LEEs for each of three scenarios were compared. Focus groups were conducted post-training to gather insights on student experiences, and transcripts underwent inductive thematic analysis.
Results: A total of 201 tutor, 192 LEE, and 197 self-assessments were analysed. The mean self-assessment scores were the lowest, while LEE scores were the highest. No significant differences were found between disciplines. Students received the lowest scores on the scenario involving provision of support for a person with suicidal thoughts, highlighting challenges in suicide assessment. Seven focus groups were conducted with 19 students across disciplines, who expressed uncertainties regarding appropriate actions following conversations. However, students described the role-plays to be highly valuable and authentic learning experiences and noted the value of role-playing with trained actors as opposed to peers or the tutor.
Conclusion: Embedding MHFA training within healthcare curricula supports students to confidently handle mental health conversations and situations, however further training in mental health crises may be needed. SPRPs, enacted by trained actors, offer a valuable approach to assess and enhance students' mental health support behaviours in a controlled, reflective environment.

P311

Rx essentials: A 1-week immersion course to strengthen foundations in medical terminology and calculations for incoming pharmacy students

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Introduction: Students enter pharmacy school with varied levels of preparation in prerequisites, particularly calculation skills. This presents an opportunity to support students in building a strong foundation for success in pharmacy school. With the goal of reducing disparities in academic readiness and building classroom community, we developed an immersion course to provide students with a foundation in medical terminology and basic calculations.
Methods: All incoming students completed this 1-credit immersion course, Rx Essentials, with 15 contact hours during the first week of the semester. Regular courses began in the second week. Class sessions used active learning strategies including games, case scenarios, pre-class assignments, and group discussions. To pass, students needed a minimum score of 70% on one medical terminology exam and three calculation quizzes. Individual tutoring and re-assessment were available for those who did not meet this threshold. Student perceptions were assessed through course evaluations and focus groups. Scores on a calculations-based pre-assessment in the Pharmaceutics course were reviewed.
Results: All students (n=100) successfully passed. Four students required one re-assessment attempt (two calculations and two medical terminology). Course evaluations were positive with scores ranging from 4.2 - 5.0, on a 5-point Likert scale (1=strongly disagree, 5=strongly agree). Themes from student comments revealed varied experiences with the calculations content: some found it easy or unnecessary, while others appreciated the refresher. The feedback also highlighted a need to allocate more time to mastering medical terminology and practicing calculations that more directly prepare students for the Pharmaceutics course. Students that completed Rx Essentials outperformed their 2023 peers on the Pharmaceutics pre-assessment (68% v 52%).
Conclusion: The Rx Essentials course effectively bridged gaps in pre-requisite knowledge and enhanced readiness for pharmacy coursework. Positive evaluations and improved Pharmaceutics pre-assessment scores indicate the course's impact. Student feedback will guide refinements to align content with curricular needs.

P312

Taste to teach: Student perceptions of a hands-on approach to learning about medicine administration

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Introduction: Pharmacists routinely give advice on appropriate administration of medicines and nutritional products. Pharmacy students are taught to locate and synthesise information relevant for specific situations. However, without practical experience of different administration processes and practical considerations, there is a risk that advice provided will be confusing and unrealistic.
Methods: A practical, hands-on 2-hour session was designed using the constructs of active learning and knowledge contextualisation and incorporated into the paediatrics and geriatrics module, which occurs late in the BPharm programme. Four stations were designed, supported by specialist multidisciplinary staff from both University and clinical settings:

- Hospital Play Specialists explaining child development, behaviour management techniques and teaching children to swallow solid doses.
- A gastroenterology nurse supporting students to 'administer' tablets and capsules via nasogastric tubes, with a pharmacist discussing considerations when crushing solid dose forms.
- Intravenous administration, where students view, touch and experience administration via luers of different gauges and a range of central lines, alongside a paediatric nurse discussing intravenous line insertion and use, and a pharmacist explaining considerations relevant to neonatal, paediatric and adult patients.
- Taste tests of enteral feeds and electrolyte replacement products in different flavours and at different temperatures, supporting discussion on product selection and taste masking.

