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Abstracts

Evaluation of the Brent Training Hub experience pilot supporting pharmacy Student GP placements

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Background: Pharmacy undergraduate placements, within general practice (GP), are a critical component of workforce development, aligning with the NHS Long Term Plan (UK Government, 2025). Placements provide students with essential experiential learning, supporting clinical, interprofessional, and communication skills (GPhC, 2021). Recognising the need for induction ahead of placement, Brent Training Hub (NW London, 2026) piloted training for pharmacy students prior to GP placements, followed by a debriefing session, ensuring students obtained the required knowledge, alongside outlining expectations.

Aims: To evaluate the impact of the Brent Training Hub GP placement induction on pharmacy student self-reported knowledge and confidence.

Method: Pre and post placement questionnaires were distributed to 15 students at the Training Hub in November 2025, via Microsoft Forms containing questions including self-reported knowledge of roles, confidence and likelihood of wanting to work in a GP setting (1 being lowest to 5 highest). Data were analysed in Microsoft Excel using mean scores and numerical data. Paired T-tests identified statistical differences pre and post ($p < 0.05$). Ethical approval was received by Kingston University.

Results: All 15 3rd year MPharm Kingston University students participating in the pilot responded (100% response rate). Self-reported knowledge on the roles and responsibilities of a pharmacist in a GP practice increased from 2.53 to 4.53 ($P < 0.0001$). Confidence working in a GP practice increased from 2.8 to 4.2 ($P = 0.0013$) and likelihood to work in a GP

practice in the future increased from 3.46 to 4.6 ($P = 0.0060$). Before the placement eight students stated they considered working in a GP surgery as part of foundation placement increasing to 100% after the placement.

Conclusion: This pilot showed benefits of utilising a training hub led GP Placements induction and debrief programme with students increasing their knowledge and confidence in the sector and supporting the workforce of the future with further placements planned.

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MPharm students delivering the community pharmacy hypertension case-finding service: The role of Entrustable Professional Activities (EPAs)

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Background: Community pharmacies have been delivering the hypertension case-finding service since 2021, with a 2023

update enabling suitably trained non registered members of the pharmacy team to deliver the service (NHS England 2023). Pharmacy undergraduate students receive training in blood pressure measurement as part of their prescribing skills development (NHS England 2025), meaning they may be able to support the service while on placement. The Entrustable Professional Activities (EPA) toolkit provides a structured framework for placement supervisors to make entrustment decisions that could facilitate students delivering the hypertension case finding service during their placements.

Aim: This pilot study aimed to determine whether 3rd year MPharm students are trusted to deliver the hypertension case finding service whilst on community placements.

Method: Prior to placements, students completed cardiovascular teaching, passed a supervised learning event using automated blood pressure monitors, and participated in a public health screening event where an academic staff member made an initial entrustment decision. Students completed two seven day placements in the same pharmacy. During the second week, responsible pharmacists (RPs) were asked to make an entrustment decision, enabling students to deliver the hypertension case finding service according to the RP's agreed level of supervision. Student feedback was collected as part of routine placement evaluation; therefore, separate ethical approval was not required.

Results: Ninety six students attended placements, and 52 provided feedback. Of these, 26 delivered the hypertension case finding service, completing over 132 blood pressure measurements across small multiples, large multiples, and independent pharmacies. Most students (n=13) were entrusted at level 4 (remote supervision), with others entrusted at intermittent, reactive, or direct supervision, and one at observation only. Students made 30 referrals for further investigation, and 17 participated in ambulatory blood pressure monitoring. Overall, students reported the opportunity positively.

Conclusion: Undergraduate pharmacy students can safely deliver the hypertension case finding service under agreed levels of supervision, supporting pharmacy team capacity and improving public access to hypertension interventions.

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Challenging stigma through interprofessional learning: Pharmacy and social work students' experiences supporting people who use drugs

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Background: Interprofessional learning (IPL) is integral to pharmacy education (GPhC, 2021), yet opportunities for pharmacists and social workers to learn together remain limited (Boylan et al, 2024). To address this, an IPL workshop was developed for Year 2 students, focusing on supporting people who use drugs (PWUDs). The initiative responds to rising drug related harm in Northern Ireland and the need for collaborative, person centred care (NISRA, 2024). The workshop incorporated lived experience speakers using a contact-based approach to challenge misconceptions, reduce stigma, and promote empathy and interprofessional collaboration.

Aim: This study aims to evaluate Year 2 pharmacy and social work students' experiences of an IPL workshop on supporting PWUDs.

Methods: Year 2 pharmacy students (n=140) and social work students (n=51) participated in a workshop comprising a question and answer session with service users, case based discussion and review. Following the workshop, students completed a paper based questionnaire, comprising Likert-scale items and free-text responses. Quantitative data were analysed descriptively, and free-text responses were analysed thematically.

Results: The response rate was 94.2% (180/191). Students reported highly positive attitudes toward the workshop's learning objectives and IPL more broadly, with 98.8% (178/180) of students strongly agreeing or agreeing that "patients would ultimately benefit if health and social care students worked together". Reported benefits included enhanced empathy, increased appreciation of the impact of stigma, and valuing opportunities to collaborate across disciplines. Qualitative data highlighted the value of learning with other disciplines and the impact of engaging with individuals with lived experience. Students also identified opportunities to enhance future IPL activities.

Conclusion: The evaluation indicates that IPL prepares pharmacy and social work students for collaborative practice, particularly in supporting PWUDs. Students reported increased empathy, reduced stigma, and stronger teamwork. The workshop demonstrates the value of contact-based IPL in preparing future practitioners for compassionate, person-centred care.

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Evaluating the impact of a resilience and mindfulness workshop for the Overseas Pharmacist Assessment Programme (OSPAP) students

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Background: OSPAP students face intensive academic demands alongside a rapid transition into UK professional practice. Resilience- and mindfulness-informed teaching may strengthen coping skills and wellbeing (Kabat-Zinn, 2003; Regehr, Glancy and Pitts, 2013; Galante et al., 2018).

Aim: To evaluate the immediate impact of a resilience and mindfulness workshop on OSPAP students perceived understanding, stress-management confidence, and coping strategy repertoire.

Methods: Ethical approval was granted by the Aston University HLS Research Ethics Committee. OSPAP students attending a two-hour, in-person Resilience and Mindfulness Workshop were invited via Blackboard/email. Consenting students completed anonymous pre- and post-session MS Teams surveys using a self-generated identifier for matching. Four matched 5-point Likert items assessed understanding of resilience and mindfulness, confidence managing stress, and regular use of strategies. Post-session items explored reflection, intention to apply strategies, and perceived relevance. Free-text responses (pre: current strategies; post: intended new strategies) were analysed descriptively.

Results: In the sample (n=52), mean scores improved across all matched outcomes: resilience understanding 3.71→4.37; mindfulness understanding 3.87→4.29; stress-management confidence 3.31→4.00; and regular strategy use 3.27→4.25. Agreement (agree/strongly agree) increased from 69.2% to

90.4% (resilience), 71.2% to 90.4% (mindfulness), 44.2% to 80.8% (confidence), and 46.2% to 88.5% (strategy use). Post-session, 88.5% reported meaningful reflection, 76.9% intended to apply at least one new coping strategy, and 86.5% perceived relevance to the Foundation Training.

Free-text responses indicated an expansion in coping repertoire: 39/52 students described at least one new strategy, most commonly reflective/mindfulness-based practices (e.g., journaling/writing feelings; n=13) and increased use of social support (n=12), n=11 reported no change and n=2 reported no strategies pre/post.

Conclusion: The workshop was associated with immediate improvements in perceived understanding, confidence, and coping repertoire, particularly reflective/mindful and social-support strategies. Further work should examine sustained behaviour change and wellbeing outcomes.

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Development of a regional journal club to support pharmacists' critical appraisal skills

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Background: Critical appraisal skills are essential for pharmacists, enabling them to evaluate research quality, relevance, and applicability to support evidence-based decisions (Trivedi and Nasim, 2024). However, pharmacists have reported limited confidence in their research capabilities (Doherty et al., 2025).

Aims: To design, deliver and evaluate a regional virtual journal club for pharmacists in Northern Ireland to support the development of pharmacists' critical appraisal skills.

Method: A three-part journal club series was designed and delivered using an interactive online format. Each 45-minute lunchtime session focused on developing critical appraisal skills through guided discussion of selected research papers. Resources were hosted on Padlet to support asynchronous access. A post-series evaluation captured participant demographics, attendance, confidence before and after the series, and perceptions of organisation, timing, and format. Ethical approval was not required as this was a service evaluation of an educational activity.

Results: In total, 23 pharmacists attended at least one session, with 8 attending all three sessions. The evaluation response rate was 22%. Respondents represented a range of sectors with 80% having over 20 years experience. All respondents reported increased confidence in research interpretation and critical appraisal following the series and anticipated applying these skills in their everyday practice. The lunchtime timing and bite-sized format were rated as suitable, and overall organisation and delivery were rated positively. Qualitative feedback highlighted the value of interaction with peers and the relevance to practice. Interest was expressed in attending a future regional journal club with participants suggesting papers for discussion.

Conclusion: A regional journal club is a feasible approach to supporting pharmacists' critical appraisal skills. Despite a small evaluation sample, the results suggest improvements in confidence. Future plans include embedding the journal club as a regular part of the continuing professional development programme delivered by Northern Ireland Centre for Pharmacy Learning and Development (NICPLD).

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Evaluating the opinions of practising pharmacists on dispensary education and practise at a secondary NHS Trust: A qualitative interview study

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Background: As the pharmacy profession shifts towards clinical and prescribing roles (NHS England, 2023), the relevance of traditional technical skills like dispensing require examination.

Aims: This study explored practising pharmacists' views on dispensing education and its relevance to contemporary professional roles.

Method: Eight practising pharmacists participated in semi-structured one-to-one interviews. Participants were recruited using purposive sampling of workplace contacts. Interviews were recorded, transcribed, and thematically analysed using the Theoretical Domains Framework (TDF), which guided coding and organisation of findings. Ethical review was not required following HRA decision tool inspection, and the study was locally registered as an audit (PHARM/SQ/2025-26/37).

Results: Findings are presented by relevant TDF domains. Knowledge and Skills: Participants described undergraduate dispensing teaching as limited, with minimal real-life practise or formal assessment. Pre-registration training also provided variable and often limited hands-on dispensing experience. Environmental Context and Resources: Automation and remote dispensing systems were reported to reduce dispensing frequency. Variation in dispensing systems across trusts also limited skill transferability. Social Influence: Strong working relationships with pharmacy technicians were described, with their dispensing expertise enabling pharmacists to focus on supervision and clinical activities. Professional Role and Identity: Pharmacists increasingly identified as clinical decision makers rather than dispensers, reflecting the profession's evolving clinical focus. Beliefs about Capabilities: Reduced dispensing confidence was associated with infrequent practise, particularly among senior pharmacists. Beliefs about Consequences: Participants believed familiarity with dispensing processes supports accurate clinical checking and safe prescribing. Behavioural Regulation: Participants preferred competency-based learning rather than extensive dispensing practise during foundation training.

Conclusion: Although practising pharmacists report reduced involvement in dispensing, its educational value remains recognised. Dispensing training was viewed as important for developing patient safety awareness and

understanding medicine supply processes. Pharmacy education may benefit from maintaining core dispensing training while adopting competency-based approaches that integrate technical knowledge with clinical decision making.

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Communities of practice to support foundation trainee pharmacist supervisors: Training leads views

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Background: Experiential learning, assessment and satisfactory performance in practice are part of the integral prerequisites to join the Pharmacy register (GPhC, 2026). Supervisors play a fundamental role in supporting foundation trainee pharmacists (FTP) whilst facilitating assurance processes for workforce supply. This essential role should be enabled to support a positive experience for all. Lave and Wenger's (1991) 'communities of practice' (CoP) theory provides a framework that enables individual and collective learning underpinned by social interactions, to progress a common focus.

Aims: To explore training leads' views of using a CoP to support FTP supervisors.

Method: Virtual semi-structured interviews were undertaken with 16 training leads across England between August and October 2025. Purposive sampling was employed to include participants representing various practice sectors and organisational formations. Interviews explored participants' views of supervisors they oversee engaging in a virtual CoP. Data was digitally audio recorded and transcribed. Through the lens of social constructionism theory, reflexive thematic analysis was applied (Braun & Clark, 2021; Burr, 1995). Ethics approval was granted by University of Hertfordshire.

Results: All participants indicated support for their supervisors engaging in a virtual CoP. Five themes were generated; (a) individual value, (b) organisational and professional onus in developing the supervision of practice; (c) multipart ownership of promoting CoP in pharmacy; (d) barriers and enablers of CoP activities; and (e) suggested components to establish a functional CoP for FTP supervisors. Although participants expressed willingness to support the

formation of a CoP beyond their organisation, some expressed reservations in participating in or leading it due to their current role.

Conclusion: A virtual CoP can be successful when aided by structures and activities that reflect the vital significance of the FTP supervisor role. The establishment of one should be informed by the needs of FTP supervisors.

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Beyond resilience: What pharmacy education can learn from students' mental health experiences

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Background: Pharmacy students are exposed to a range of academic, psychosocial and personal challenges that may affect their mental health. Existing literature identifies stress, anxiety, and depression among pharmacy students; however, there is a limited understanding of how educational structures and learning environments contribute to these issues. Understanding student experiences is crucial for guiding pharmacy education policy, curriculum development, and support strategies for students.

Aims: To identify factors associated with mental health of pharmacy students and to explore related challenges, with implications for pharmacy education.

Method: This research study comprised a scoping review to identify factors associated with mental health challenges in pharmacy students globally. Using Covidence software, this scoping review followed JBI methodology, and the Prisma reporting guidelines. The scoping review identified stressors which informed the development of the qualitative phase's

interview questions allowing a deeper exploration of these factors. The qualitative phase utilised semi-structured interviews with Australian (n=8) and Pakistani (n=10) pharmacy students to explore challenges affecting their mental health and help-seeking behaviours. Data were analysed using an inductive thematic approach with findings reported as per the COREQ (Consolidated Criteria for reporting of qualitative research) guidelines. Ethical approval was obtained from the Queensland University of Technology Ethics Review Committee.

Results: The scoping review revealed significant levels of stress, anxiety, and depressive symptoms in pharmacy students, frequently linked to academic workload, exam pressure, competitive learning environments, and future-related concerns. The interviews supported these findings and offered deeper insight into the impacts of curriculum intensity, unclear assessment expectations, and insufficient wellbeing support on students' mental health. Students reported prioritising academic over personal life, often compromising their mental wellbeing.

Conclusion: Pharmacy education must move beyond increasing awareness to incorporating wellbeing-informed curriculum design, transparent assessment practices, and providing accessible support strategies for students, ultimately fostering a more resilient future workforce of pharmacists.

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Preparing pharmacists for environmental stewardship: Educational gaps in pharmaceutical waste disposal in Pakistan

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Background: Pharmaceutical waste has become a global healthcare concern with detrimental effects on human health, wildlife, aquatic species, and ecosystems. In low-middle income countries inappropriate disposal of pharmaceutical waste is common and waste infrastructure such as high temperature incinerators is lacking.

Aims: To explore how pharmacy education addresses pharmaceutical-waste disposal and how educational gaps affect public knowledge and disposal practices in Pakistan.

