

CONFERENCE ABSTRACTS

Pharmacy Education Conference 2022: Initial education and training of pharmacists in a post-pandemic world

Manchester, United Kingdom

Oral Presentation

Lessons from implementing supervision infrastructure in a multisector post-registration pharmacist training pilot: South East London foundation pharmacist vocational training scheme (SEL VTS)

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Keywords: Cross-sector, Educational supervision, Multisector, Post-registration pharmacist, Practice supervision

Background: South East London Foundation Pharmacist Vocational Training Scheme (SEL VTS) was a post-registration pharmacist multisector training feasibility pilot, testing placements in hospital, community and GP practice sectors and integrated independent prescribing course. A programme overview is available (Health Education England, 2022).

Aim: This abstract focuses on supervision infrastructure lessons identified from evaluation conducted midway through the pilot.

Method: Qualitative research methodology included interviews and focus groups with pharmacists (n = 11), educational supervisors (n = 3), and stakeholders (n = 11), conducted by an independent organisation. Feedback from GP placements was captured separately (Hindi *et al.*, 2021).

Results: A multisector training supervision model including both peripatetic educational supervisors and sector-specific practice supervisors was valued by stakeholders and pharmacists (n = 22).

Participants perceived that part-time supervisor employment one to two days per week impacted support, including timeliness of feedback. Educational supervisors (n = 3) reported managing expected support levels from pharmacists across the week was challenging, and a barrier to completing meetings and formative assessments.

Pharmacists and supervisors highlighted that practice support infrastructure absence in community pharmacy impeded pharmacist integration into service delivery and formative assessments completion.

Hospital practice stakeholders (n = 5) highlighted additional need for support implementing a new training curriculum concurrently with an established curriculum.

Discussion: For multisector training, a practice supervision model that provides supervision support across all sectors is needed, particularly in community pharmacy where supervision infrastructure is not historically embedded. From SEL experience, peripatetic educational supervisors and a community pharmacy supervisor role partially overcame this.

Peripatetic educational supervision models should consider employing supervisors at least three days per week to ensure effective supervision across the week.

Inclusion of training support mechanisms for practice supervisors is essential if supervising in tandem with an established curriculum. Consider if the established training curriculum can be utilised in cross-sector.




Overall, combined multisector peripatetic and sector specific practice supervision benefited supervision support continuity for the pharmacists.

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Under pressure – Pharmacists' perceptions of the effects of postgraduate education on their wellbeing: A qualitative study

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Keywords: Pharmacist, Postgraduate education, Qualitative methods, Wellbeing

Background: A 2019 National Health Services commission on the mental wellbeing of healthcare postgraduate learners reported research largely focused on doctors in training and identified the need for further research into the wellbeing needs and ways to support wellbeing in postgraduate learning for other healthcare professions (HEE, 2019).

Aim: To explore the effects of postgraduate education on the reported wellbeing of working pharmacists.

Method: Following institutional ethical approval, an email invitation was sent to students studying a part-time clinical pharmacy postgraduate distance-learning diploma course. Semi-structured interviews were conducted using Microsoft Teams with all students who volunteered to participate. The interview guide was based on the existing literature and covered: reasons for distance learning, reported effects of combining work and study, perceived effect of the COVID-19 pandemic on wellbeing. These topics were explored in interviews using open, non-leading questions with follow up questions according to participants' responses. Recruitment continued until data saturation was achieved. Interviews were recorded with consent, transcribed verbatim and thematically analysed (Clark & Braun, 2017)

Results: Twelve interviews were conducted, and four themes were identified: Feeling under pressure to do a diploma for career progression; Inconsistency between employers in

requirements for qualifications; Lack of funding and study-time being key factors impacting on wellbeing (e.g. 'Having study time, particularly if it's like something that you have to do to progress at work, they should be facilitating'). Studying during the COVID-19 pandemic was also reported to negatively affect some students' wellbeing.

Discussion: Despite being limited to students from one University, these findings add to the literature that studying whilst working, may negatively affect the wellbeing of pharmacists if they are not adequately supported. The findings of this study highlight the need for employers to consider funding and study leave for pharmacists to help negate the negative effects on wellbeing experienced by some students.

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A method of maintaining the validity of GPhC's registration assessment question bank

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Keywords: Modified Angoff, Question bank, Subject matter experts, Validity

Background: In 2016, the General Pharmaceutical Council's (GPhC) registration assessment was modernised, including the:

- Introduction of modified Angoff methodology to set passing scores (Cizek & Bunch, 2007)
- Creation of a new calibrated question bank

In 2021, a standards maintenance approach using item response theory was introduced to the registration assessment. This required creation of a calibrated question bank containing questions used from 2016 - 2019. Only valid questions suitable for reuse in future assessments could be included in the calibrated bank (Downing, 2003).