Results: Students reported the workshop was useful and universally recommended continuation for future cohorts. All stations were mentioned in free-text evaluation comments asking which aspects they considered most useful (play specialists n=8/44; tasting n=34/44; IV lines n = 21/44 and nasogastric tubes n=24/44). Comments included "being able to observe, interact, hold, taste, at the different stations really helped to consolidate the knowledge we've learnt in class. It was fun and interesting".
Conclusion: The practical medicines administration workshop was well received by students, provided a valuable learning experience and is now permanently integrated into the module.

P313

The use of international comparison as interactive teaching method in pharmacy education

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Introduction: Pharmacy regulation and ethics course introduce students to pharmacy laws, ethics, and regulations in the pharmacy profession. Learning through international comparison assignments can significantly impact students' academic performance. The aim of this study is to identify students' perceptions of using the international comparison as an interactive teaching method in learning ethical regulation and law course.

Methods: This cross-sectional study used a mixed methods approach that included quantitative and qualitative data collection. The survey was divided into five domains: knowledge development, international perspective, future prospects, personal enjoyment, and an overall evaluation of the learning experience. Students' levels of agreement were assessed using a five-point Likert scale, with five indicating the strongest agreement and one indicating the strongest disagreement. Additionally, open-ended questions encouraging students to reflect about their experiences were included in the survey.

Results: A total of 214 students completed the questionnaire, achieving a response rate of 81.6 %. Nearly 90 % of the participants agreed or strongly agreed that a comparison of the two international perspectives was effective in supporting their knowledge of drug approval processes in Saudi Arabia and other countries. However, approximately three-quarters of the students strongly agreed or agreed that international comparison and contrast assignments would influence their career choices. The students were enthusiastic about the assignment's development and improvement of a set of crucial abilities, including searching, analyzing, summarizing, critical thinking, and teamwork, which are crucial for healthcare students, particularly pharmacy students.

Conclusions: Overall, learning by using an international comparison of contrast assignments as an interactive teaching method can positively impact students' academic and professional development by helping them develop critical thinking, research, writing, cultural awareness, and communication skills.

P314

Weight bias and stigma in healthcare: Description of an innovative interprofessional education workshop

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Introduction: Weight bias can lead to negative patient outcomes and discourage individuals from seeking healthcare. Stigma operates on multiple levels: micro (interpersonal interactions between patients and health professionals), mezzo (physical environment, including equipment and decor), and macro (institutional policies). To promote equity, health professionals must recognize their own biases, advocate for weight-inclusive spaces, and develop policies ensuring care for patients of all sizes. Exploring these issues in an interprofessional education (IPE) setting can foster multidisciplinary dialogue on providing weight-inclusive care. This study aimed to assess the impact of a 4-hour IPE workshop on student knowledge and attitudes regarding weight bias.
Methods: Students from twelve health professions participated in a Zoom-based IPE workshop designed to improve knowledge and attitudes related to weight bias. The workshop included lectures from subject matter experts and three breakout room sessions where interprofessional teams applied lecture content to problem-based scenarios. Breakout sessions were titled: 1) Introduction to weight stigma using a comic strip, 2) Identifying barriers to care in the built environment, and 3) Practicing interventions in potentially stigmatizing situations. Students completed a pre/post-event survey, including the Knowledge and Beliefs About Weight Stigma (KABAWS) scale, a 24-item, 5-point Likert-based survey developed for the workshop. The Wilcoxon Signed Rank Test was used to determine changes in the pre/post KABAWS survey.
Results: Six hundred and forty-seven students participated, with 529 completing the pre/post survey (response rate 81.8%). Statistically significant improvements were noted on 19 items of the KABAWS survey, including “It is unacceptable for fat people to leave a healthcare appointment feeling bad about their weight” ($p<0.001$) and “Fat people should lose weight so they don’t experience weight stigma anymore” ($p=0.002$).
Conclusion: Few studies have addressed weight bias among health professions students. This study suggests that the IPE workshop successfully shifted student attitudes regarding weight bias and stigma.