Method: This research study comprised firstly a scoping review (JBI methodology and Prisma reporting guidelines) examining disposal practices, awareness, and pharmacists' role in educating patients regarding sustainable pharmaceutical waste disposal in Pakistan. Secondly, a questionnaire was administered to customers visiting hospital and community pharmacies in Pakistan, between March and July 2025 to assess their knowledge, attitudes, and disposal practices regarding pharmaceutical waste. There were 385 respondents with a response rate of 81%. Results were summarised using descriptive and inferential statistics. Ethical approval was obtained from the Queensland University of Technology.

Results: The scoping review identified that poor pharmaceutical waste disposal was associated with a lack of awareness of appropriate disposal methods and waste infrastructure (high-temperature incinerators). Survey data corroborated the scoping review findings - participants were unaware of sustainable disposal methods and reported disposing of pharmaceuticals in household trash or in toilets or sinks. Due to lack of knowledge, Pakistani pharmacists fail to educate customers on appropriate disposal of unwanted pharmaceuticals highlighting a gap in their professional educational responsibilities.

Conclusion: The scoping review found systemic infrastructure gaps and lack of public awareness initiatives in Pakistan, consistent with challenges previously reported in LMICs. Survey results showed low awareness and poor disposal practices by respondents. This issue requires a multi-pronged approach. Pharmaceutical waste disposal knowledge should be embedded in pharmacy curricula to enable pharmacists to educate the public on appropriate disposal and advocate the government for WHO standard pharmaceutical waste infrastructure.

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A mixed methods evaluation of perceptions and real-world experiences of designated prescribing practitioners on the readiness of foundation trainee pharmacists for prescribing

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Background: In 2021, the General Pharmaceutical Council (GPhC) introduced revised Initial Education and Training (IET) standards mandating the integration of independent prescribing within undergraduate pharmacy programmes. This national shift reflects the expanding role of pharmacists, with newly qualified pharmacists expected to be clinically competent prescribers from the point of registration (GPhC, 2021). Despite this mandate, evidence suggests considerable variation in the depth and quality of clinical teaching across institutions (HEIs). Such inconsistency may contribute to Foundation Trainee Pharmacists (FTP) entering practice with variable levels of clinical competence, raising potential patient safety concerns.

Aims: This study aimed to explore Designated Prescribing Practitioner (DPP) perspectives on FTP readiness to prescribe upon qualification and to identify perceived deficits within undergraduate pharmacy education and training.

Method: A mixed-methods approach was employed, comprising a structured questionnaire followed by semi-structured interviews of 11 DPPs. Participants were recruited via networks, local training hubs, and professional recommendations. Quantitative data were analysed using descriptive statistics, while qualitative data underwent thematic analysis. Ethics approval was granted by the university of Birmingham research ethics committee (Ref: MP2526-0).

Results: DPPs frequently described FTPs as demonstrating "unconscious incompetence", characterised by limited insight into gaps in their clinical knowledge when making prescribing decisions, aligning with established models of competence (Miller, 1990). This was often accompanied by misplaced confidence, which DPPs felt contributed to unsafe or suboptimal prescribing decisions. Additional themes highlighted variability in training, assessment, and inconsistencies in adherence to IET standards across HEIs, all of which were perceived to significantly influence the preparedness of graduates entering FT.

Conclusion: These findings highlight the need for greater consistency and standardisation in pharmacy education. Ensuring baseline clinical competence at the point of qualification is essential for patient safety and for enabling foundation training to build upon undergraduate learning. Addressing current inconsistencies is critical to support safe prescribing practice and reducing risk.

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Evaluating the impact of simulated GP patient records on student confidence and knowledge

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Background: Despite electronic patient health records being used throughout the NHS, teaching activities relating to patient health records on undergraduate pharmacy programmes are still predominantly paper-based. General Practice is a sector of practice that has recently had a significant influx of pharmacy professionals and is a difficult sector to simulate when using paper-based records to teach. The University of Bradford has been making use of a GP simulation suite since June 2020.

Aims: To increase student confidence to navigate a GP clinical information system and to attend GP placements; To increase student knowledge on the roles and activities that pharmacy teams undertake in General Practice; To allow students to apply programme clinical knowledge to simulated patient case studies where considerations for hypertension diagnosis and management were required.

Method: During the 2024 – 2025 academic year, 2nd Year MPharm student opinions were sought through pre and post

session surveys using a five-point Likert confidence scale, across 2 tutorials and 1 workshop where the GP SystmOne simulation suite was used. Ethical approval was not required.

Results: Tutorial 1: Pre-survey (n = 111), post survey (n= 109). Confidence in navigating the system grew from 1.95/5 to 3.5/5; Workshop 1: Pre-survey (n = 113), post survey (n= 101). Confidence in navigating the system grew from 2.62/5 to 3.77/5. Confidence to diagnose and manage hypertension increased from 2.26/5 to 3.98/5; Tutorial 2: Pre-survey (n = 76), post survey (n= 69). Confidence in navigating the system grew from 2.63/5 to 3.70/5; Overall: Majority of the students found that each session helped increase knowledge about GP pharmacy roles and increased confidence to attend placements.

Conclusion: Use of a simulated patient record can increase student confidence to attend placements and apply clinical knowledge. Pre-placement use of simulated patient records could help increase placement impact.

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Evaluating pharmacy-themed escape rooms to support engagement and applied learning: A pilot study

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Background: Gamified learning activities such as escape rooms aim to enhance engagement, intrinsic motivation, and applied learning within medical and pharmacy education (Rutledge, C., et al., 2018). Studies demonstrate high learner

satisfaction and improved knowledge application in pharmacy contexts (Hintze, Samuel and Braaten, 2023). However, evidence within UK MPharm programmes remains limited.

Aims: This study evaluated the perceived learning value of pharmacy-themed escape rooms in supporting engagement, knowledge application, and skills development among MPharm students.

Method: Ethical approval was granted by the University of Birmingham. Two face-to-face escape room sessions were delivered: Session 1 (Summer 2025) engaged Year 1–2 students (n = 9) via voluntary enrichment activities, while Session 2 involved Year 3–4 students (n = 3) in Semester 2. Lower participation reflected placements, assessment deadlines, and ongoing MPharm projects. Four MPharm staff members also undertook Session 1. Activities were adapted to ensure content was appropriate for students' developmental stage, prior knowledge, and clinical experience. Students completed a mixed-methods questionnaire comprising Likert-scale questions, multiple choice items, and open-ended feedback.

Results: All students rated the escape room as engaging, with satisfaction and likelihood to recommend averaging 9.1/10 and 9.3/10 respectively. Students reported reinforcement of key pharmacy skills (accuracy/clinical check, NEWS2 documentation, pulse assessment) and transferable skills including problem solving, communication, teamwork, critical thinking, and time management. Small cohorts and differing activities limit interpretation of learner stage effects. Difficulty was viewed as appropriate, with time pressure described as stressful but manageable. Staff unanimously agreed the activity reinforced core pharmacy skills and session 1 feedback prompted refinements such as shorter time limits and clearer clues.

Conclusion: Pharmacy-themed escape rooms provide an enjoyable means for MPharm students to apply professional and clinical skills. Positive student and staff feedback, alongside iterative refinement, supports their integration as engaging revision and skills-based learning activities.

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Development and evaluation of an AI-driven educational tool to develop patient counselling skills (QCounsel)

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Background: Future pharmacists must have the required skills to provide advice to patients on the safe, effective use of their medicines (General Pharmaceutical Council, 2021). Ample opportunity should be given to do this during MPharm study. Moreover, evidence indicates that feedback improves healthcare professionals' related performance (Ivers et al., 2025).

Aims: To develop and evaluate an AI-based counselling skills platform's provision of appropriate feedback to students, in response to submitted patient counselling.

Method: Gold standard counselling model answers were prepared by experienced pharmacy practice staff (with reference to relevant clinical resources) for twenty mock prescriptions. High risk medicines (such as opioids) and others for main systems (cardiovascular, endocrine, respiratory, digestive, skin, nervous and reproductive) were included. Spoken counselling was recorded via the platform, and AI-generated feedback provided. Feedback accuracy and appropriateness was evaluated using a rubric aligned to key aspects of the model answers. In a secondary assessment, the platform's ability to detect deliberate errors included in modified gold standard counselling, likely to have patient safety implications (for example, incorrect patient name, incorrect directions, omission of warnings, etc.) was assessed. Ethical approval was not required as this work did not involve human participants (the authors developed and tested the platform, which was driven by commercially available AI functionality).

Results: The mean score for generated feedback on gold standard counselling was 88.9%. Mark deductions largely centred on professional introduction (75.0%), safety netting (20.0%), and missed dose advice (24.0%). In the secondary assessment, intentionally introduced counselling errors were mostly detected (91.0%). Errors related to warnings were fully detected. Medication side effect errors were detected least (85.0%).

Conclusion: This work has been undertaken on a small scale, with further evaluation and optimisation necessary. Findings are encouraging, and add to the evidence-base for AI use in supporting pharmacy education, including assessment and feedback.

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Free-to-use GenAI platforms: Do they support postgraduate pharmacy students in clinical decision making? A case study from Overseas Pharmacist Assessment Programme (OSPAP) students

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Background: Generative artificial intelligence (GenAI) tools are increasingly available to support students and healthcare professionals in clinical decision-making. While these tools can rapidly generate recommendations, concerns remain regarding the accuracy, reliability, and potential for unsafe or misleading outputs.

Aims: This study aimed to explore how postgraduate pharmacy students used free-to-access GenAI platforms when working through a clinical case and then examine the accuracy of the recommendations produced.

Method: In this cross-sectional study, seventy-two OSPAP students were divided into nine groups and asked to evaluate a purposefully designed case study. Each group selected one free-to-use GenAI tool to identify a priority pharmaceutical problem and develop a pharmaceutical care plan. Following the activity, students completed a questionnaire to evaluate the activity and reflect on GenAI use. Ethical approval was not required, as the study followed university's reflective practitioner protocol (UPR RE01).

Results: Seven different GenAI platforms were used, most common being Gemini and ChatGPT. Analysis showed that only two groups correctly identified the key priority pharmaceutical problem. Three groups (33%) recommended an appropriate antibiotic for the management of community-acquired pneumonia, the remaining groups provided inappropriate options. Despite this, 55% (n=5) of groups reported confidence in their GenAI-supported

recommendations, and over half adopted the GenAI output as part of their pharmaceutical care plan without modification.

Conclusion: Results demonstrate that although GenAI tools may offer some perceived support for pharmacy students' clinical decision-making, their clinical recommendations were frequently inaccurate. Additionally, results highlight the importance of input quality, problem formulation, and critical digital literacy prior to using GenAI to support clinical decision-making. These findings raise pedagogical questions regarding whether current educational approaches sufficiently prepare students to navigate and use GenAI tools effectively, and which key skills require further development to ensure safe and effective use in practice (Preiksaitis and Rose, 2023; Saban and Dubovi, 2025).

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AI and Me: Exploring 1st and 4th year MPharm students' use and perceptions of GenAI

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Background: Generative AI (GenAI) is embedded in diagnostics, prescribing and everyday life, bringing positive advancements in healthcare (Bhuyan *et al.*, 2025). Students frequently use GenAI to support study, but also highlight concerns (Attewell, 2025). Pharmacy schools are expected to prepare graduates for practice, so understanding current use and barriers to using GenAI, can give insight to develop curricula which supports students to use the tools ethically, legally and responsibly.

Aims: To explore 1st and 4th year MPharm students' current experiences, attitudes and barriers of GenAI use.

Method: An anonymous MS Forms questionnaire was shared with 1st and 4th year MPharm students containing multiple choice, Likert and free-text questions addressing current use of GenAI, barriers and support needed to use tools effectively. Ethical approval was granted by Keele School of Pharmacy Ethics Committee.

Results: 99 students (50/163 1st years, 40/86 4th years) participated (response rate 39.8%). 92% (91/99) reported using GenAI within academia, with 28 using it daily; the most common use was explaining course content or supporting revision. 65% believe GenAI will be an essential tool within their future profession, particularly for administrative tasks and patient education. Accuracy was a major concern for 89% of participants, yet only 58% checked output before use. Additionally, 78.8% worried about it undermining pharmacists' clinical judgment. Students indicated they want guidance on appropriate use, including practical tips for revision and simulated practice.

Conclusion: Students are actively engaging with GenAI, mainly as a supportive tool rather than completing tasks. Their awareness of accuracy limitations and potential for over-reliance is positive, but it is concerning that less than 60% check output. Pharmacy schools must consider how to guide students in the critique of GenAI as an evidence-based source, as students express a want for clarity on how to use the tools without putting patients at harm.

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Artificial intelligence versus human-centred approaches in OSCE preparation: Perceptions and experiences of UK pharmacy students

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Background: OSCEs (Objective Structured Clinical Examinations) are a core method of assessing clinical skills. Preparing for OSCEs presents a challenge, as recreating

authentic interactions outside the clinical environment remains limited (Kneebone et al., 2004). With the rapid expansion of artificial intelligence (AI) in education, its integration into OSCE preparation has been inevitable. However, this has raised questions around authenticity, contextual nuance, and the absence of natural human interaction that characterises real clinical encounters (Cook et al., 2011). A gap remains in the literature comparing AI-led and human-centred OSCE preparation within UK pharmacy education.

Aims: To compare UK pharmacy students' perceptions and experiences of AI-led and human-centred approaches to OSCE preparation.

Method: Ethical approval was granted by the University of Leicester Research Ethics Committee. A survey was conducted among pharmacy students from UK schools of pharmacy across all years of study who had experience with both AI-led and human-centred OSCE preparation. Survey items explored perceived scenario realism and usefulness in developing communication and clinical reasoning skills. Quantitative data were analysed using descriptive statistics and comparative analysis. A focus group was conducted to explore these perceptions further. Focus group data were analysed using thematic analysis, and findings were used to contextualise the quantitative results.

Results: A total of 87 undergraduate pharmacy students from 14 UK schools of pharmacy completed the survey (Year 1: 15, Year 2: 25, Year 3: 29, Year 4: 19). Human-centred OSCE preparation was rated higher for scenario realism and communication skill development, whereas AI-led preparation was rated higher for accessibility and opportunities for repeated practice. Three main themes were identified in the focus group: Interpersonal realism, accessible rehearsal and integrated learning strategies.

Conclusion: While AI-based tools offer accessible and flexible practice, human-centred preparation remains central to the development of communication and clinical reasoning skills required for OSCE performance.

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ConsultAI: Development and evaluation of an AI patient simulation platform for pharmacy consultation training

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Background: Effective consultation skills are central to pharmacist's practice, yet delivering authentic training at scale presents logistical and quality challenges. Peer role-play lacks clinical realism while standardised patients are resource-intensive (Seuber et al, 2018). Recent advances in large language models now enable sophisticated virtual patient simulations (Bakhaya et al, 2026; Beshir et al, 2022; Pit et al 2025). We have developed ConsultAI, a platform providing AI-powered patient encounters for student pharmacists.

Aims: To develop and evaluate an AI patient platform for pharmacy consultation training. Objectives included: developing clinically authentic scenarios; testing platform robustness and conversational consistency; evaluating effects of prompt configuration and language model selection; and gathering student feedback.

Method: A web-based platform featuring speech recognition and AI-generated avatars was developed. Clinical scenarios aligned to over-the-counter consultations were created. Platform reliability was assessed through deployment monitoring. Conversational consistency was evaluated using text analysis incorporating TF-IDF similarity, semantic embeddings, and clustering analysis across scenario presentations. Systematic comparisons examined different prompt configurations and language model options. Student feedback was gathered through co-design sessions and small group evaluations. Ethical approval was obtained from the SIPBS Ethics Committee prior to student recruitment.