Aim: Design a process to review previously used questions, using subject matter experts (SMEs), to ensure inclusion of contemporary and valid questions only within the calibrated bank.

Method: 'Validity panels' to review used questions and assess their suitability for reuse were created. Each panel had a member of the GPhC Board of Assessors (BoA), three SMEs and GPhC education staff. Each panel had a SME from

community pharmacy, hospital pharmacy and primary care. Eight panels were held virtually in 2020. Ethics approval was not required.

Results: Questions used between 2016 and 2019 were reviewed.

Table 1: The number of questions reviewed, accepted for reuse, and retired.

	Questions reviewed	Questions suitable for inclusion in calibrated bank	Questions retired [‡]
Part 1	237	224	13
Part 2	688	607	81

[‡]Includes those retired by BoA 2016 - 2019

Discussion: Through this process, questions no longer suitable were identified, retired, or flagged for review or minor amendment. Reasons for retiring questions included changes in:

- clinical guidelines
- products available
- pharmacy practice

Creation of 'validity panels' from SMEs allowed a contemporary, calibrated question bank to be created.


This methodology will be repeated to review questions not used between 2021 - 2023 forming part of the process to ensure the question bank remains fit for purpose.

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What's another peer? Exploring the use of near peer teaching of medication history taking in M.Pharm. undergraduates

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Keywords: Medication history, M.Pharm. placement, Near peer teaching, Peer learning, Peer support

Background: Ten Cate and Durning (2007) propose that a fundamental goal of higher education is to achieve 'progressive independence of the learner' They argue that when fostering independent thought and decision making, learning may also incorporate elements of teaching and

mentorship. One way to achieve this is to facilitate the teaching of others or the concept of 'peer' or 'near peer' teaching (NPT). Year 4 students were introduced to the concept of NPT via a workshop and practised this with Year 2 students completing medication histories on placement.

Aim: To explore Year 4 Master of Pharmacy (M.Pharm.) students' experiences of NPT as part of their hospital experiential learning programme.

Method: This qualitative study involved the use of a focus group, with students that had taken part in NPT on placement. A topic guide directed the discussion of the focus group which was digitally recorded. The data was transcribed verbatim, and the transcript analysed using Thematic Analysis (Braun & Clarke, 2006).

Results: Four main themes were identified from the analysis. The theme of 'relationships' had subthemes of 'trust', 'role modelling' and 'being valued'. The theme of 'emotions' had subthemes distinguishing negative and positive feelings as a result of feedback. The theme of 'curriculum and organisational culture' had subthemes of 'timing' and format of feedback' and 'feedback literacy'. Finally, the theme 'views of peer teaching' had the subthemes of 'power' and 'two-way learning'.

Discussion: Year 4 participants showed an appreciation for the teaching activity, stating it improved their confidence and enhanced their professional identity. They indicated that their Year 2 peers benefitted from the activity as they learnt to take accurate medication histories. As the M.Pharm. is updated in line with new standards (GPhC, 2021) it is imperative that students have the opportunity to meaningfully engage in NPT to foster independence.




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Developing, piloting and evaluating a Medicines Safety School Programme to be delivered by student pharmacists

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Keywords: *Experiential learning, Medicines safety, Peer education, Pharmacy undergraduate curriculum, Role-emerging placement*

Background: As healthcare transitions to a more person-centred approach, various pedagogical approaches, including peer education, have been identified to improve student pharmacists' communication skills. Defined as 'sharing of information, attitude or behaviour by people who are not professionally trained educators, but who's goal is to educate...' peer education benefits both educators and learners (Aburahma, & Mohamed, 2017). To widen and enhance the educational experiences of student pharmacists, an opportunity was identified to develop an innovative role-emerging placement (Depasquale *et al.*, 2021).

Aim: To develop the content, pilot delivery and evaluate the effectiveness of an innovative Medicines Safety School Programme delivered by student pharmacists to primary school pupils.

Method: A collaborative approach between academic and primary school staff guided programme content. The interactive workshop focused on benefits of medicines when used correctly and harmful effects associated with medicines misuse. Delivery was piloted by academic staff in one school, followed by, programme delivery by student pharmacists. The school teachers were asked to complete an evaluation questionnaire following the event, while pupils were asked to complete a pre and post workshop survey aimed at assessing their understanding of medicines. A post-placement online survey explored student pharmacists' views on how involvement supported their professional development.