P315

Exploring the opportunities of teaching therapeutic decision-making skills online in Indonesian undergraduate pharmacy education

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Introduction: Therapeutic decision-making is a core competency in pharmacy and there is an increasing need to support student development of these skills. However, educational institutions often face limitations in time and resources to provide sufficient training in this area. Online teaching and learning may assist the institution to better prepare the students for these skills. This is the first study conducted to identify the needs, expected outcomes, supporting resources, and potential barriers to teaching therapeutic decision-making skills online in an Indonesian university.
Methods: Online interviews with faculty executives, pharmacy academics, and hospital preceptors in an Indonesian university were conducted. Qualitative data analysis was conducted using deductive coding guided by the program decision-making CIPP (Context-Input-Process-Product) combined with inductive coding. This study was approved by the Human Research Ethics Committees of Monash University and the Indonesian university.
Results: Eight pharmacy academics, three faculty executives, and six pharmacist preceptors participated in this study. Participants suggested a need to enhance students' therapeutic decision-making skills before graduation, as hospital placements alone were insufficient to develop these competencies. Some participants expressed concerns about the effectiveness of teaching skills online, citing limited real-time interaction with students critical for refining their abilities. Most participants identified the students' skill acquisition as the primary expected outcome of teaching therapeutic decision-making skills online. Resources identified to support online teaching and learning included Internet access, online learning platforms, clinical literature, and faculty training.
Conclusion: Academics, administrators, and preceptors agreed on the need for additional support for students to develop therapeutic decision-making skills with online learning as a potential solution. However, some barriers were anticipated, including effectiveness concerns. These findings suggest that successful implementation of online therapeutic decision-making training will require dedicated resources for technological infrastructure and faculty development, along with careful consideration of pedagogical approaches that enhance student engagement and skill acquisition.

P316

Clinical decision-maker: A vital role in the professional identity formation of pharmacists

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Introduction: Pharmacists are valued for their broad knowledge about the safe use of medicines and their ability to communicate this expertise to patients and other healthcare providers. However, if pharmacists and the public view the profession merely as medicines suppliers this view might impede professional progress and impact patient outcomes. This poster presentation illustrates three leverage points to support change in the professional identity of pharmacists from medicines supplier to clinical decision-maker.
Methods: Building on previous studies focused on clinical decision-making, a conceptual analysis was performed to identify potential influences on the professional identity formation of pharmacists.
Results: Three leverage points were identified: workplace culture, terminology, and pharmacy education. Workplace culture is a dominant force that shapes the everyday practice of pharmacists. Change will require policies, procedures, and colleagues that support pharmacists to assume direct responsibility for drug therapy decisions. Regarding terminology, greater consensus is required for pharmacy. This consensus includes common names to describe, teach, learn, study, and legislate the processes that pharmacists use when making decisions about drug therapy. In pharmacy education, educators are ideally placed to support future pharmacists to mobilize foundation knowledge and skills about drug therapy and become leaders for people that require complex medicines therapy.
Conclusion: There are likely other leverage points that can be acted upon to facilitate change in the pharmacy profession. In other health professions, practitioners and educators also may be encountering a need to develop new roles to keep pace with advances in healthcare, shifting landscapes in education and training, growing needs of patients, and changing expectations of people in our communities.

P317

What do I mean when I say… Crucial Conversations? Enhancing Pharmacy Practice through Effective Dialogue