Results: The platform demonstrated excellent reliability with over 12,000 successful executions with 99.8% completion rates. Over 100 clinical scenarios were developed covering diverse pharmacy consultations. Text analysis revealed high conversational consistency (>0.9 semantic similarity) across repeated encounters, with responses clustering by scenario rather than iteration (PCA and t-SNE analysis). Prompt configuration and model selection influenced response characteristics including length, vocabulary and readability, enabling optimisation for educational purposes. Student feedback (35 students) confirmed perceived realism and educational value.

Conclusion: ConsultAI demonstrated robust response consistency suitable for educational deployment. Systematic evaluation identified optimal configurations balancing reliability with naturalistic variation, and the evaluation

framework provides a transferable methodology for validating AI-based educational simulations.

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Digitally enhancing pharmacy student placements to improve experience and align with the NHS England Safe Learning Environment Charter (SLEC) at The Dudley Group NHS Foundation Trust (DGFT)

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Background: Undergraduate pharmacy placements can be difficult to organise, with challenges in communication, supervision, timetabling and feedback affecting student experience and service delivery. Strengthening placement quality requires alignment with the NHS England SLEC, which promotes positive learning cultures, psychological safety, inclusion, and high-quality supervision. To support these expectations through enhanced organisation and learner integration, a digitally supported placement model was introduced at DGFT.

Aims: To evaluate the impact of a digitally enhanced placement on organisation, delivery, student experience and alignment with SLEC.

Method: Digitisation used Microsoft Teams, Forms and Excel. Teams provided a live timetable and supervisor messaging; Forms captured attendance and feedback via QR code; Excel enabled real-time timetable updates. Students received a

digital welcome pack and individual Electronic Prescribing and Medicines Administration (EPMA) logins to support clinical engagement through patient notes and drug chart access. Feedback was collected via a mixed-methods questionnaire with 5-point Likert-scale and free-text questions. Quantitative responses were summarised and qualitative comments analysed for themes including efficiency, organisation, communication and team integration. Placement students from years 2-4 and supervising staff completed questionnaires. This project met service evaluation criteria and did not require formal ethics approval.

Results: Students unanimously agreed that Teams improved organisation, enabled rapid updates, increased autonomy, and strengthened supervisor communication (100%). The digital register was convenient (90.9%), the welcome pack prepared students well (90.9%) while reducing anxiety (63.6%) and EPMA access enhanced clinical involvement (90.9%). Students reported better team belonging (81.8%) and found the QR feedback tool helpful (72.7%). Comments highlighted clearer communication, greater independence and deeper clinical engagement. Staff reported that Teams, live timetable and communication/feedback features made supervision easier, more efficient, and better organised.

Conclusion: A digitally enhanced placement improved delivery, efficiency and experience while supporting SLEC-aligned learning environments. This scalable model could modernise experiential pharmacy education across NHS organisations.

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Artificial intelligence in cancer therapeutics: evaluating clinical reasoning in hematology and Oncology Pharmacology and Pharmacotherapy.

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Background: Large language models (LLMs) are increasingly used by healthcare professionals and trainees for medical education and clinical decision support. Their integration into pharmacy education and oncology practice has outpaced rigorous evaluation in high-stakes areas such as hematology and oncology pharmacology and pharmacotherapy. Prior work has assessed LLM performance in hematology question answering (Cervera et al., 2023), outlined AI applications in hematology (Kilic Gunes, 2025), and discussed AI's evolving role in oncology (Lee et al., 2024). However, comparative evidence between free and premium LLM versions in advanced pharmacotherapy remains limited.

Aims: To compare the performance of free and premium LLMs in hematology and oncology pharmacology and pharmacotherapy questions relevant to pharmacy education and clinical reasoning.

Method: A 150-question bank was developed, including 100 multiple-choice questions (50 hematology, 50 oncology) derived from authoritative review textbooks and 50 short-answer questions (SAQs) adapted from tumor board cases. Six models were evaluated: ChatGPT, paid ChatGPT-5, Google Gemini, paid Google Gemini 2.5 Pro, Microsoft Copilot, and DeepSeek. MCQs were scored against reference answers. SAQs were independently assessed by four hematology–oncology clinical pharmacists using a structured Likert-scale rubric. Analyses compared performance across models, access tiers, and domains.

Results: All models demonstrated high MCQ accuracy. Paid Google Gemini 2.5 Pro achieved the highest MCQ score (95/100), followed by paid ChatGPT-5 (93/100). Performance was strongest in hematology, with greater variability in oncology. For SAQs, paid ChatGPT-5 and paid Google Gemini 2.5 Pro achieved the highest mean scores (230.3/250). Premium models showed greater consistency and fewer critical errors.

Conclusion: Premium LLMs demonstrated superior consistency and clinical reasoning depth compared with free models, particularly for oncology-focused and open-ended tasks. LLMs may support pharmacy education, but expert oversight remains essential in high-stakes pharmacotherapy.

Ethics Statement: This study involved no human participants or patient data; ethics approval was not required

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Exploring the impact of image-informed, game-based learning in pharmacy education: A pilot study

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Background: Pharmacy education involves large volumes of complex content, which can increase cognitive load when delivered predominantly through didactic approaches¹. This may present additional challenges for some learners, including those who benefit from visual and inclusive learning strategies.

Game-based and visual approaches have been shown to enhance engagement and motivation in health professions education². However, their design and implementation within undergraduate pharmacy education remain highly variable.

Aims: This pilot study explored the impact of image-informed, game-based learning activities on pharmacy students' engagement, perceived learning experience, and short-term knowledge retention.

Method: Following ethical approval, image-informed, serious game-inspired learning activities were delivered to volunteer Year 4 pharmacy students at a UK university to support timely revision ahead of imminent synoptic assessments. The intervention incorporated three pedagogically distinct activity types aligned with principles of visual learning and inclusive design³.

Pre- and post-session quizzes evaluated changes in knowledge related to the session topics, alongside student feedback collected via a post-session questionnaire. Descriptive statistics were used to analyse the data.

Results: Fourteen students participated. Mean quiz scores increased from 50% pre-session to 87.5% post-session,

indicating improved short-term knowledge retention. Three participants self-reported learning differences (e.g. ADHD or dyslexia); all scored 25% pre-session, with post-session scores of 87.5% (n=2) and 100% (n=1).

Student feedback was highly positive, with 100% of participants agreeing or strongly agreeing that the session was more engaging than traditional teaching formats, sustained attention more effectively, increased motivation, and supported memorisation. All participants expressed a desire for similar activities across other topics. Qualitative feedback described the approach as 'a better way to learn', with suggestions for integration into mainstream teaching.

Conclusion: This pilot suggests that image-informed, game-based learning can enhance engagement and short-term learning in pharmacy education and warrants further evaluation with larger cohorts.

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Evaluating University of Manchester's revised MPharm 4 placements: Early impact on trainee pharmacists' preparedness for practice

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Background: Experiential learning is central to pharmacy education, supporting clinical confidence and practice readiness (Jacob et al., 2021). The revised GPhC Initial Education and Training Standards emphasise experiential learning to support transition to practice (Jacob and Boyter, 2023). This study evaluates the impact of a redesigned fourth-year hospital placement incorporating these principles on Trainee Pharmacists' perceived preparedness for Foundation Training.

Aims: To evaluate the perceived impact of redesigned fourth-year placements on graduates' preparedness for practice during their first six weeks as Trainee Pharmacists.

Method: In September 2025, Trainee Pharmacists starting at Manchester University NHS Foundation Trust who completed the revised undergraduate placements were invited to complete an anonymous Qualtrics® survey (N=8). This explored understanding of secondary care, prescribing, and clinical confidence using Likert Scale and open-text responses. Quantitative data were summarised descriptively and qualitative responses analysed thematically. Ethical approval was not required at institutional level as per the HS Health Research Authority Decision Tool (HRA 2022) indicating the work does not constitute research.

Results: Eight responses were received (RR = 8/8). Seven participants (87.5%, N=7) reported feeling prepared for Foundation Training. All respondents (100%, N=8) reported greater confidence with navigating the ward, medicine reconciliations, and counselling compared with before placement. Five participants (62.5%, N=5) reported improved understanding of multidisciplinary team (MDT) roles and prescribing decisions. Confidence in MDT engagement remained limited, with one participant (12.5%, N=1) reporting confidence with prescribing discussions, and three (37.5%, N=3) reporting improved MDT communication.

Conclusion: Despite the small sample, the redesigned placements appear to have enhanced these Trainee Pharmacists' perceived preparedness for practice. The single-site, post-hoc design without a control group, however, limits causal attribution. Participants felt best prepared for medication reconciliations and counselling, while prescribing decisions, patient reviews, and MDT communication remained development areas. These findings will inform placement development and strengthen practice transitions.

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Evaluation of the impact of repeated use of Supervised Learning Events (SLEs) on pharmacy students' performance and confidence during clinical placements

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Background: Supervised Learning Events (SLEs) measure the progress of a person's level of competence and ability in certain tasks or procedures. SLEs used in practice are Direct Observation of Practice (DOPs), Mini – Clinical Examination (Mini-CEX) and the CPPE Medicines Related Consultation Assessment Tool (MR-CAT).

Ethics approval from Health and Life Science Faculty Research Ethics Committee at De Montfort University.

Aims: The overall aim of the research is to evaluate the use of the SLEs in the level 7 MPharm Pharmacy Placements. The aims are:

1. Evaluate whether SLEs contribute to improved performance for Pharmacy students on placement in Hospital, Community and GP sectors.
2. Evaluate if the tools Mini-CEX, DOPS and MR-CAT are suitable SLEs for Pharmacy.

Method: Using mixed- methods 696 SLE forms were submitted by ninety students. Each student completed 3 of each SLE per sector and eLfH training provided for students and ProPharmace for supervisors.

Tick-box data was analysed and coded 0–3 based on performance ratings (below expectations, meets expectations or exceeds expectations) for Quantitative data. Qualitative data was thematically analysed via colour coding strong comments green and weak as red.

Results: SLE completion rates were highest for attempt one and then declined. DOPs had the highest completion rate across all 3 sectors then Mini-CEX and MR-CAT. Statistical analysis using the Friedman test revealed no noticeable improvements, p-values exceeded the significance threshold ($p < 0.05$) ranging from 0.110 to 0.650. A decline in scores across the three SLE forms was observed.

For thematic analysis the selected themes are: confidence, consultation structure, application of feedback, patient safety and risk assessment, clinical knowledge and skills.

Conclusion: Findings indicated minimal measurable improvements in students' clinical competency and confidence, with only a minority demonstrating notable progress.

Varying factors affected the feedback across SLEs. Mini-CEX and DOPS showed higher completion rates than MR-CAT.

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Exploring MPharm students' experiences of achieving the new GPhC learning outcomes during clinical placements

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Background: In 2021, the General Pharmaceutical Council (GPhC) introduced new standards for the education and training of pharmacists, defining 55 Learning Outcomes (LOs) that MPharm students must demonstrate by graduation. Kingston University subsequently expanded experiential placements across practice settings. The 2024 cohort was the first required to evidence achievement of these new LOs.

Aims: To explore placement experiences and factors influencing achievement of the GPhC LOs among the first MPharm cohort required to evidence them.

Method: University ethics approval was obtained. An initial cross-sectional survey captured broad cohort perspectives. Subsequently, one-to-one semi-structured interviews were conducted with a purposive sample of third-year MPharm students to enable in-depth exploration of placement experiences across hospital, GP, and community settings. Students had been familiarised with GPhC LOs within the curriculum prior to placement. Interview data were analysed inductively using Braun and Clarke's thematic analysis (Clarke et al., 2015).

Results: Ten students were interviewed, purposively sampled to ensure representation across placement settings. Four analytical themes were identified. First, LOs gained meaning through situated practice, with students' understanding shaped by supervisor input and practical engagement. Second, tensions between documentation requirements and experiential learning emerged, with record forms and LO

mapping perceived as burdensome in busy settings. Third, supervision quality acted as a mediator in translating LOs into practice, enabling or constraining experiential learning. Finally, organisational context influenced opportunities to demonstrate LOs, with structured hospital and GP placements offering more consistent clinical exposure than community settings. Students valued patient-facing involvement and highlighted the importance of clear expectations and supervisor preparation.

Conclusion: Achievement of the GPhC LOs is shaped by placement design, supervision, and documentation burden. While the findings provide insight into this first implementation cohort, transferability beyond this single institution may be limited. Enhancing supervisor preparation and streamlining record-keeping may strengthen placement quality and support prescribing-ready graduates.

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Shared Decisions, Safer Care: Evaluation of an interprofessional education programme for pharmacy and medical students within secondary care experiential learning

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Background: Safe and effective patient care involves collaborative working between healthcare professionals. Uni-disciplinary silos of healthcare education do not prepare students for working in interprofessional clinical teams (Gilligan 2014). To address this difficulty there is a need to provide healthcare students with interprofessional education opportunities (Jacob 2020) (CAIPE 2017).

Aims: Evaluate student perceptions of an interprofessional education programme and the impact of the programme on student clinical skills.

Method: We developed an interprofessional education programme, incorporating simulation-based learning, role exchange and collaborative working with patients. Ethical approval was granted by Queens University Belfast. Following completion of the programme, students completed a short Likert Style Microsoft Forms questionnaire to explore their opinions of the programme. Quantitative data was analysed

using descriptive statistics, and thematic analysis was used to evaluate the qualitative free text responses.

Results: Response rate was 88% (n=22) for medicine and 91% (n=31) for pharmacy. Mean score for overall rating of the programme was 4.75 out of 5. 96% (n=51) of students reported learning alongside a multi-professional team member helped them to gain a different perspective on the roles of different professions. 96% (n=51) of respondents reported that they will be able to use the skills and knowledge gained within the programme in their future career. Themes from the free text comments included: interprofessional collaboration, professional identity, social and academic congruence, development of a holistic practitioner and simulation to prepare for clinical practice.

Conclusion: This study highlights how simulation-based education can be utilised as a component in interprofessional undergraduate education. The use of role exchange in undergraduate pharmacy simulation within the study adds a novel dimension to the literature. Evidence suggests that the programme can be utilised in order to develop rapport between interprofessional healthcare student cohorts and how these skills can be utilised within their future professional roles.

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Exploring pharmacy students' and educators' perspectives on learning alongside students from other healthcare professions in real-world placement settings

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Background: Shared clinical placements represent a practice-based model of interprofessional education (IPE), where students from different healthcare professions learn together in the same clinical setting [1]. IPE is recognised as a key strategy for improving students' collaboration, confidence,

and delivery of patient-centred care and is a mandatory requirement set by the GPhC [2][3]. However, despite its recognised importance, opportunities for pharmacy students to engage in shared clinical placements remains under-evaluated and lack standardisation [4].

Aims: The study aimed to explore pharmacy students' and educators' perspectives on the value, feasibility and challenges of shared clinical placements within UK undergraduate pharmacy education.

Method: Qualitative, semi-structured interviews were conducted over Microsoft Teams with ten pharmacy students and five pharmacy educators. Interviews were audio-recorded and transcribed verbatim. Thematic analysis following Braun and Clarke was used to generate key themes and sub-themes. Ethical approval was granted from the School of Pharmacy Research Ethics Committee, reference number MP2526-05R1.

Results: Four key themes were identified: (1) Value and Meaning of Shared Clinical Placements, highlighting improved understanding of professional roles and exposure to authentic multidisciplinary teamwork; (2) Development of Skills and Competencies through Shared Clinical Placements, including enhanced communication, teamworking and application of theoretical learning to clinical practice; (3) Challenges and Risks of Shared Clinical Placements, including logistical and timetabling constraints, limited placement provider capacity and supervision, and students' confidence within clinical environments; and (4) Implementation and Design of Shared Clinical Placements, including the need for implementation of structured, integrated approaches within pharmacy curricula to improve equity.