Results: The pilot was delivered to 72 pupils (eight to nine-year-olds). Results from pre- and post-workshop surveys completed by pupils showed an increased understanding post-workshop of the benefits and potential risks associated with medicines. Post-workshop evaluations completed by class teachers rated the workshop as excellent in aspects such as presentation of the topic and effective linking to school and national curricula. 77 student pharmacists were involved in delivering the programme to 296 primary school pupils. Results of a post-placement online survey showed that student pharmacists felt that completing this placement had benefited their professional development and increased their confidence when interacting with young children.

Discussion: This study adds to the limited body of evidence exploring role-emerging placements combined with peer education. With positive initial response from all stakeholders, efforts are being made to embed this programme within the Master of Pharmacy curriculum.

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Preparing for practice: Trialling a one week, self-directed hospital placement for fourth year pharmacy students

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Keywords: *Communication skills, Consultation, Entrustable professional activities, Extended placement, Hospital placement, Pharmacy education, Pharmacy student, Preparation for practice, Self-directed, Time management*

Background: Given the increase in placement hours required in the new Masters of Pharmacy (M.Pharm.) and requirements to prepare future students for prescribing, Health Education England funding was used to run a one-week pilot placement with fourth year pharmacy students.

Aim: To evaluate student and staff opinions on a one-week clinical placement, examine student preferences on placement activities and inform future placement design.

Method: 137 students attended a one-week placement at three hospitals. Students were allocated a ward, supported by placement tutors and clinical pharmacists. Students were given a handbook containing entrustable professional activities, transferable to any ward specialty, to be completed under supervision until deemed competent. Tasks were designed to promote interaction with the MDT and mimic activities undertaken by pharmacists. Each day students completed an activity diary and at the end of the placement all students and pharmacists were asked to complete a

questionnaire evaluating their experience using a Likert scale and quantitative questions to gain views on experience and suggestions for the future.

Results: Overall, student feedback was positive, although data suggests attendance reduced after day three with some students finding the week too long. Results showed improved student confidence (97%) and communication skills (96%). Some students enjoyed the self-directed nature of the placement while others felt 'lost'. 96% of students felt they understood more about the hospital pharmacist's role after the week long clinical placement. Staff feedback was mixed with some pharmacists enjoying the opportunity to teach with others feeling less equipped.

Discussion: As the M.Pharm. changes to incorporate prescribing additional clinical exposure will be present from much earlier in the course. This pilot demonstrated that a week-long placement increased students' confidence, their independence and knowledge of the hospital environment. Going forward it is important to identify why some students struggled more with self-directed learning so support can be provided from an earlier stage. Also identifying the training needs of the hospital team to better equip them in supporting students' learning.

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Pharmacy Education Conference 2022: Initial Education and Training of Pharmacists in a Post-Pandemic World

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Poster Presentation

An evaluation of the inclusion of Enterprise/Entrepreneurship modules within the pharmacy degree

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Keywords: Business viability, Careers, Enterprise, Entrepreneurship, Pharmacy degree

Background: Community pharmacy demonstrated high levels of innovation/adaptability to ensure service continuity throughout the pandemic (Peat *et al.*, 2022). Pharmacists require a plethora of skills, clinical and other, to develop businesses and services (Saseen *et al.*, 2022; Scahill & D'Souza, 2022). Enterprise skills and entrepreneurial confidence enables creativity and innovation. The role of the 'pharmapreneur' (Thamby & Parasuraman, 2015) has been recognised by the World Health Organisation, concurring with the nine-star pharmacist concept.

Aim: To determine the benefits of enterprise/entrepreneurship skills and knowledge development among pharmacy students.

Method: Data were collected via a literature informed Google survey with 22 questions (19 closed and three open) following university ethical approval. A multi-channel approach was adopted for survey deployment. The data collection was carried out on the pharmacy cohort in the University of Bradford (n = 500). Descriptive statistics were applied in the analysis.

Results: 54 students from stages 1 to foundation year responded, of the respondents 78% (42) were female. The findings indicated that 90% (49) of students had limited business/enterprise education. 80% (43) of students agreed that having these skills would allow them to access more career opportunities. 68% (37) said that they would like to be more confident in designing new business ideas and actioning them. A resounding 80% (43) said they would benefit from knowing more about enterprise/entrepreneurship training and 85% (46) said this should be offered on pharmacy degrees (Table 1). Of this latter group, 83% (38 of 46) felt that the modules should be optional and be single not spiralling.