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Introduction: The transition from pharmacy education to professional practice is fraught with communication challenges that can hinder effective professional development and integration. This workshop utilises the Crucial Conversations framework – a communication strategy for managing high-stakes interactions – aiding professional development and promote a culture of lifelong learning among pharmacists.
Methods: Using "Crucial Conversations" framework by Patterson et al, a face-to-face workshop was designed for pre-registered pharmacists. It integrated theoretical concepts, guided discussions and interactive role-playing activities to explore communication barriers and enablers. This aimed to equip participants with skills to navigate complex scenarios, fostering meaningful and constructive conversations supporting professional growth and adaptability. A facilitator guide was developed supporting delivery of the training. It outlined the framework, key discussion points, and scenarios for role plays. Facilitator training was delivered via pre-recorded video to ensure consistency and thorough understanding of the content.
Results: Participants improved their understanding of crucial conversation techniques, highlighted by one participant, “This is exactly what we need at this point of registration to engage effectively with our supervisors”. The workshop enhanced their confidence in handling complex communications and fostered the development of personalised action plans. It promoted open dialogue, reflective thinking, and confidence in communication skills. Mastering these skills allows pre-registered pharmacists to better meet the healthcare demands, enhancing their adaptability in Australia’s dynamic pharmacy landscape.
Conclusion: Effective management of crucial conversations is essential for pre-registered pharmacists transitioning to professional roles. This workshop refines communication skills, instills a proactive approach to lifelong learning, and builds confidence through continuous reflection and open dialogue. By integrating these techniques into daily practice, participants enhance their engagement in professional interactions, contributing significantly to healthcare. The structured workshop approach provides tools to transform challenges into opportunities for development, benefiting patient care and team dynamics.

P318

Emergency contraception: Do Australian pharmacists have the knowledge and practices to optimise outcomes.

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Introduction: Around 40% of pregnancies in Australia are unintended, with women living in rural and remote areas being 1.4 times more likely to experience unwanted pregnancy, associated with social disadvantage and reduced availability and access to reproductive healthcare. (Rowe et al., 2016; Shankar et al., 2023) In Australia, emergency contraceptive pills (ECP) first became available without prescription in 2004, and currently two types of ECP are available over the counter in Australian pharmacies. Pharmacists' lack of knowledge has been reported to impact their practice and thus customer outcomes. (Nona et al., 2024) Recommendations are that knowledge of current and future pharmacists should be addressed in relation to changing demands on time and scope of practice. The aim of this study was to determine the knowledge and practices of Australian community pharmacists in the provision of over-the-counter ECP.
Methods: This study applied data gathered though semi structured interviews conducted with Australian community pharmacists engaged in the supply of over-the-counter emergency hormonal contraception. Exploration of their knowledge, experiences in practice provided qualitative data that was inductively and deductively coded and themed against a modified Theoretical Domains Framework.
Results: Seventeen pharmacists, practicing in all regions from metropolitan to very remote locations across Australia participated. Analysis highlighted themes including benefit v risk, choice of ECP, guideline use and underprepared for ECP. Participants described a lack of current ECP knowledge which they correlated with limited time and resource access, alongside complacency and the reliance on acquired knowledge and professional judgement. They also acknowledged minimal updates in their education since their university studies.
Conclusion: Pharmacists recognise gaps in their knowledge of ECP, impacted by the failure to appreciate the need for ongoing professional development. Future research into pharmacists' practices and guidelines to inform that practice is recommended.

P319

Cultivating a sustainable approach to practitioner wellbeing

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Introduction: The workplace experience is a critical aspect of developing an engaged workforce. In response, the Pharmacy Workforce Wellbeing Initiative (PWWI) implemented a sustainable workforce wellbeing strategy that consists of:

1. Asking “What Matters to You?”
2. Reflective Practice Program
3. Wellbeing Champions

Methods: What Matters to You (WMTY) conversations come from the IHI framework for Improving Joy in Work. The IHI framework provides a source of timely, candid feedback, specific to the Pharmacy Program. Improvement science principles are used to address challenges identified. Reflective practice is an opportunity to develop self-awareness. The program is run in collaboration with the psychology team and based on the professional supervision model used in psychology. Participants are paired with a supervisor who is not a peer or line manager and meet to reflect on the experience of working in healthcare.

The PWWI team convene the Wellbeing Committee, with membership from across the Pharmacy Program tasked with local implementation of initiatives.

Results: The first WMTY conversations were conducted in 2022 with 73% of staff participating. In 2024, 40% of the Pharmacy team participated. WMTY conversations have identified many suggestions for improvements ranging from immediate to more complex. “What Matters to You?” has become part of the lexicon of the Pharmacy Department.