Conclusion: Shared clinical placements were perceived as meaningful experiential learning approaches for the delivery of IPE within pharmacy curricula, which closely aligned to real-world practice. Recommendations for future practice and policy include piloting shared clinical placements and integrating dedicated IPE facilitators to support coordination, feasibility and sustainability of shared placements.

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An evaluation of a novel cancer-focused student placement programme

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Background: Experiential learning in cancer represents a significant yet underexplored component of undergraduate pharmacy education in the United Kingdom. Although clinical placements are recognised for developing professional attributes and offering practical experience, oncology settings may pose unique emotional and cognitive challenges (Kav et al., 2013). Given strong links between The University of Birmingham (UoB) and the Cancer Services pharmacy team at the local NHS Trust, a specialist cancer placement for 3rd & 4th-year students was introduced in September 2024.

Aims: This project aimed to explore pharmacy students' perceptions of their oncology placements and evaluate their impact on learning, professional development, and future practice.

Method: The project commenced in September 2025. A pilot study was conducted to test and refine the interview questions before data collection. Semi-structured interviews were undertaken between 15th and 24th November 2025, with participants enrolled in the UoB MPharm programme who had completed a 5-day oncology placement at the local trust. Ethical approval was obtained from UoB's Ethics Committee. Thematic analysis was used to analyse the data and identify themes. Data analysis and the project write-up were completed by the 17th of January.

Results: Of the 14 eligible students, 12 participated. Analysis identified seven themes relating to professionalism, learning and placement structure. Findings indicated that the placement influenced students' clinical knowledge, academic performance, career perceptions, and communication skills. Students reported enhanced professional preparedness, particularly in communication with patients and multidisciplinary teams, supporting career advancement, preparation for assessments, and foundation-year support. Students also suggested improvements, including additional preparation such as a refresher on cancer care.

Conclusion: Insight into students' perceptions of the placement serves as an example of the educational value of a structured opportunity in a specialised clinical area. The

oncology placement elicited positive responses from students who also highlighted opportunities to strengthen placement design and assessment.

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Evaluating simulated placements to enhance experiential learning within a new MPharm curriculum

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Background: UK Schools of Pharmacy have redesigned curricula in-line with GPhC learning outcomes (General Pharmaceutical Council, 2021) and the requirement for all newly registered pharmacists to qualify as IPs. This shift highlights the need for enhanced experiential learning grounded in authentic skill development (Kolb, 2015). Capacity for external placements, despite clinical tariff funding, prompted the development of in-house simulated placements (SPs) to provide equitable and prescribing-focused experiential learning that supported students' preparedness for prescribing-focused practice. Activities included: mini-case presentations, consultation simulations, clinical skills, medicines reconciliation and "a day in the life of a pharmacist".

Aims: To evaluate the impact of SP activities on Year 2 MPharm students' learning and skills development.

Method: SPs incorporated observation of positive role models, repeated practice, and structured feedback. An online questionnaire comprising Likert-scale items and free-text responses was completed by students in AY 2022-2023, 2023-2024 and 2024-2025. Quantitative data were summarised descriptively, and free-text responses underwent framework analysis. No ethical approval was required based on the HRA decision tool used in line with university research ethics guidance.

Results: 125 students responded. Likert scale responses were predominantly positive; most students agreed that SPs supported development in communication (87%), critical thinking (85%) application of law and ethics (74%), evidence-based practice (78%), therapeutics understanding (78%), confidence in future roles (81%), and insight into the pharmacist's responsibilities (89%). Further responses provided constructive feedback informing future design.

Thematic analysis identified three themes: SPs provided a safe space to make mistakes and learn; offered an organised structure for developing key skills; and added complementary value to external placements.

Conclusion: SPs contributed meaningfully to experiential learning, supporting clinical, communication and professional skills development. Findings support continued use and further refinement of SPs, to enhance preparedness for prescribing-focused practice.

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An evaluation of the introduction of Pharmacy First into final year community pharmacy simulation

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Background: Simulation is used to practice skills and receive feedback in a safe environment (McBane et al 2023). In Year 4 of the MPharm, students simulate running a community pharmacy, performing consultations including Pharmacy First. Pharmacy First is a service where 7 conditions can be treated in pharmacies without needing to visit a GP. The nature of the service, with a clear pathway and PGDs made it suitable for students to undertake in simulation.

Aims: To evaluate the introduction of Pharmacy First into simulation.

Method: In the 24-25 academic year students (n=256) were sent a survey at the end of semesters 1 and 2. Likert responses were analysed via descriptive statistics in MS Excel (1 = strongly disagree, 5 = strongly agree). Thematic analysis of free text comments was performed (Braun and Clarke 2006). Ethical approval was granted by the University of Nottingham School of Pharmacy Ethics Committee (013-2025).

Results: Survey response rate was 27% in semester 1 and 23% in semester 2. Likert scale responses related to confidence in Pharmacy First consultations and OSCE preparedness were rated highly at the end of semester 2; mean Likert score 4.3

(SD = 0.7) and 4.3 (SD = 0.8) respectively. In semester 1, 66% of students estimated a Pharmacy First consultation required 12-14 minutes, increasing to 83% by semester 2.

Thematic analysis of comments identified 3 themes: 'feedback informed skill development', 'prescribing preparedness' and 'simulation and future practice'. Students valued the feedback received. They expressed confusion over the value of PGD services as independent prescribers and requested more prescribing scenarios. Some used simulation experiences on placement and valued simulation in preparing them for practice.

Conclusion: Students enjoyed the opportunity to deliver Pharmacy First in simulation. Future work includes addition of other advanced services and private prescribing clinics in skin and travel medicine.

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Comparison of a modified Ebel method of standard setting with Cohen's method for MPharm Very Short Answer (VSA) format examinations

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Background: A modified Ebel standard setting method like that used in other UK undergraduate pharmacy and medicine programmes was introduced for Very Short Answer (VSA) MPharm examinations. Two academics independently scored each question according to relevance and necessity using three criteria: Essential (expected knowledge); Important (ought to know); or Supplementary (desirable knowledge). Discrepancies were resolved through panel consensus. Examination blueprints ensured sufficient Essential questions to meet the fixed pass mark, with the remaining questions split between the Important and Supplementary categories. However, how this standard setting method compares to other methods is unknown.

Aims: To compare pass marks of VSA examinations standard set with the Essential, Important, Supplementary (EIS) method with those determined by an established method.

Method: Cohen's method of standard setting was used for comparison because it is a widely used established method (Cohen-Schotanus & Van der Vleuten 2010). Anonymised VSA marks for MPharm years 1, 2 and 3 were analysed (2025/26 cohorts). Cohen's method cut scores (i.e., the pass marks) were calculated as 55% of the 90th percentile of candidates' marks and compared with the fixed pass mark of 40% for the EIS method. Independent sample t-tests were conducted with a p-value of <0.05 being considered statistically significant. This secondary analysis of routinely collected examination data did not require ethical approval.

Results: Cohen's cut scores for the Year 1 and 2 were 39.8 and 39.6 respectively. Year 3 had a marginally higher 55% cut score of 42.9. No statistically significant difference was found when compared to EIS fixed pass marks (Year 1 p=0.92; Year 2 p=0.83, and Year 3 p=0.06).

Conclusion: The EIS method and the Cohen method of standard setting methods produced statistically indistinguishable results. These findings should be interpreted cautiously, as they are based on three examination results from one MPharm programme.

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Competence, confidence, and preparedness in physical examination: Perspectives of year 4 MPharm students

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Background: "Standards for the Initial Education and Training of Pharmacists" (General Pharmaceutical Council 2021) introduced learning outcomes requiring pharmacy graduates to demonstrate effective physical examination and diagnostic skills as part of their readiness to become independent prescribers at the point of registration. In response, the University of Manchester's Master of Pharmacy (MPharm) programme introduced new teaching and assessment activities focused on physical examination, delivered through a blended model combining hands-on simulation workshops using supervised learning events (SLEs), interactive lectures, self-directed study, service-learning activities and placements.

Aims: Explore Year 4 MPharm students' perceptions of their competence, confidence, and preparedness in performing physical examinations skills.

Method: Ethical approval was granted by the University of Manchester Research Ethics Committee. Year 4 students were invited to participate in audio-recorded in-person focus groups exploring experiences of physical examination teaching and assessment within the MPharm programme, and their perceived competence, confidence, and preparedness to perform physical examinations as future prescribers. Focus group transcripts were transcribed verbatim, anonymised and analysed using reflexive thematic analysis (Braun and Clark 2020).

Results: Two focus groups were conducted in February 2025 (11 participants). Analysis revealed five themes: (1) confidence is practice-dependent and skill specific; (2) longitudinal repetitive "hands on" experience builds confidence; (3) importance of "why" and not just "how"; (4) SLEs provided structured opportunities supporting both confidence and competence development; (5) authentic experiences (e.g. health clinics) strongly enhanced perceived preparedness.

Conclusion: Year 4 pharmacy students reported their confidence, competence, and preparedness in physical examination skills were strongly influenced by repeated, authentic, and supervised practice. The findings highlight the value of longitudinal, hands-on learning and assessment, particularly through SLEs, and suggest that curricula should continue to prioritise authentic clinical activities such as health clinics. Explicit integration of the underlying reasoning ("why" as well as "how") further supports readiness for prescribing roles.

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Exploring student perceptions of MyDispense simulation training on developing prescribing skills in second-year MPharm students at Kingston University London

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Background: Simulation-based learning supports prescribing education in the MPharm as UK pharmacy graduates move towards registration as independent prescribers (General Pharmaceutical Council, 2021). MyDispense, an online simulation, recently expanded to include prescribing and diagnostic functionality; however, evidence evaluating it in undergraduate prescribing development remains limited.

Aims: To explore second-year Kingston University London MPharm students' perceptions of MyDispense simulation training in supporting the development of prescribing skills.

Method: A mixed-methods study conducted in October 2025 followed a MyDispense simulation aligned to the second-year curriculum. Students completed three prescribing scenarios using MyDispense version 7.5. An anonymous 24-item questionnaire, distributed via QR code using MS Forms, captured data on usability, engagement, confidence, transferability and perceived strengths and limitations. Quantitative data were analysed descriptively and qualitative responses thematically. Ethics was obtained from Kingston University.

Results: A response rate of 31% (n=60/193) was achieved, with response numbers varying between optional questions. Prior to the session, 56.6% (n=34/60) reported little or no prescribing experience. Following simulation, 94.8% (n=55/58) reported improved understanding and confidence in the prescribing process. Perceived transferability to in-person simulations was high, with 56% (n=35/60) responding yes and 42% (n=26/60) somewhat. Most students were willing to use MyDispense outside scheduled sessions (85%, n=51/60). Engagement was rated positively by 73.3% (n=44/60), and 80.7% (n=46/57) described the experience as enjoyable. Perceived ease of use varied.

Qualitative responses (n=34) highlighted increased confidence in prescription writing and medication selection, alongside improved familiarity with clinical resources and counselling. Challenges included diagnostic decision-making, treatment selection and navigation.

Conclusion: Second-year MPharm students perceived MyDispense prescribing simulations as valuable for improving understanding and confidence with prescribing processes and supporting early familiarisation with prescribing practice. While engagement and perceived transferability were high, usability and clinical decision-making challenges suggest that

MyDispense is best as a complementary learning tool alongside in-person simulation and clinical teaching.

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Integrating continuous glucose monitoring into pharmacy education: A structured workshop evaluation

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Background: Continuous Glucose Monitoring (CGM) is increasingly recommended for insulin-requiring diabetes, yet clinician limitations in technical competence and data interpretation hinder its use and contribute to inequitable access. Preparing future pharmacists with the knowledge and confidence to support CGM is therefore essential.

Aims: To evaluate the impact of an industry-academic led CGM workshop on final-year pharmacy students' knowledge, confidence, and preparedness for CGM use in clinical practice.

Method: Final-year pharmacy students' self-reported knowledge, confidence, and preparedness in CGM were assessed using online pre- and post-workshop surveys following a CGM workshop. Post-workshop feedback evaluated usefulness and areas for improvement. Ethical approval was obtained from University of Hertfordshire Health, Science, Engineering and Technology Ethics Committee. Likert-scale data was analysed descriptively, with thematic analysis of open-ended responses.

Results: 53% of students (n = 46/87) participated in the survey. 'Very' or 'extremely' high ratings increased across all outcomes, including knowledge of CGM benefits (32.6%, n = 14 to 73.9%, n = 34), confidence explaining CGM products (16.3%, n = 7 to 63.0%, n = 29), familiarity with data interpretation (18.6%, n = 8 to 71.7%, n = 33), identifying high-risk patients (23.2%, n = 10 to 76.1%, n = 35), conducting CGM-based consultations (23.3%, n = 10 to 69.6%, n = 32), and preparedness for practice (25.0%, n = 11 to 76.1%, n = 35). Seven themes emerged: value of practical application, increased knowledge and understanding, interactive learning, overall positive evaluation, expert guidance, practical challenges with CGM devices, and time and structural constraints.

Conclusion: An industry-academic led CGM workshop improved final-year pharmacy students' knowledge, confidence, and preparedness to apply CGM technology in practice. Post-workshop feedback identified challenges and uncertainty in device use, highlighting the need for additional support. These findings will guide refinement of future workshops to optimise learning within structural and time constraints.

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Simulation supporting trainee pharmacists independent prescribers physical assessment skills

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Background: Physical skills assessment (PSA) must be demonstrated to Miller's triangle level 4 within the Foundation Training Year (FTY) (General Pharmaceutical Council 2025, NHS England). Utilisation of simulation could support Trainee Pharmacists (TPs) to achieve this by providing equitable opportunities for learners to practice these skills within a safe environment.

Aims: To increase TPs confidence in completing PSAs.

Method: Hospital pharmacy education leads, TP representatives and simulation fellow, developed a one-day simulation-based training programme with online pre-reading to support development of skills applicable to primary, community and secondary sectors. This was delivered by the simulation fellow, to TPs undertaking multisector programmes hosted by secondary care, 6 months into FTY.

Ethical approval was not undertaken, as the work was part of service evaluation.

Data was collected using online evaluation forms immediately pre-and post-session, exploring relevance to learning needs,

key learning points and future recommendations. Thematic analysis and paired t-tests were used for analysis.

Results: All eight acute Trust TPs attended with 100% evaluation response rate, all agreeing the session helped them prepare for PSAs and recommending the training for future TPs.

Quantitative analysis showed increased confidence ratings across all skills, with statistical significance in all except manual blood pressure and blood glucose testing. Themes identified were: Benefit of hands-on format; Value of multiprofessional development, with medic providing expert knowledge, whilst pharmacists facilitated clinical application; Opportunities to make mistakes and learn through timely feedback. Future recommendations included expansion on symptoms and differentials, and greater focus on common skin infections seen in community.

Conclusion: Simulation and pharmacy collaboration demonstrated value in preparing TPs for PSA. However, the small sample may limit generalisability. To address gaps in community-relevant content, input from community education leads may be beneficial. Future sessions to assess PSA using the Direct Observation of Practice supervised learning event are in planning.