Results from the pilot Reflective Practice program (n=12) are promising. 90% of participants rated the program as “somewhat” or “extremely” useful. Measures of wellbeing have improved and scores of relationship quality were high.

Activities of the Wellbeing Committee centre on the themes from staff surveys. In addition, a calendar of events runs including the Wellbeing Week, “Non-scrub Days” and shared morning teas.

Conclusion: Pharmacy practice continues to respond to the demands of contemporary healthcare. This requires a focus on creating an environment people are drawn to work within. The PWWI addresses wellbeing sustainably.

P320

Nutrition education in pharmacy training: Is it sufficient?

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Introduction: Poor dietary habits contribute to the development and progression of non-communicable diseases worldwide. Counselling on diet and lifestyle forms part of first-line prevention/treatment for several conditions, such as cardiovascular disease and diabetes, with pharmacists being part of the primary healthcare workforce that delivers this important health promotion service. Here, we explored if Australian pharmacists felt adequately equipped to provide advice on diet as well as vitamin and mineral supplementation to patients.
Methods: Australian pharmacists, recruited via professional networks and social media, participated in an online survey to evaluate whether their pharmacy education provided adequate training in general nutrition. They were also asked if nutrition education should be included in pharmacy training, and if so, in what format. Additionally, semi-structured interviews were conducted to further explore the adequacy of nutrition training and to identify specific dietary topics for which patients commonly seek information from pharmacists.
Results: Of the 107 registered pharmacists who completed the online survey, 80% reported insufficient training in general nutrition, while 67% felt that it should be a core subject in pharmacy education. Semi-structured interviews with 21 pharmacists revealed that the lack of nutrition education hindered their ability to provide nutrition counselling to patients. The topics for which patients were seeking nutritional information were diverse and extended beyond common non-communicable diseases. Additionally, pharmacists indicated that they often pursue self-education in general nutrition to improve their knowledge and skills in this area.
Conclusion: Australian pharmacists indicated that their nutrition education as provided through their pharmacy training was insufficient. Incorporation of more in-depth nutrition education in pharmacy training is required to meet this important public health need.

P321

Evaluation of a bespoke 360-degree feedback tool and facilitated feedback program for professional development in a tertiary hospital pharmacy department

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Introduction: 360-degree feedback (360df) delivered via a structured, facilitated session is shown to identify opportunities to create a professional development (PD) plan. Studies demonstrate the successful use of 360df for assessment of junior resident pharmacists, however evidence supporting 360df in pharmacist PD is lacking and available 360df tools were not fit-for-purpose. A novel and bespoke 360df tool was developed and evaluated to determine acceptance and pharmacists' perceptions of 360df for PD.

Methods: The 360df tool was developed with questions aligning to relevant competencies in the National Competency Standards Framework For Pharmacists In Australia 2016. Pharmacist participants sent invitations with the 360df tool to ≥15 colleagues within their professional sphere and undertook self-evaluation with the same tool. A feedback report was generated and discussed between the participant and a trained feedback facilitator, followed by collaborative design of a PD plan. Following self-evaluation, an acceptability questionnaire was employed to determine participants' acceptability of the 360df tool. The questionnaire utilised an Osgood's Semantic Differential Scale, containing 12 bipolar adjectives and a ten-point rating scale (where 10 indicates a strong positive response). At completion of 360df, semi-structured interviews were utilised to explore participants' perceptions of the process and themes were identified through qualitative analysis.

Results: Of 25 participants enrolled, 23 (92%) completed the 360df process. The acceptability questionnaire (response rate 91% [21/23]) returned a mean rating of 7.3/10 (SD 2.1), where median ratings ≥9 indicate participants found the tool fair, beneficial, useful and valuable. Preliminary results from thematic analysis of 23 semi-structured interviews highlight the critical role of facilitated feedback and indicate that pharmacists perceive 360df as useful for PD, provides opportunities for practice improvement and strengthens relationships with interdisciplinary staff.

Conclusion: The bespoke 360df tool was deemed beneficial and valuable, and 360df is perceived by pharmacists as a useful and practice-changing PD process.

P322

Comparison of interprofessional versus integrated teaching methods among fifth-year Pharm D and medical students.

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Introduction: Few health science schools in India include interprofessional education (IPE) in the curriculum. Including IPE as a core element in the curriculum can improve understanding of professional roles and bridge the gap between the disciplines.
Methods: A prospective interventional study where selected Pharm D and Medical students in their fifth year underwent IPE in select topics (IPE group) whereas the other students attended the regular integrated teaching (IT) included in the curriculum (3 hours/week). The IPE consisted of pre- reading material followed by lectures and case-based modules amounting to 6 hours/week) All the students were provided pre- and post- questionnaires to test their knowledge. The scores of the IPE student group were compared with those of the IT group.
Results: Out of 502 students enrolled in the study, 52 (10.35%) were in the IPE group and 450 (89.64%) students underwent the regular IT program. 76% and 24% of participants were students of undergraduate medicine and Pharm D respectively. The pre-scores for IPE group and integrated teaching group were comparable for all the three topics, heart failure (4.64 ± 0.60 – IPE, 4.47 ± 0.87 - IT, p=0.63), pneumonia (5.56 ± 1.64 – IPE, 5.6 ± 1.18 - IT, p=1.6) and peptic ulcer disease (4.16 ± 0.78 – IPE, 4.27 ± 0.82 – IT, p=0.32). The post scores were higher in the IPE group for all the topics (9.29 ± 0.77 – IPE, 6.60 ± 1.33 – IT for heart failure; 9.38 ± 0.69 – IPE, 6.74 ± 1.27 – IT for Pneumonia; 9.47 ± 0.62 – IPE, 6.52 ± 0.96 – IT for peptic ulcer disease) indicating an enhanced understanding. Most students in the IPE group agreed that their communication with patients and others in the healthcare team improved.
Conclusion: The interprofessional education program was beneficial in enhancing students' knowledge.

P323

Engaging pharmacy student learning and communication skills through Pecha Kucha

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Introduction: Conventionally, students in the Master of Pharmacy program's Pharmaceutical Microbiology unit submitted written reports to explain lab results. However, these reports often lacked originality and critical thinking, making them less engaging for both students and markers. Further concerns about written responses by generative AI are warranted with this submission format. This study explores the educator experience of replacing written lab reports with a novel Pecha Kucha presentation format to deepen understanding of scientific concepts and enhance preparation and practice of communication skills.
Methods: Students attended three microbiology labs focusing on essential knowledge for pharmaceutical microbiology (aseptic processing principles, effective sterilization, measurement of antimicrobial agent effectiveness, formulation and preservative compatibility). Groups of four students conducted data analysis to create a pre-recorded Pecha Kucha video to explain their lab results to a general audience. Pecha Kucha presentations consist of 20 image-based slides with each slide only shown for 20 seconds (total: 6 minutes and 40 seconds). Autoethnography was used to explore the educator experiences of teaching and assessing this new assessment approach to inform future delivery.
Results: Pecha Kucha videos were assessed. Unlike previous written reports, each presentation was unique and showcased high levels of creativity. Educator's reflections revealed that the Pecha Kucha format positively influenced student engagement, satisfaction, and improved student's data interpretation, analysis and communication skill development. The transcripts of each presentation highlighted greater depth of understanding. From a marking perspective, the Pecha Kucha format was easy and quick to assess with a specific scientific content rubric.
Conclusion: Implementing a Pecha Kucha format is an innovative pedagogical strategy that enhances student engagement, fosters creativity and develops presentation skills. This format proved beneficial to both students and markers, as it increased enjoyment, originality, and critical thinking, enriching the teaching and learning experience in the pharmacy curriculum.