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Evaluating moulage-enhanced high-fidelity simulation for teaching opioid overdose management

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Background: Simulation-based education is increasingly embedded within MPharm curricula, offering realistic, safe practice that enhances clinical skills and prepares students for patient-facing roles. Evidence demonstrates that simulation improves learners' knowledge, satisfaction and confidence compared with traditional teaching (Selcuk et al., 2025), while systematic reviews report significant confidence gains across clinical pharmacy activities (Huon et al., 2024). High-fidelity

simulation incorporating moulage heightens realism and immersion, supporting experiential learning (DCosta et al., 2024). However, application of moulage-enhanced simulation to teach opioid overdose management remains under-evaluated in pharmacy education.

Aims: To evaluate the impact of a moulage-enhanced high-fidelity simulation session on pharmacy students' perceptions of opioid overdose management.

Method: Students completed a case-based simulated opioid overdose scenario using a high-fidelity manikin with moulage depicting clinical signs (e.g., pinpoint pupils, track marks, cyanosis, sweating, poor dentition and vomiting). The scenario required bedside assessment, interpretation of vital signs, simulated observations and naloxone dose calculation. Afterwards, students completed an anonymised Microsoft Forms questionnaire containing pre- and post-session confidence ratings, Likert statements and free-text responses. Quantitative data were analysed descriptively, and qualitative data were analysed using deductive thematic analysis following Braun and Clarke's (2021) six-phase framework. Ethical approval was obtained from the University of Birmingham.

Results: Forty-six responses were analysed. Confidence in recognising and managing opioid overdose increased from 1.76 to 3.50 (scale 1-5), while confidence in clinical assessment increased from 2.09 to 3.72. Between 87–96% agreed or strongly agreed that the session was engaging and improved assessment preparedness. Students reported that the session was realistic, engaging and more effective than didactic teaching. Thematic analysis highlighted appreciation of moulage-enhanced realism and improved visualisation of deterioration, with suggestions for additional clinical scenarios.

Conclusion: Moulage-enhanced high-fidelity simulation improved students' confidence and understanding of opioid overdose management, supporting broader integration of immersive simulation within pharmacy education and assessment preparation.

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The perceptions of the first cohort of trainee pharmacists undertaking independent prescribing within their training year: A single NHS site evaluation

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Background: Changes to pharmacy education, including the 2021 Standards for the Initial Education and Training of Pharmacists (GPhC, 2021), have embedded independent prescribing (IP) within the foundation training year. Trainee pharmacists must now develop prescribing competence alongside service demands and exam preparation. Understanding these experiences is essential for supporting programme development and safe prescribing practice.

Aims: To explore the perceptions of the first cohort of foundation trainee pharmacists undertaking integrated IP training.

Method: Using purposive sampling, six trainee pharmacists at the beginning of their training year participated in an in-person, semi-structured focus group at a Midlands secondary care NHS trust in early September 2025. This was audio-recorded using a password-protected device, transcribed verbatim in Microsoft Word, and analysed thematically using Braun and Clarke's six-step approach. A follow-up focus group is planned towards the end of their training year to explore whether perceptions have changed. NHS Research Ethics Committee approval was not required following use of the Health Research Authority decision tool. The project was registered locally as a service evaluation on the Trust's audit management system.

Results: Four overarching themes were identified: (1) uncertainty and lack of information; (2) prescribing training structure and preparedness; (3) workload and time pressures; and (4) perceived value and professional identity.

Organisational and structural influences on prescribing training were highlighted, including workload pressures and variation in supervision by Designated Prescribing Practitioners. Trainees were uncertain how IP would be valued in practice, with unclear training expectations and limited formal prescribing assessments undermining confidence in prescribing competence. Beliefs about capability were associated with uncertainty around progression from supervised to independent practice,

suggesting a gap between policy ambition and trainees' experience of prescribing training.

Conclusion: Trainee pharmacists value IP but report uncertainty around training, supervision, and role integration. Clearer guidance and structured support may enhance safe early-career prescribing.

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An evaluation of the band 6 to 7 pharmacist development programme at University Hospital Southampton NHS Foundation Trust

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Background: Band 6-7 pharmacist roles at University Hospital Southampton were implemented to support early pharmacist career development. Previous work with band 7 pharmacists (including those on 6-7 progressions) identified two key themes with regards to progressive roles: differences in support offered and lack of standardisation. (Thomson and Smith, 2024).

Aims: To evaluate the support offered and perception of tasks required for the progressive 6-7 pharmacist programme.

Method: A locally developed online survey was piloted then distributed to current and former band 6-7 pharmacists, incorporating open and closed ended questions. Satisfaction with aspects of the programme was measured using 5-point Likert scales. Descriptive statistics were calculated using Microsoft Excel. Ethics approval was not required for this service evaluation.

Results: Responses were received from 11/18 pharmacists invited (61%). Eight participants were dissatisfied, 1 was neither satisfied or dissatisfied and 2 satisfied overall.

Five (45%), responded that they were provided with all support expected. Nine (82%) had a mentor and 6 (54%) had regular meetings to review their programme progression.

The tasks attached to the programme generally perceived as "very helpful" or "helpful" were delivering training, ward assessments and case-based discussion. Participants

reported that assessments against the Foundation Pharmacist Framework and reflective accounts were “unhelpful”.

Time allocated varied across teams; four (36%) were given 1 – 1.5 hour(s) per week to complete the work, 75% of those agreeing this time was adequate. Those not given designated time felt it would have been beneficial.

Conclusion: While limited due to low response rate results suggest there is a lack of support to participants in progression posts. Programme documents now state that all are expected to have an assigned mentor and responsibilities regarding mentorship and assessment have been clarified. Inconsistencies between teams remains an ongoing issue being revised within the leadership team.

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Pharmacy professionals' quality improvement projects from the Primary Care Pharmacy Education Pathway (PCPEP) of Centre for Pharmacy Postgraduate Education: A retrospective abstract analysis

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Background: Across the NHS, quality improvement (QI) projects are used to drive change (Backhouse and Ogunlayi, 2020). All pharmacy professionals undertaking the *Primary care pharmacy education pathway* (PCPEP) are introduced to QI principles. Learners complete a QI project, produce an abstract and present it, developing leadership and research skills linked to the four pillars of practice (Health Education England, 2017) through QI methodology, data analysis and improvement cycles.

Aims: To explore PCPEP QI projects and how educators can support pharmacy professionals in demonstrating QI and measurable outcomes.

Method: Reviewers themed potential categories for data collection under broad areas such as patient safety and medicines optimisation. Relevance was tested on ten random

abstracts. A definition document was created to support consistency in categorisation.

Fourteen CPPE education supervisors systematically reviewed 2446 abstracts (covering cohorts from 2021 to 2025) with 701 analysed for this abstract. The University of Manchester ethics decision tool confirmed that ethical approval was not required.

Results: Analysis showed links between project topics, PCPEP learning and NHS priorities. Project abstract strengths included process change (84%), multidisciplinary team involvement (81%), reduction of potential harm (80%) and improvement in recommended monitoring process (70%).

Weaknesses included lack of the following: title (28%), references (36%) and quantified cost savings (85%). Sustainability was infrequently addressed, although most projects aligned with at least one sustainable healthcare principle (Centre for Sustainable Healthcare, 2026).

Conclusion: Alignment of projects with learning content suggests that PCPEP engaged learners with planning QIs. A range of QI activities were undertaken, with measurable benefits to patient care and process efficiency, demonstrating impact of learning on practice. However, not all outcomes were routinely reported. Pharmacy professionals would benefit from additional support in linking proposed QI objectives to measurable outcomes and effectively demonstrating their work's impact.

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The clinical future of community pharmacy: How to operationalise learning and training for a prepared workforce

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Background: The 10 Year Health Plan (Department of Health and Social Care, 2025) recognises community pharmacy as a central provider of front-line clinical and preventative services within integrated ‘neighbourhoods.’ Community pharmacy employers are essential to service and workforce

planning, investment and delivery, yet their views have rarely been sought.

Aims: This study aims to explore community pharmacy employer perspectives on sector and workforce training capacity and learning needs amidst service transformation.

Method: Part of a larger mixed methods study, this abstract reports from semi-structured interviews with community pharmacy owners, superintendents, education/training leads, and representing organisations across England, purposively recruited via professional networks. This study gained university research ethics approval (2025-24298-43818).

Interviews explored learning and training needs, barriers, and enablers for new and expanding clinical roles/services, drawing also on experiences from recently introduced services such as Pharmacy First and Independent Prescriber (IP) Pathfinder. Interviews were video/audio recorded, transcribed verbatim and analysed thematically (Braun and Clarke, 2006) using NVivo 15.

Results: Interviewees (n=23; 16=male) broadly supported the policy direction of increased clinical roles and services. Key themes emerged concerning workforce learning needs, funding/commissioning, and systems to implement training. Interviewees wanted to enable their workforce but identified structural challenges. Interviewees identified the need for significant investment for workforce training, backfill, and protected learning time. Interviewees noted how operationalising workforce learning involves a precarious balance between business profitability and investment, with greater clarity needed on long-term funding and service commissioning. Concerns were raised about the risk of a 'two-tiered workforce' of newly qualified pharmacists with IP qualifications and pharmacists without, highlighting a need for equitable workforce support.

Conclusion: This study provides timely insights into the needs and pressures community pharmacy faces to successfully operationalise workforce training, informing service and workforce planning for community pharmacy's clinical future.

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Evaluation of pharmacists' opioid dispensing practices: A cross-sectional study from Pakistan

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Background: The global opioid crisis is increasingly recognized; however, in Pakistan, weak regulatory enforcement, inappropriate dispensing of prescription medicines, and limited implementation of opioid stewardship programs pose major obstacles [1, 2]. Despite pharmacists' critical role in ensuring safe opioid use, there is limited evidence assessing their dispensing practices, concerns, and stewardship-related activities within Pakistan.

Aims: To evaluate pharmacists' knowledge of opioids and opioid stewardship, dispensing practices, concerns regarding physicians' prescribing, opioid-related interventions, and perceived barriers to opioid stewardship in Punjab, Pakistan.

Method: A cross-sectional study was conducted among community and hospital pharmacists across five cities of Punjab, Pakistan, using convenience sampling. A 58-items structured questionnaire was developed from previously validated instruments and relevant literature, reviewed by experts for face and content validity, and pilot-tested for clarity. The tool demonstrated good internal consistency (Cronbach's alpha = 0.81). Descriptive statistics summarized the data, while Spearman's correlation and ANOVA were used for inferential analysis (p<0.05). The Xi'an Jiaotong University medical ethics committee approved the study.

Results: A total of 496 pharmacists participated (response rate: 72%). Most pharmacists were aware of opioid risks and adverse effects (88.9%) and provided patient counseling (87.5%). However, only 25% were aware of naloxone use in opioid overdose, and 29% reported never recommending naloxone. Concerns about inappropriate prescribing were common, including opioids for suspected misuse (48.4%) and unnecessary prescriptions (64.5%). Spearman correlation showed significant positive associations between knowledge and practice (r=0.401, p<0.001) and between knowledge and concern scores (r=0.267, p<0.001). ANOVA analysis showed significant differences in knowledge and practice scores across pharmacists' experience levels and practice settings (p<0.05). Lack of education and training resources (58.0%) and system-level barriers were major barriers to opioid stewardship implementation.

Conclusion: Pharmacists demonstrated adequate knowledge but important gaps in overdose management. Targeted opioid stewardship training, curriculum strengthening, and improved pharmacist–physician collaboration are needed.

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A mixed methods study exploring the perceptions of Foundation Trainee Pharmacists (FTPs) on their readiness to prescribe

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Background: Significant reforms have been made to initial education and training standards for pharmacists (IETPs, 2021), accommodating for the qualification of pharmacist independent prescribers (PIPs) at the point of registration. (General Pharmaceutical Council, 2021) Given the recent implementation of this initiative, the existing evidence base remains limited specifically from the perspective of foundation trainee pharmacists (FTPs).

Aims: This study aimed to explore FTP perceptions surrounding their confidence and readiness to prescribe.

Method: A mixed methods study utilising a structured survey (n = 38) and semi-structured interviews (n = 16) was conducted. Survey items were categorised mirroring the NHS WTE assessment strategy into four domains: clinical decision-making; physical and clinical examination skills; history taking and prescribing consultations; and safe prescribing skills and knowledge. (NHS England, 2024) The study was approved by the University of Birmingham Research ethics Committee (Ref: MP2526-07R1).

Results: Survey responses were obtained using a five-point Likert scale and analysed using Microsoft Excel. Semi-structured interviews were conducted over Microsoft Teams, lasting around 20 minutes. Verbatim transcripts were analysed using Braun and Clarke's reflexive thematic analysis framework. (Braun and Clarke, 2006) Ethical approval was granted by the University of Birmingham School of Pharmacy ethics sub-committee.

Key quantitative findings surrounding self-reported confidence, identified that on average, 44.7% (n = 16) of participants agreed to feeling confident in clinical decision-making; 66.7% (n = 25) in physical and clinical examination skills; 86.8% (n = 33) in history taking and prescribing

consultations; and 59.2% (n = 22) in safe prescribing skills and knowledge.

Conclusion: Three key themes emerged from thematic analysis: confidence facilitators; confidence barriers; and programme design and delivery. Identified themes highlight requirements for revisions within training pathways. Participants reported concerns regarding inconsistency, unstructured learning, and sector variation, indicating a requirement for review and standardisation to better support FTPs in developing prescribing competence and confidence.

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Implementing a student-led inhaler technique clinic in a NHS hospital outpatient pharmacy setting: A pilot service evaluation aligned to Entrustable Professional Activities (EPAs)

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Background: Outpatient pharmacy waiting times present opportunities for patient education while experiential learning must remain tariff-compliant. This pilot aimed to provide patient benefit while enabling pharmacy students to demonstrate EPAs under arm's-length supervision. Inhaler technique was selected as a low-risk, high-impact intervention due to prevalence of inhaler errors and their association with poorer respiratory outcomes.

Aims: To evaluate the feasibility, educational impact, patient outcomes and EPA alignment of a student-led inhaler technique clinic.

Method: Fifty students (Year 2-4 Aston University; University of Birmingham; University of Wolverhampton) participated across placements. Students completed pre- and post-training knowledge and confidence assessments. Training was delivered by the Lead Specialist Respiratory Pharmacist, who assessed students using Direct Observation of Practical Skills. Clinics were delivered in pairs in two-hour sessions under arm's-length supervision, with a Responsible Pharmacist available for escalation. Using "Make Every Contact Count" approach, outpatient pharmacy attendees were opportunistically screened and inhaler users offered assessment and counselling. Consultations were guided by a structured Microsoft Form containing a checklist of inhaler technique steps and errors. Patients demonstrated inhaler technique before and after counselling to reassess errors. Patient confidence and satisfaction were measured using 10-point Likert-scale questionnaires. As a service evaluation, formal ethics approval was not required.

Results: Of 342 patients, 42 inhaler users consented to assessment and counselling. Metered-dose inhalers were most common (85.7%), followed by dry powder inhalers (9.5%). Baseline assessment identified technique errors in 59.5% of patients. Following student counselling and demonstration, technique improved with correct technique in 76.2% and partial improvement in 7.1%. Patient satisfaction scores were high. Educational benefits were evident; students demonstrated improved confidence and inhaler knowledge and practised EPAs including person-centred consultation, medicines optimisation and professional accountability.

Conclusion: Arm's-length supervised student-led inhaler clinics were feasible, safe and educationally valuable, demonstrating meaningful patient benefit and strong EPA alignment.