P324

Pharmacists' knowledge, attitudes, and confidence in recommending mobile health applications to patients: What we learned from the literature

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Introduction: Numerous studies have demonstrated the benefits of utilizing mobile health applications (m-health apps), to improve patient care. However, no guidelines exist as a reference for pharmacists when making recommendations of m-health apps to patients. The objective of this project was to characterize the factors that pharmacists and patients prioritize when assessing m-health apps. These factors may help determine pharmacists' knowledge, attitudes, and confidence in recommending m-health apps to patients.
Methods: A literature search was conducted in MEDLINE and EMBASE. Ten studies were reviewed and analyzed for factors related to using/recommending m-health apps, positive/negative attitudes on m-health app use/recommendations, and confidence/readiness in recommending a m-health app to a patient.
Results: A factor that influenced pharmacists' knowledge on m-health apps was age. Pharmacists less than 35 years old have better perceptions of apps and their use in patient care. Factors that promote positive attitudes in app recommendation included features such as notifications or reminders, of which their use have improved patient adherence to medication use. Factors that prompted negative attitudes included lack of scientific evidence behind information provided within the app. Other barriers involved a lack of usability, unfamiliarity with using mobile apps, and security concerns. Factors that improved confidence in making app recommendations included whether the app was accessible in various app stores, visually appealing, easy-to-use, and presentation of information in a patient-friendly manner.
Conclusion: From being aesthetically pleasing and user-friendly to being able to improve medication adherence and patient communication, all studies illustrated similar preferred factors in m-health apps. While further studies are necessary to elucidate factors influencing pharmacists' recommendations of m-health apps, what we learned from the literature can serve as a starting point for future guideline development and continuing professional development.

P325

Education reimagined: Virtual learning's role in a post-pandemic world

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Introduction: In response to the unprecedented disruptions caused by the COVID-19 pandemic in 2020, Advanced Pharmacy Australia (AdPha) swiftly transitioned all in-person education to virtual platforms. Content was delivered in two components; self-directed learning on AdPha's Online Continuing Professional Development (CPD) platform and interactive live virtual sessions via Zoom. This approach remains the mainstay of education delivery for the organisation. This flexible and inclusive digital approach to education delivery, meeting all member needs, remains integral in 2024.
Method: To assess the effectiveness and alignment of this model to members' needs, AdPha conducted an Education Needs Survey in April 2024. The survey, distributed to all 5716 members sought feedback on the current virtual education format, focusing on its advantages, disadvantages and preferred delivery modality for future education.
Results: The survey results highlighted key benefits of virtual learning, particularly among those attending AdPha seminars. Members identified cost savings (70.83%), accessibility (66.67%) and participation access (58.33%) as primary benefits. When asked to rank preferred formats, the majority (87.5%) of members indicated they prefer virtual sessions. 45.83% of respondents favoured a one-day virtual seminar, followed closely by a preference for two-day virtual sessions (41.67%). Qualitative feedback underscored these findings, with members noting that whilst in person learning has advantages, virtual seminars are more accessible, economical, and feasible for rural and remote individuals.
Conclusion: This survey highlights the strong desire from AdPha members for the continued use of virtual learning platforms, with convenience, cost reduction, and enhanced accessibility identified as key drivers. The insights gained will continue to guide AdPha's ongoing strategies to deliver the highest quality education by adopting new technologies and diversifying virtual content delivery, ensuring equitable and accessible learning opportunities for all members.

P326

Interventions to expand community pharmacists' scope of practice

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Introduction: The role of community pharmacists has evolved beyond the dispensing of medicines. The aim of this scoping review was to describe the interventions that expand the pharmacist's scope of practice within a community pharmacy setting and assess their effectiveness.
Methods: We performed a scoping review to identify randomised controlled trials (RCTs), published worldwide from 2013 to 2024, which focused on interventions designed to expand pharmacists' scope of practice in the community. The review was undertaken in accordance with the Joanna Briggs, Institute methodology for scoping reviews. To address the aim of this scoping review, the included RCTs were mapped to themes influenced by the Professional Practice Standards 2023 as developed by the Pharmaceutical Society of Australia: medication management, collaborative care and medication adherence.
Results: Twelve studies demonstrated the potential to expand community pharmacists' scope of practice. Two RCTs resulted in no effect of the intervention. One RCT (conducted in Italy) led to an actual change to community pharmacists' scope of practice, with a statistically significant improvement in the proportion of patients with controlled asthma.
Conclusions: On the whole, this scoping review synthesised the findings of peer-reviewed RCT studies that revealed expanding community pharmacists' scope of practice may result in improved patient outcomes, a reduced burden for the healthcare system, and greater productivity