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Fluid Choices, Clinical Voices: Evaluation of an undergraduate pharmacy student education programme for the management and prescribing of intravenous fluids

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Background: Up to one fifth of patients receiving intravenous fluids experience complications (NICE 2017). As a result, fluid prescribing should be given the same status as drug prescribing (NCEPOD 1999). Pharmacists are ideally placed to support prescribing of intravenous fluids, and undergraduate education is essential to promote future prescribing practices.

Aims: Evaluate student opinions of an intravenous fluid training programme and explore their interpretation of this role within their future career as a pharmacist.

Method: All 4th Year Students within both university Schools of Pharmacy in Northern Ireland completed the training programme. Ethical approval was not required as the evaluation was classified as a teaching evaluation. Following completion of the programme, students completed a Likert Style Microsoft Forms questionnaire to explore their opinions of the programme. Quantitative data was analysed using descriptive statistics, and thematic analysis was used to evaluate the qualitative free text responses.

Results: 125 of the 244 students responded, giving a response rate of 51%. Mean score for overall student rating of the training programme was 9.2 out of 10. 94% (n=118) of respondents reported that completing the on-line training course was beneficial before attending the prescribing workshop. 98% (n=122) of respondents reported that they felt more confident to support prescribing of intravenous fluids. 99% (n=124) of respondents reported prescribing of fluids and electrolytes is of equal importance to prescribing of medications. Themes from the free text comments included: practical prescribing practice, responsive feedback, applying science to practice and professional identity.

Conclusion: There is evidence to suggest that undergraduate pharmacy students appreciate the role of a qualified pharmacist in the management and prescribing of intravenous fluids. Students embraced the opportunity to develop their knowledge in this subject area, rated the training programme very highly and reported confidence in applying these skills in future clinical scenarios.

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An exploration of barriers and enablers of student attendance at teaching sessions on pharmacy and optometry undergraduate programmes at a UK university

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Background: Student attendance at scheduled teaching sessions is an important indicator of academic engagement, professional development, and overall success within higher education. In professionally oriented programmes such as pharmacy this holds particular significance. Despite this, universities continue to face challenges in supporting consistent student attendance (Lucey & Grydaki, 2022).

Aims: This study aimed to explore the factors influencing non-attendance among students enrolled in the Initial Year/Master of Optometry, and Master of Pharmacy programmes at a UK university.

Method: An online survey, informed by themes identified in the literature was developed using a mixture of question types including a range of statements with a 5 point likert scale. The survey was piloted with MPharm 3rd year students. Ethical approval was obtained from the University of Hertfordshire.

Results: A total of 147 students responded to the online survey (35% response rate), 64% from pharmacy and 36% from optometry; most were first-year students. There were no statistically significant differences between the MOptom and MPharm students views on attendance.

Students were asked about their reasons for attending or missing lectures. The strongest agreement was found with

statements such as “I attend teaching because it is mandatory” (81% agreement) and “I attend teaching because a register is taken” (79% agreement). Conversely, the most frequently endorsed reasons for non-attendance were “I don’t attend teaching when I don’t like the teaching style of the lecturer” (57% agreement) and “I don’t attend teaching when I need to revise for upcoming exams/tests” (55% agreement).

Conclusion: This study highlights the need for universities to address both logistical barriers to attendance, in terms of a range of timetabling issues, as well as approaches to learning and teaching. The team are keen to further explore the impact of lecturer behaviours and teaching style on student attendance.

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Check In and Check Out: A process for developing independent learning in pharmacy students

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Background: Henderson et al. (2018) developed the ‘Check In and Check Out’ (CICO) tool to enhance self-efficacy in practical nursing skills by promoting agency and structured reflection. Learners ‘Check In’ to set learning intentions before sessions and ‘Check Out’ afterwards to reflect on achievement and confidence. Although created for nursing education, CICO is transferable to other disciplines and learning contexts.

At Keele University, CICO was adapted for the MPharm professional portfolio within the professional development strand of the 120-credit Stage 3 and Stage 4 modules (levels 6 and 7). Students completed ten weekly CICO entries and an evaluative “end of CICO review” reflecting on the tool’s value for their learning.

Aims: Evaluate how CICO supported students’ independent learning and self-efficacy.

Method: ‘End of CICO’ reflections were thematically analysed. Ethical approval was granted by the Keele University Educational Research Ethics Committee (KR-210069).

Results: Stage 3 analysis generated four themes. Students reported that CICO provided a useful scaffold for transitioning

to more independent learning. Reflection was recognised as a developing skill. CICO improved accountability by encouraging timely work completion and consistent study habits, reducing last-minute learning. Some students experienced fatigue linked to repetitive questions during quieter weeks.

Stage 4 analysis identified five themes. CICO supported management of heavier workloads, research projects, and increasing expectations for self-directed learning. Students viewed reflection as beneficial preparation for Foundation Training. Confidence statements aided self-assessment for some, but others found them repetitive or too narrow. While CICO's structure reduced stress for many, it heightened pressure during busy periods. Acceptance was lower among students with established organisational systems.

Conclusion: CICO supports self-efficacy, independent learning, and readiness for Foundation Training. Refinement of reflective prompts may improve contextual alignment of confidence statements, and a reduction in the number of assessed CICO weeks may enhance student engagement.

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Students' perceptions of culturally competent teaching practices in UK pharmacy education: A qualitative study

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Background: Pharmacy education in the UK serves increasingly diverse student cohorts (Naqvi et al., 2025); however, limited evidence exists on how Master of Pharmacy (MPharm) students perceive the cultural responsiveness of teaching practice. Although cultural competence is considered vital for inclusive pharmacy education, there often remains a gap in educators' understanding of how to embed culturally responsive approaches into teaching practice (Sleeter, 2012).

Aims: To explore MPharm students' perceptions of the cultural competence of teaching practice at the Reading School of Pharmacy (RSoP).

Method: An interview study was conducted with MPharm students (Years 1-4) at RSoP during Nov-Dec 2025. Semi-structured interviews utilised a validated interview guide, were conducted on Microsoft Teams, and recorded with consent. Recruitment used a census approach by emailing invites with a registration link distributed via relevant mailing lists. Interviews were transcribed using Teams, anonymised, and analysed using Braun and Clarke's (2006) reflexive thematic analysis. RSoP Research Ethics Committee granted ethical clearance (SREC 31/2025).

Results: Fourteen students participated (11 female, 3 male; Asian n=6, Black n=6, White n=1, Other n=1). Four themes emerged: 1) Understanding of culturally competent teaching practice; 2) Positive learning experiences; 3) Barriers; 4) Recommendations. Teaching was perceived as inclusive and respectful of cultural and religious diversity. Participants valued diverse patient case studies and the recognition of religious practices and dietary restrictions. Challenges included language and accent difficulties, timetable clashes with religious practices, limited diversity in teaching materials, assessments, and staff, and occasional cultural insensitivity and linguistic bias. Students proposed more culturally diverse cases with non-Western perspectives, the use of disclaimers, embedding cultural safety in assessments, and improving student-instructor communication about religious needs.

Conclusion: Culturally competent teaching was positively perceived; however, inconsistencies exist across the MPharm curriculum and teaching practices. Addressing shortcomings and incorporating student recommendations may enhance inclusivity and culturally competent teaching practice.

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MPharm curriculum reform and embedding prescribing into the Aston University undergraduate programme: A qualitative exploration of pharmacy graduates' perspectives and experiences

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Background: Across the United Kingdom, undergraduate Master of Pharmacy (MPharm) programmes have undergone major transformation to implement new General Pharmaceutical Council (GPhC) standards for the Initial Education and Training of Pharmacists (GPhC, 2021). A key reform has been the inclusion of prescribing, meaning on successful completion of the foundation year, these trainees will be registered pharmacist independent prescribers. In 2025, the first graduates completed the newly accredited MPharm.

Aims: The study aimed to evaluate the Aston University MPharm curriculum re-design, from the perspective of Aston Pharmacy graduates at the start of their foundation year. Findings will inform programme enhancement plans and iterative quality reviews.

Method: A cross-sectional study, using a semi-structured interview method, was conducted on Aston University MPharm alumni from the July 2025 graduating cohort (n=125). Participants also had to be undertaking a UK pharmacist foundation trainee programme with a prescribing pathway. Recruitment began in September 2025 over three-weeks, via email. Interviews were conducted during October and November, over a five-week period. One-to-one interviews were conducted on-line, via Microsoft Teams. Transcripts were manually analysed using thematic analysis (Braun & Clarke, 2022).

Ethical approval: School of Allied Health Professionals and Pharmacy Research Ethics Committee at Keele University. Work-based approval: Head of Education, Aston Pharmacy School.

Results: Nine graduates, in foundation trainee years from community, hospital and GP practice, were interviewed. Three overarching themes were derived:

1. Transition and change.
2. Teaching and assessments underpinning foundation year practice.
3. Programme and curriculum development.

Graduates aligned key aspects from their MPharm programme in supporting foundation trainee practice and identified perceived areas for curriculum improvement. They also generally felt prepared for prescribing training.

Conclusion: From this study, Aston graduates overall valued the MPharm redesign in preparing for foundation trainee practice. Findings will prove useful for iterative curriculum development and wider external engagement discussions.

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Enhancing person-centred and culturally competent care among migrant communities: A practice-based educational intervention

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Background: Health inequalities among migrant populations remain a significant public health concern, often driven by systemic barriers such as language, socioeconomic status, and discrimination [1]. The evaluation of pharmacy students' knowledge and perception about health inequalities among the immigrant population reveals several important insights regarding their understanding and attitudes toward person-centred and culturally competent care [2].

Aims: This study aimed to assess the awareness and readiness of pharmacy students to provide person-centred and culturally competent care to migrant populations; to identify gaps in education; and to inform curriculum improvements.

Method: Ethical approval was granted by Kingston University Research Ethics Committee. This study employed a mixed-methods approach. A quantitative survey adapted from existing similar tools in the literature, was filled by 72 Level 7 pharmacy students at Kingston University. The second tool was qualitative interviews with six interprofessional learning students who collaborated directly with local migrant-support organisations. Their engagement involved several structured activities designed to develop cultural humility, person-centred communication skills and awareness of migrant health inequalities.

Results: Quantitative results revealed that while students demonstrated positive attitudes toward addressing health disparities, their knowledge and practical skills in this area were limited. The majority of respondents (77.8%) recognised

the importance of culturally competent care, yet nearly half (48.6%) reported inadequate training in this area. Qualitative findings emphasised that students valued direct interactions with migrant populations as an essential element of their education.

Conclusion: This study highlights the need for integrating experiential learning, cultural competence workshops, and interprofessional collaboration into pharmacy curricula to better prepare students for recognising and addressing health disparities. By equipping future healthcare professionals with the knowledge and skills to meet the unique needs of migrants, pharmacy education can play a pivotal role in promoting equity within healthcare systems [3-4].

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A qualitative study of the perceptions of pharmacy educators regarding how the teaching, learning and assessment of Antimicrobial Stewardship (AMS) should be incorporated into the undergraduate pharmacy curriculum in the United Kingdom (UK)

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Background: Pharmacists have key roles promoting antimicrobial stewardship (AMS) to slow the development of antimicrobial resistance (Liaskou et al., 2018). Embedding best practice for AMS within the curriculum, at

undergraduate and post-graduate level, for frontline health and social care staff is critically important (Gov.UK, 2024).

Aims: To identify perceptions of pharmacy educators about the teaching, learning and assessment of AMS in the undergraduate pharmacy curriculum in the UK.

Method: Following ethical approval (University of Huddersfield), eight pharmacy educators from universities in the UK were purposively recruited and interviewed 1:1 utilising a qualitative semi-structured topic guide.

Results: Inductive Interpretative Phenomenological Analysis (IPA) data analysis produced five group experiential themes: “AMS curriculum development”, “AMS syllabus”, “Delivery of AMS teaching”, “Assessment of AMS knowledge” and “Pharmacy students and AMS”. Educator perceptions were that spiral, integrated approaches supported AMS curricula development and delivery but there should also be standalone AMS teaching. No single teaching or assessment method was identified as most effective, with suggestions that different approaches were required at different stages of the curriculum to support prior learning and the AMS topic being taught. Having specific national AMS competencies for pharmacy education were identified as beneficial. Challenges for AMS curricula included student retention of foundational science knowledge and arranging consistent AMS experiential learning opportunities. AMS was considered an authentic topic for interprofessional education and participants recommended that valuable teaching opportunities could be provided by expert patients describing their lived experiences of infection.

Conclusion: Pharmacy educators considered that AMS is an important topic in the initial education and training of pharmacists. Teaching of AMS should be spiralled up through the busy pharmacy curriculum underpinned by national AMS competencies (NHSE, 2024). Foundational science of antimicrobials taught early in the programme should be built upon with increasingly complex application to case-based clinical scenarios and work-based learning.

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Pharmacists as trusted advisors for equitable cancer screening uptake: Implications for pharmacy education from a community survey

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Background: Cancer screening uptake remains uneven, particularly among minority ethnicities (Scott and Hoskin, 2024). Pharmacists, as accessible health professionals, can provide opportunistic advice, address concerns, and signpost people who may not attend screening (Egbewande et al., 2022). Pharmacy education needs to prepare graduates for this role.

Aims: To identify the most trusted messenger for cancer screening decisions, and to understand whether culturally representative messaging increases likelihood of attending screening. This will inform the approaches required in pharmacy education to support underserved groups.

Method: Cross-sectional survey of adults (≥ 18), recruited via community and social networks, in Greater London (October 2025-January 2026). Survey captured demographics (including ethnicity and first language), trusted messenger, exposure to representation in campaigns, and whether seeing someone “like me” would increase likelihood of attending screening. Descriptive analysis and subgroup comparisons were undertaken. Ethical approval was obtained from the University Ethics Committee in September 2025.

Results: Participants ($n=259$; 205 ethnic minority, 54 white) identified a health professional as the most influential messenger ($n=219/259$, 84.6%). Over half reported they would be more likely to attend screening if the message featured someone “like them” ($n=148/259$, 57.1%), with higher endorsement among ethnic minority respondents ($n=131/205$, 63.9%) than white respondents ($n=17/54$, 31.5%). Ethnic minority respondents were less likely to report having seen their community represented in campaigns (24.4% yes) compared with white respondents (53.7% yes).

Conclusion: Community preferences place trust in health professionals and highlight the value of culturally representative messaging for ethnic minorities. For pharmacy education, these findings support curriculum content/assessment on: (i) brief, opportunistic screening conversations (explaining purpose, addressing concerns,

correcting misconceptions), (ii) culturally responsive communication, (iii) navigation of screening pathways, including language-access support, and (iv) scenario-based teaching that reflects diverse communities. These competencies can be assessed via simulation/OSCE consultations and reflective exercises focused on reducing screening inequities.

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The predictive value of numeracy assessments for overall registration success in overseas qualified pharmacists

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Background: In pharmacy practice, accurate calculations and critical evaluation directly influence patient outcomes. Mathematics fosters logical, structured thinking, enabling pharmacists to weigh evidence impartially and make informed decisions.

Aims: This study explored whether performance in numeracy assessments within the Overseas Pharmacist Assessment Programme (OSPAP) predicts success in the registration assessment.

Method: Data on OSPAP numeracy performance and GPhC registration assessment outcomes were collected from 2019 to 2025. Logistic regression analysis examined the predictive association between numeracy performance and assessment outcomes. This study did not require ethical approval but was conducted under the University of Hertfordshire’s Protocol UPR RE01.

Results: Data from 170 OSPAP students were analysed. Candidates who passed the GPhC assessment ($n=146$) achieved higher numeracy scores (mean = 82.45, SD = 13.78) than those who failed ($n=22$; mean = 68.95, SD = 11.30), with a significant difference, $t(166) = 4.38$, $p < .001$, representing a large effect size.

Binary logistic regression indicated that numeracy scores significantly predicted passing the GPhC assessment ($B = 0.062$, $SE = 0.016$, $Wald = 14.28$, $p < .001$; $\text{Exp}(B) = 1.064$), with

the model correctly classifying 85.1% of cases and explaining 9–16.7% of the variance in outcomes. Pearson correlation showed a positive association between numeracy scores and GPhC outcomes, $r(168) = 0.322$, $p < .01$. These results suggest numeracy performance significantly contributes to GPhC success.

Conclusion: The UK government's commissioned inquiry by Ofsted (2021) into mathematics education notes that mathematical training develops logical reasoning, analytical thinking, and problem-solving skills. This concept is supported by Carpenter et al (2022) who suggest that critical thinking is a core aspect of numeracy development. Embedding mathematical skill development earlier within pharmacy programmes and progressively building these competencies can strengthen student confidence and performance, however other factors will likely contribute to student success in the registration assessment.

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Understanding UK pharmacists' views on reforms to independent prescribing

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Background: The initial education and training of pharmacists in the United Kingdom is undergoing significant reform, with prescribing now integrated into the undergraduate Master of Pharmacy (MPharm) degree and foundation training year. Under the Initial Education and Training Standards for Pharmacists (IETP) 2021, graduates qualify as independent prescribers at registration (General Pharmaceutical Council, 2021). However, pharmacists' perspectives on the implications, challenges, and barriers of these reforms remain under-reported.

Aims: This study aimed to explore registered pharmacists' perspectives on the IETP 2021 reforms, including perceived benefits, drawbacks, and concerns.

Method: Five UK pharmacists participated in two 2-hour, online semi-structured focus group discussions. Sessions were recorded, transcribed verbatim, and analysed using thematic analysis (Braun & Clarke, 2006). Participants were recruited via convenience sampling as this was an exploratory study. Ethical approval was granted by the School of Chemistry, Food and Pharmacy Research Ethics Committee, University of Reading.

Results: Five pharmacists (two general practice prescribers, one community and two hospital non-prescribers) with 4–10+ years' experience participated. Analysis generated 11 codes and four themes: (1) prescribing preparedness: reforms seen as necessary but rushed, causing educational gaps and potential errors; (2) patient safety: concerns about limited experience, prescribing pressure, and liability; (3) workload changes: impact on pharmacists, staff, and routine tasks; (4) patient implications: benefits to care alongside potential confusion.

Conclusion: Pharmacists' views on the reforms highlighted concerns regarding preparedness, workload, patient awareness and safety. Experiential learning including simulation (Phanudulkitti et al., 2023), consultation skills training, and transitional support for undergraduates and foundation trainees were identified by participants as key to addressing challenges and supporting patient care. Study limitations included small sample size and single-coder analysis (although this was enhanced by peer discussion). Future research will survey a broader sample of pharmacists to inform nationwide MPharm curriculum development, alongside follow-up discussions with MPharm undergraduates.

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Pharmacy students' perspectives on factors influencing OSCE performance: Insights from second-year students

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Background: The objective structured clinical examination (OSCE) is a key assessment tool used to evaluate clinical competence in healthcare fields (Cristobal *et al.*, 2024; Nasser *et al.*, 2024). However, limited research has explored factors affecting OSCE performance from the perspective of pharmacy students.

Aims: This study examines academic, psychological, and skills-based factors influencing OSCE performance among second-year pharmacy students at a London university, using a mixed-methods approach informed by their first-year experience.

Method: The study was approved by Kingston University's the School of Pharmacy ethics committee (11 October 2024) and completed in January 2025. Data were collected using a 22-question questionnaire on OSCE skills, preparation, experiences, challenges, and demographics (Likert-scale, multiple-choice, open-ended) and piloted for validity. To explore key themes in depth, a small group (n=6) participated in semi-structured interviews and two consecutive mock OSCEs with embedded feedback.

Results: Of the 109 questionnaires distributed, 72 were completed, yielding a response rate of 66%. Key challenges that affected performance during the assessment were difficulty locating and extracting information from resources (81%, 58/72), time pressure (68%, 49/72), and poor planning, such as rushing into communication (56%, 40/72). Participants reported that the most challenging skills to acquire were clinical reasoning, time management, reading and extracting information. Positive factors influencing preparation included clearer understanding of the OSCE format and prior practice in simulation sessions, whereas academic workload, stress and anxiety were the main negative factors. Peer practice and simulation sessions were perceived as the most effective preparation strategies. Overall, the course was rated very good or good in improving clinical skills through simulation sessions and communication skills practice (67%, 48/72). The interviews reinforced the same key findings. Personalised feedback provided after the first mock OSCE led to a marked improvement in performance during the second mock.

Conclusion: Findings suggest that simulated learning and structured formative assessments with personalised feedback could enhance OSCE performance by reducing anxiety, improving time management and building confidence.

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From learning tool to assessment platform: Student perceptions of MyDispense

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Background: The online simulation platform MyDispense allows students to safely practise counselling, prescription validation, and dispensing. While evidence shows benefits for learning and assessment (Khera *et al.*, 2023), challenges include a steep learning curve, technical issues, and limited authenticity, potentially affecting engagement (Collins *et al.*, 2025).

In 2023, the University of Birmingham (UoB) integrated MyDispense into first-year teaching and made it available for independent learning across Years 2-4. With planned expansion across the programme to include summative assessment, understanding student perceptions is essential to optimise implementation.

Aims: To explore student perceptions of MyDispense and suitability for summative assessment.

Method: A literature-informed interview guide was piloted with academic staff. Transcripts from semi-structured interviews with UoB MPharm students (November-December 2025) underwent content analysis to identify themes. Ethical approval: UoB School of Pharmacy Research Ethics Committee.

Results: Of ten participants, four reported formal MyDispense training (Year 1, n=2; Year 2, n=1; Year 3, n=1). The remainder reported no training and low platform use (Year 3, n=2; Year 4, n=4). Analysis generated four themes. Usefulness: students viewed MyDispense as beneficial and better than paper-based activities. Detailed, corrective feedback was valued and brief feedback deemed unhelpful. Usability: challenges emerged, particularly initially, around navigation and specific tasks (e.g., labelling). Use of the platform for assessment was broadly supported but concerns were raised about unfamiliarity and technical issues during assessment. Authenticity: perceptions of realism varied. While many felt MyDispense realistic, others criticised the

patient interactions as repetitive and robotic. Complexity: students recommended more emotionally responsive and complex patient scenarios but feared such enhancements could increase cognitive overload during assessment.

Conclusion: UoB pharmacy students value MyDispense for developing practice skills and support its summative assessment use. However, usability concerns highlight the need for systematic curriculum integration and broader case development before implementation as an assessment tool.

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'ACE'ing the pharmacy student clinical skills learning experience

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Background: New pharmacists must now qualify as independent prescribers upon registration (GPhC, 2021). Consequently, MPharm programmes have expanded clinical skills teaching, including physical examination, to better prepare students for prescribing. In medical education, combining academic instruction with trained lay people using their own bodies to coach students in the associated practical and communication skills is a proven, effective simulation-based approach (Danielson et al., 2019). At the University of Birmingham (UoB), these lay educators are known as Associate Clinical Educators (ACEs) and have been embedded within the MPharm curriculum for over five years. However, their use in pharmacy education remains under-reported.

Aims: To explore student experiences of learning physical examination skills with ACEs.

Method: A mixed-methods study (November–December 2025) used a literature-informed (den Harder et al., 2022) online 30-item questionnaire (demographics, Likert-scale statements, and free-text responses) and semi-structured interviews with UoB MPharm students and alumni. Qualitative data were analysed using inductive thematic analysis. Approval was granted by UoB School of Pharmacy Research Ethics Committee.

Results: Of 117 questionnaire respondents, 98.3% reported positive ACE experiences. Participants agreed ACEs created safe, supportive learning environments (97.4%) and provided constructive, personalised feedback (94%). ACE interactions were perceived to improve confidence in clinical skills (88.9%) and communication (91.5%). However, 29.1% were neutral or disagreed that ACEs supported prescribing preparation.

Four themes emerged from free-text responses and 18 interviews: ACEs as educators providing personalised, knowledgeable feedback; ACE attributes fostering psychological safety; human-to-human simulation-based learning building confidence; design and organisational barriers including session length and student numbers; and the need for clearer prescribing links.

Conclusion: Pharmacy students perceive ACEs to enhance confidence, communication, and clinical physical examination skills through authentic and supportive learning. However, clearer alignment with prescribing and improved session design are needed. Future research should objectively assess the ACE impact on pharmacy students' clinical competence.

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Are pharmacy educational programmes in the United Kingdom (UK) designing curricula to tackle health misinformation?

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Background: Health misinformation (HM), defined as a health-related claim of fact that is false due to a lack of scientific evidence (Chou *et al.*, 2018), is not a new phenomenon. Rapid growth of digital platforms and social media has accelerated its spread and increased its potential impact on public health. Misinformation now influences

health behaviours and patient decision-making. Pharmacists are increasingly expected to support patients in navigating and critically evaluating HM. Consequently, pharmacy education must equip graduates with the skills needed to identify and respond to HM.

Aims: This exploratory study aimed to identify how UK pharmacy education curricula address HM.

Method: Descriptive content analysis was conducted using publicly available regulatory documentation and curriculum information, accessed from regulatory body websites. In October 2025, curricula from all 30 accredited UK schools of pharmacy, six schools seeking accreditation, and Foundation Training Year (FTY) programmes were analysed to identify references to HM and related digital literacy concepts. To enhance rigour, a subset of documents was independently coded by a second researcher, with discrepancies resolved through discussion. As all data were publicly available, ethical approval was not required.

Results: Thirty-six pharmacy curricula were analysed; none explicitly referenced HM. Seventeen schools mentioned digital-related concepts across three themes: programme delivery and infrastructure, digital tools supporting learning, and initiatives to enhance staff and student digital literacy. Similarly, none of the four FTY programmes explicitly addressed HM, although digital-related content appeared in learning resources, application processes and learner support.

Conclusion: These findings represent a starting point for understanding how HM may be addressed in pharmacy education. Public curriculum documentation may not capture the full depth of teaching practices. Previous evidence also suggests variability in how digital literacy is embedded within UK pharmacy programmes (Alowais *et al.*, 2024). Future research should explore module-level content, teaching approaches and educator perspectives.

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No placements? No problem: Large-scale simulated GP pharmacist consultations to develop skills, empathy and confidence in early pharmacy training

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Background: Opportunities for pharmacy students to practise authentic patient consultations are often limited due to restricted access to clinical placements. Simulation is a structured educational approach using role-play and realistic scenarios to replicate clinical encounters safely, allowing students to develop consultation skills without risk to patients. Current standards for initial pharmacist education emphasise person-centred care, shared decision-making and effective communication. (1) Providing structured opportunities early is essential for preparing students for patient-facing practice. (2) To address this, a large-scale simulated GP placement was introduced for Year 1 MPharm students at the University of Manchester.

Aims: To evaluate whether participation in a simulated GP placement improves students' confidence in core consultation skills, including empathy, communication, shared decision-making and structuring consultations.

Method: A cohort of 158 Year 1 MPharm students attended a three-hour on-campus simulated GP clinic centred on a longitudinal patient journey ("Tony") over 24 months, covering hypertension, myocardial infarction, diabetes and mental health. Activities included case-based discussions, role-play consultations, lifestyle advice scenarios and navigating clinical guidelines. Outcome measures were self-perceived confidence across ten consultation-related skills using pre- and post-session five-point Likert scale surveys and qualitative reflections from open-ended questions exploring perceived learning. Ethics approval was not required as this formed part of routine educational quality assurance.

Results: Median confidence scores increased across all ten skills. A strong positive correlation between pre- and post-session scores (Spearman's $\rho = 0.828$, $p = 0.003$) indicated consistent improvement. Qualitative data highlighted increased empathy, enhanced understanding of patient perspectives, and greater confidence in structuring consultations.

Conclusion: Large-scale simulated GP placements provide a practical, scalable approach to early consultation training. They improve students' confidence, empathy and

understanding of patient perspectives, supporting readiness for clinical placements and fostering patient-centred practice.

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Exploring pharmacy students' knowledge and preparedness for pharmacovigilance, with a focus on adverse drug reaction reporting

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Background: Recent General Pharmaceutical Council (GPhC) learning outcomes require graduating pharmacists to anticipate and recognise adverse drug reactions (ADRs) and to be able to apply the principles of pharmacovigilance (PV).¹

PV involves detecting, assessing, understanding, and preventing adverse effects of medicines.²

Aside from ADR reporting, cases of misuse, medication errors, and overdoses should also be reported to enhance patient safety.³

Given the increased emphasis on drug safety within professional standards, it is important to evaluate whether current teaching adequately supports students' preparedness to meet these expectations.

Aims: This study explored pharmacy students' knowledge, perceptions, and self-reported preparedness regarding PV.

Method: Following ethical approval, a questionnaire comprising 16 mixed-format questions assessing knowledge, perceptions and self-reported preparedness was distributed to Year 4 pharmacy students (n=113) at a London university. The questionnaire included scenario-based items designed to assess students' judgement regarding ADR reporting. Descriptive statistics were used to analyse the data.

Results: Response rate was 77.9%. While the majority of students associated pharmacovigilance with concepts such as "side effects", "drug safety", and "patient safety", 89.8% rated their pharmacovigilance knowledge as average or below average. Despite this, responses indicated appropriate judgement regarding when pharmacovigilance principles should be applied. For example, 65.9% reported being likely or extremely likely to report a paracetamol overdose, and 63.6% indicated the same for codeine misuse, compared with

28.4% for mild gastrointestinal upset associated with Non-Steroidal Anti-inflammatory drugs. These findings suggest that students were able to differentiate between events requiring pharmacovigilance action and those less likely to warrant reporting.

Conclusion: Although many students perceived their pharmacovigilance knowledge as limited, their responses indicate appropriate recognition of ADRs and the need to apply pharmacovigilance principles, aligning with current GPhC learning outcomes. These findings support the value of continued emphasis on drug safety and pharmacovigilance education within the pharmacy curriculum.

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The impact of using simulated electronic CD register training in undergraduate pharmacy education

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Background: As UK pharmacists progress towards independent prescribing, undergraduate education must ensure competence in the legal and professional management of controlled drugs (CDs), as prescribing authority includes responsibility for safe CD prescribing, supply, and record-keeping (General Pharmaceutical Council, 2021). Increasing use of electronic CD registers in practice highlights the need for students to gain experience with digital systems.

Aims: To evaluate the impact and usability of simulated electronic CD registers introduced into a second-year MPharm practical, exploring its impact on students' self-

reported confidence in CD prescribing, supply, and legal record-keeping.

Method: A CD-focused practical incorporating a simulated electronic register (CDRx) was delivered to Year 2 MPharm students. The activities included CD prescribing, completing electronic registers, enabling students to apply legislation, and accurately document CD supply. Preparation involved pre-reading on CD prescribing and lectures introducing CDs. Combined, a framework in clinical governance for CD management was developed (GPhC LO38) (General Pharmaceutical Council, 2021).

Anonymous, voluntary post-session feedback was collected via a Microsoft Forms survey using Likert-scale and free-text questions, with descriptive statistics and basic content analysis used, respectively. Formal ethical approval was not required.