P327

Navigating challenges in pharmacy practice education: Insights from the Indian PharmD Program

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Introduction: The PharmD program in India, established in 2008 under the Pharmacy Act of 1948, believed to be a significant step in advancing pharmacy education and practice in the country.
Methods: A SWOC analysis of the Indian PharmD program, highlighting its achievements and areas for improvement to align with global standards has been done.
Results: Strengths of the program include a robust focus on experiential education constituting nearly 75% of practical training, and a balanced curriculum that integrates biomedical, pharmaceutical, and clinical sciences offered in about 321 colleges to approximately 10000 students. The program fosters critical thinking, scientific reasoning, and interprofessional education, providing students with exposure to diverse healthcare settings. It supports progressive learning, integrating foundational knowledge with advanced clinical applications, and encourages self-directed learning and problem-solving skills. However, the program's Weaknesses include absence of competency-based education, and limited simulation-based training. The curriculum and assessment methods lack standardization, and there are gaps in resources for community pharmacy training and entrepreneurship development. The dual roles of faculty as teachers and preceptors, unclear guidelines for internship supervision further limit the program's efficacy. Opportunities include adopting a competency-based curriculum, introducing innovative pedagogies and assessments like OSCE/OSPE, expanding elective and clinical research-oriented courses, and improving alignment with international standards. Establishing structured faculty development programs, skill labs, and interprofessional education modules could further enhance the program's impact. Key Challenges include insufficient support from hospital administrators, logistical issues in clinical rotations, balancing foundational and clinical sciences, and the need to establish a professional identity for clinical pharmacy services. Addressing these challenges requires a collaborative effort between academia, healthcare institutions, and regulatory bodies.
Conclusion: This analysis underscores the potential of the PharmD program in shaping competent pharmacy professionals while emphasizing the need for systematic improvements to ensure its continued growth and relevance in healthcare in India.

P328

Bite-sized educational resources and a virtual community of practice to engage pharmacy professionals and students in quality improvement

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Introduction: Bite-sized educational content on quality improvement (QI) can be tailored to diverse learning styles of healthcare professionals (HCPs) and students. This project was aimed (1) to develop and evaluate educational resources for HCPs, including pharmacists, about QI concepts using infographics (through Online Pocket Guide to QI or PGQI), video microlessons, and provide real-world examples of QI/leadership (through the Leading with Quality Podcast or LQP); (2) to engage HCPs/students by featuring the content in a virtual QI community of practice (CoP).
Methods: Development of educational resources involved consulting national/international resources for training HCPs on QI (via PGQI, video microlessons) and interviewing guest speakers about their experiences with QI/leadership (via LQP). Resources were featured on a virtual QI CoP. The PGQI and LQP were individually pilot-tested to a convenience sample of Canadian pharmacy professionals/students through online surveys based on Kirkpatrick's four-level training evaluation, asking about their perceived value, relevance, and knowledge gain after reviewing the PGQI or the LQP.
Results: The PGQI, video microlessons, LQP, and QI CoP have been developed. Survey respondents for both PGQI (n = 20) and LQP (n = 20) found the materials to be relevant and easy to understand, indicated improved knowledge on QI and/or leadership, and recommended the resources to other HCPs/students. PGQI respondents suggested more external resources, QI examples, and case scenarios, while LQP respondents suggested improving clarity by explaining concepts and jargon at the beginning of the podcast episodes.
Conclusion: Bite-sized content (offered through PGQI, video microlessons, and LQP) will serve as resources to support a virtual QI CoP for HCPs/students for knowledge exchange, personal and professional development, and fostering leadership in QI.