Results: Among 93 respondents (58.9% response rate), 89.2% reported increased confidence in supplying CDs appropriately following use of CDRx. Improved understanding of legal requirements for CD prescriptions were reported by 80.7%, while 68.8% reported confidence in writing legally accurate CD prescriptions. Despite overall positive feedback, 62.4% requested further support using CDRx, suggesting electronic registers were challenging for some.

Conclusion: Simulated electronic CD registers were associated with high self-reported confidence in undergraduate teaching highlighting the educational value of digital simulation. This reflects increasing prescribing digitalisation, including Electronic Prescribing Systems, emphasising the need for curricula to prepare students. While findings support the role of electronic CD register training, further support is required for students navigating the CDRx platform.

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The impact of an integrated simulation-based respiratory practical to support clinical and consultation skills in MPharm students

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Background: As pharmacists' roles expand towards independent prescribing and primary care, undergraduate education must adopt integrated approaches to clinical skills training (Pharmacy Schools Council). Peer-assisted learning and simulation-based environments develop confidence and communication skills (Cole et al., 2018; Foucault-Fruchard et al., 2024). However, opportunities for students to develop a holistic approach to patient care through integrated learning remain limited.

Aims: To evaluate the impact of an integrated, multi-station respiratory practical on second-year MPharm students' self-reported confidence and perceived learning in respiratory examination, patient consultation, and managing difficult conversations.

Method: The practical was delivered to 146 second-year MPharm students. The session comprised three stations: respiratory examination with Advanced Clinical Educators (ACEs); a simulation-based respiratory assessment using structured clinical scenarios; and a peer-assisted role-play consultation, where students alternated between pharmacist and observer roles, with ACEs acting as patients. Observers provided peer feedback for reflective learning.

This design enabled students to perform respiratory examinations, take patient histories, and communicate management decisions within a practice-based context. Students completed pre-session learning before participation. Anonymous post-session feedback was collected via Microsoft Forms using Likert-scale and free-text questions. Likert-scale data were analysed descriptively, while free-text responses underwent content analysis. Comparison with the previous cohort, who undertook the same practical, was descriptive and based on post-session self-reported data. Formal ethical approval was not required as no personal data were collected.

Results: Forty students responded (27.4% response rate). Overall, 92.5% agreed ACE-led stations improved understanding of respiratory examination skills, and 97.5% reported improved confidence in managing difficult conversations. Self-reported confidence was higher compared with the previous cohort (82%). Qualitative feedback was consistent across cohorts, with students frequently requesting increased time with ACEs.

Conclusion: A multi-station integrated respiratory practical was associated with high levels of self-reported confidence and perceived learning across respiratory examination, consultation and communication skills in MPharm students.

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By the book: How Queen's University Belfast (QUB) Master of Pharmacy (MPharm) students view playing by the professional standards

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Background: Pharmacy students must maintain high ethical and professional standards (GPhC, 2020; PSNI, 2026). Fitness to practise (FtP) is questioned when conduct or health raises a serious or persistent concern (GPhC, 2021).

Professional standards are introduced to QUB MPharm students during their first week. Due to the potential impact of breaches, it's critical to understand pharmacy students' perceptions of having to follow professional standards.

Aims: To explore Year 1 QUB MPharm students' understanding of professionalism and views on requirements to adhere to professional standards.

Method: The study was approved by the Faculty Ethics Committee (MHLS 25_09). All Year 1 QUB MPharm students (n=147) were invited by email to participate in focus groups. Participation was voluntary and informed consent was obtained (n=5). A topic guide was developed. Discussions in the focus group were recorded and transcribed verbatim.

Reflective thematic analysis of data was completed. Consent forms and recordings were securely stored.

Results: Analysis revealed four overarching themes:

- patient-centred care
- professional identity formation
- concept of professional behaviours
- factors impacting professionalism

Participants linked the importance of abiding by professional standards with patient safety. They felt that role modelling and experiential learning were essential in forming professional behaviours. All participants agreed that professional identity develops over time but felt that early implementation of teachings and practice was beneficial. Students agreed on the necessity of abiding by the expected standards.

Conclusion: Students recognised professional behaviours accurately and showed no grievances with adhering to professional standards. The findings reflect the benefits of fostering professional development from course outset. Despite this study involving a small number of students in one school, it supports the importance of student awareness and understanding of professionalism in pharmacy education. The students' extensive discussion revealed a strong understanding of what is expected of them when practising as a pharmacy professional.

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Pharmacy students' perceptions of simulation, placement learning and structured reflection in relation to OSCE preparedness

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Background: Objective Structured Clinical Examinations (OSCEs) are widely used in MPharm programmes to assess clinical and professional competencies in structured, time-limited settings. Recent General Pharmaceutical Council (GPhC) standards¹ have increased emphasis on clinical placement learning and structured reflection to support practice readiness, while simulation-based teaching is widely used within pharmacy education to support the achievement of these outcomes and preparation for OSCEs. However, where curriculum time and student workload are finite, it is important to understand how students perceive the relative value of different learning approaches for OSCE preparedness.

Aims: This study explored final-year MPharm students' perceptions of simulation-based teaching, clinical placement learning, and structured reflection in relation to their preparedness for OSCE assessments.

Method: Following ethical approval, final-year MPharm students (n=171) at a London university who had undertaken four weeks each of simulation and clinical placements in the previous academic year completed a 5-point Likert questionnaire exploring perceptions of these experiences, including structured reflection for OSCE preparedness. Optional open-text responses were included. Descriptive statistics were used to analyse the data.

Results: Response rate was 46.8% (n = 80). Structured reflection facilitated via PebblePad was rated low, with only 2.5% (n = 2) agreeing it supported OSCE preparedness. Simulation-based teaching was valued, with 86.3% (n = 69) feeling confident performing OSCE tasks and 77.5% (n = 62) finding feedback useful. In contrast, only 3.8% (n = 3) felt confident performing OSCE tasks following placements. Although no students indicated placement feedback as useful, open-texts indicated that they valued incorporating placement cases into simulations.

Conclusion: Simulation was perceived as substantially more effective than placements or structured reflection (facilitated via PebblePad) for OSCE preparation. While placements and reflection may support broader professional development, these findings highlight the need for curricular prioritisation to ensure activities are proportionate in value and aligned with assessment demands.

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Candidates' experience of preparing for the MPharm selection interview at Queen's University Belfast (QUB)

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Background: Admissions processes for UK MPharm programmes include an interactive component to assess candidates' values/suitability for entry into pharmacy (General Pharmaceutical Council, 2021). Evidence related to the impact of candidates' prior experiences of and preparation for this component is lacking.

Aims: Investigate candidates' exposure to relevant experiences and preparatory activities prior to their QUB MPharm selection interview, and the impact on outcomes.

Method: All candidates who undertook the interview (December 2025) were invited to participate. Consenting candidates completed a pre-piloted online questionnaire. 7-point Likert scales were employed (7=highest agreement level), along with other closed- and open-response questions. Mann-Whitney U tests and Spearman's rank correlation coefficient were used to compare interview scores with responses and assess relationship strength. QUB Medicine, Health and Life Sciences Research Ethics Committee approved the study (Reference: 469810).

Results: The response rate was 37.0% (n=47/127). Median interview scores were similar regardless of healthcare-related work experience/employment (experience/employment, n=42, 75.0% vs. no experience/employment, n=5, 75.9%; p=0.93). Likewise, median interview scores were not affected by respondents' having (n=20; 76.9%) or not having (n=27; 73.2%) ≥1 family member in healthcare sector employment (p=0.35). Respondents (n=14) with healthcare-related interview experience did not perceive influence on their performance (median agreement score=4), nor was outcome affected (median interview scores: experience, 74.5% vs. no experience, 76.9%; p=0.22). All respondents used the QUB pre-interview information and agreed that it provided adequate interview preparation (median agreement score=6). Respondents engaged with additional (median=5)

preparatory activities (e.g. information and/or advice from the internet/internet forums) with a weak correlation existing between the number of activities and interview score ($r_s=0.237$; $p=0.11$).

Conclusion: Healthcare knowledge/skills gained directly/indirectly through prior experiences does not appear to influence interview scores, indicating the equitability of the QUB interview process. Candidates value pre-interview information in preparing for their interview.

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Suicide awareness and prevention for pharmacy students: an evaluation of training provided by North Staffordshire Mind

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Background: North Staffordshire Mind (NS Mind) provides mental health workplace training. In 2024, Keele University commissioned NS Mind to deliver suicide awareness and prevention training to 25 Master of Pharmacy (MPharm) students. Open to all Keele MPharm students, places were allocated on a first-come-first served basis. The 3.5-hour voluntary training was attended by 21 students.

The session addressed suicide awareness, stigma reduction, risk and protective factors, and indicators that an individual may be feeling suicidal, as well introducing a four-step intervention framework for supporting individuals experiencing suicidal thoughts or ideation, and guidance on signposting and self-care (North Staffordshire Mind, 2026).

Aims: This study aimed to evaluate the training session.

Method: Ethical approval was granted by Keele University Educational Research Ethics Committee. A mixed-methods questionnaire was distributed via email to all attendees, with nine students responding (response rate 43%).

Results: All respondents indicated that their expectations were met or exceeded, with two reporting that the course exceeded expectations. The training was perceived as well designed, relevant, and appropriately pitched. All

respondents reported confidence in applying the knowledge gained in practice.

Self-reported knowledge increased following the training. All respondents would recommend the training to peers.

Thematic analysis of free-text responses identified three themes: benefits to professional and personal development; high-quality, thought-provoking delivery; and suggestions for improvement. Future recommendations included enhanced interactivity and improved digital access to materials.

Conclusion: Pharmacists from all sectors can identify and support patients with mental health difficulties and suicide ideation (Royal Pharmaceutical Society, 2018). International studies have indicated the need for supporting students with skills needed to care for patients experiencing mental health crises (Gorton et al, 2021; Mospan and Gillette, 2020). This pilot highlights a useful intervention in supporting these skills. Further study is required due to the small sample size.

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Impact of a workshop on managing challenging conversations: A pre- and post-evaluation with independent prescribing students

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Background: Independent Prescribing (IP) programmes for UK pharmacists must meet General Pharmaceutical Council learning outcomes, while course content is determined by individual providers (GPhC, 2022). Feedback from stakeholders involved in the QUB IP programme highlighted the need for structured training in managing challenging conversations. While preparing pharmacists for challenging patient interactions is important, few studies have explored this in pharmacy education (Eukel et al., 2021).

Aims: To evaluate the impact of a newly developed workshop teaching structured communication skills, with scenario-based role-play, on pharmacist trainee prescribers' confidence in managing challenging conversations, and its relevance and usefulness.

Method: A pre- and post-workshop questionnaire was administered to all participants (n=30) in January 2026. It included five confidence-based items rated on a five-point Likert scale (1=not confident, 5=very confident), measures of perceived relevance and usefulness, and free-text questions exploring perceptions of the communication strategies and suggestions for future improvement. Free-text responses were analysed thematically using an inductive coding approach, with two independent researchers identifying and agreeing on key themes. Ethical approval was received from the QUB Faculty of Medicine, Health & Life Sciences Research Ethics Committee.

Results: All participants completed both questionnaires. Mean overall confidence increased from 2.97 pre-workshop to 3.63 post-workshop, with improvements across all domains (Wilcoxon signed-rank test: $Z=4.31$, $p<0.001$, $r=0.79$). Usefulness (mean 3.80/5) and relevance (mean 4.43/5) were rated positively. Thematic analysis indicated that participants intended to implement strategies in practice, with scenario-based role-play helping consolidate learning. Suggestions focused on more role-play and a wider range of clinical scenarios.

Conclusion: The workshop was associated with significant improvements in confidence and was perceived as relevant and acceptable by pharmacist trainee prescribers. A limitation is that the evaluation measured self-reported confidence only; skill development was not assessed. These findings support the inclusion of structured communication skills training with scenario-based practice in IP programmes.

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Evaluating the effectiveness of the PebblePad e-portfolio system at Kingston University in preparing level 7 students for their foundation trainee year: Insights from current trainees

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Background: In 2024, Kingston University implemented the PebblePad e-portfolio across all levels of the MPharm programme to support students in evidencing achievement of General Pharmaceutical Council Learning Outcomes (LOs). Although e-portfolios are widely used in pharmacy education (Ming et al., 2019), limited evidence exists on how e-portfolio platforms and their educational implementation prepare MPharm graduates for the Foundation Trainee year, including transition to the Axia e-portfolio. This study explored foundation trainee pharmacists' perceptions of how PebblePad, implemented within the Kingston curriculum, supported preparedness for Foundation training during its early implementation.

Method: Following ethical approval, one-to-one semi-structured online interviews were conducted with foundation trainee pharmacists from diverse training settings. Data were analysed using Braun and Clarke's thematic analysis (Clarke et al., 2015).

Results: Nine foundation trainee pharmacists were interviewed.

Participants described PebblePad within the Kingston MPharm curriculum as enhancing familiarity with portfolio requirements through structured LO mapping and evidence documentation, supporting transition to Foundation training. Axia was frequently perceived as simpler by comparison.

Structured reflective prompts within record forms supported development of reflective practice and professional confidence, highlighting curriculum design in portfolio use. However, challenges emerged at the system and educational implementation levels. System-related issues included usability limitations and technical reliability, while educational challenges included workload, repetitive reflections, and inconsistent tutor and placement supervisor support during early implementation.

Participants recommended clearer training, improved feedback, streamlined reflective requirements aligned with Axia, enhanced system usability, and prescribing-related activities.

Conclusion: PebblePad supported preparedness for Foundation training by familiarising students with LO mapping and reflective practice. However, its educational value was shaped by both platform design and educational processes surrounding its implementation, including workload and supervisory support. Closer alignment with the

national Foundation Axia system may improve transition and reduce burden. These findings inform wider MPharm curriculum design and e-portfolio integration beyond a single institution.

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Supporting the transition into higher education: evaluation of pre-course admissions activities for the Overseas Pharmacist Assessment Programme (OSPAP) at the University of Hertfordshire

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Background: Adult learners returning to higher education often face challenges not addressed by traditional undergraduate support systems. Most transition support focuses on students at the point of arrival on campus, yet research suggests that enhanced pre-course support can help students prepare for study and manage expectations (Curnock Cook, 2022). With international pharmacists comprising approximately 11% of the UK pharmacy workforce, the OSPAP team at the University of Hertfordshire introduced a series of pre-course activities during the admissions process to help manage expectations, address concerns, and support transition into study.

Aims: This study aimed to evaluate student satisfaction with these pre-course activities.

Method: A cross-sectional survey was conducted using an online questionnaire consisting of closed-ended questions and open-ended responses exploring student perceptions of the activities. Descriptive statistics were used to analyse quantitative data. Open-ended responses were analysed using thematic analysis following an inductive approach to

identify themes. Ethical approval was granted by the University of Hertfordshire HSET, reference UH0981.

Results: Seventy-six OSPAP students completed the survey. Fifty-nine students (77.6%) reported that the welcome webinar was extremely useful, particularly in helping them understand expectations related to induction and the programme structure. For the introductory blog, 36 students (47%) rated it as extremely useful and thematic analysis identified several factors contributing to student satisfaction, including clearer expectations about the programme, reassurance about the transition to study in the UK, and an early sense of connection with the peers.

Conclusion: Students reported positive perceptions of the pre-course activities, particularly the welcome webinar and introductory blog. These activities appeared to support student transition by helping manage expectations and providing early programme orientation, which may facilitate engagement with learning (Chickering and Gamson, 1987). Further work could explore how pre-course initiatives may enhance awareness of learning expectations and support academic resilience among international students entering postgraduate study.

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