Discussion: This study demonstrates that pharmacy students strongly support the inclusion of enterprise/entrepreneurship modules in their training. Additional workshops would reinforce this teaching. This would benefit pharmacist career progression promoting greater contribution to community pharmacies as threatened small businesses.

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Student perspective on the effectiveness of personal academic tutors at the University of Bradford

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Keywords: Personal tutors, Student perspective, Student questionnaire

Background: Key roles of personal academic tutors (PATs) are to enhance student experience, increase student engagement, and improve retention (Ghenghesh, 2018; Yale, 2019). The role has grown in importance with increasing student numbers and widening participation programmes encouraging a wider range of students to access HE than may have done previously (Younger *et al.*, 2019). Due to this increase in roles and responsibilities for the PAT, it is important that research investigates the student perspective of the PAT system to identify its strengths and limitations.

Aim: To explore how Master of Pharmacy (M.Pharm.) students at the University of Bradford perceive the effectiveness of the PAT system.

Method: A student led online questionnaire with 35 questions, mostly Likert scale or free text, was disseminated to pharmacy students using Google Forms in term 1, 2020. As an anonymised service evaluation, full ethical approval was not required.

Results: 159 responses were received (~30% of all M.Pharm. students across all Stages). Responses indicated that there was a high level of student satisfaction in key aspects of the PAT role (Figure 1). Student responses indicated that 143 (90%) identified their PAT as being approachable, 142 (89%) supportive, 138 (87%) easy to contact and 133 (84%) responsive. However, 92 (58%) were not comfortable sharing personal problems. 39 students (25%) were both uncomfortable sharing and had mental health concerns. Primary reasons for not speaking to tutors included feeling awkward, judged, and believing it would go on their academic record. Interestingly, over 16% of students did not have anybody to confide in and 18% had undisclosed personal issues.

Discussion: Whilst there are many positive aspects to the PAT system, it is clear the issue around personal problems needs to be addressed. Staff development and institution-wide efforts to improve mental health literacy amongst both staff and students being key recommendations (Aller *et al.*, 2021).

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Exploring the experience of young people about pharmacy services in primary care: A cross-sectional study

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Keywords: Pharmacists, Primary care, Young people

Background: According to recent literature, the prevalence and incidence of long-term illnesses such as asthma and diabetes in young people have substantially risen over the past 13 years (Shah *et al.*, 2019). Recent figures indicate that, in England, 4.1% of all prescriptions were prescribed for young people. More than 45 million prescriptions were dispensed for young people in 2017 by pharmacists (NHS Digital, 2018).

Aim: The aim of this study was to investigate young people's perspectives of the pharmaceutical services that are provided from primary care pharmacists (General Practice [GP] and community based pharmacists) relating to medication.

Method: A cross-sectional survey using both the online and paper-based tools was conducted from March to November 2019. The population for this survey was young people from age 18 to 24 years registered as students at The University of Birmingham. The survey consisted of 24 questions and they were a mix of closed-ended questions such as multiple choice and Likert scale and open-ended questions. This research gained ethical approval from the University of Birmingham Ethics Committee.

Results: A total of 210 survey responses were returned. The number of people that initially received the survey is unknown. As a result of this, the response rates could not be performed due to the nature of the distribution. Most of the

participants were female (62.4%). Most students were 18 years old (35.2%). Among participants, 15.7% were diagnosed with long-term illnesses and the majority of them (33.3%) were diagnosed with respiratory disease all of which was reported as asthma. Pharmacists were not utilised as a source of information for young people whereas the majority (60.6%) obtained information from their doctors. Most of the participants (97.0%) had not taken part in an Medicines Use Review (MUR) or New Medicines Service (NMS) and 78.8% of them had never been told about any services or support groups by their pharmacist.

Discussion: There is a lack of provision of pharmaceutical services and support by primary care pharmacists to young people with long-term illnesses. The results could potentially be very useful in informing the policymakers to assist in the further growth of the pharmacy services. Further research will enhance understanding of the perceptions of young people about the pharmaceutical services that are offered by primary care pharmacists with respect to medications.

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An evaluation of students' views on a blended learning approach and their engagement with a post-registration pharmacy practice programme.

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Keywords: Blended learning, Student engagement, Synchronous learning

Background: The landscape of higher education has changed since the onset of the COVID-19 pandemic with many courses implementing or enhancing online education (Hensley *et al.*, 2021) and the use of a synchronous learning model. A potential variation in student engagement between the different modes of delivery (Cunningham, 2014) has led to a focus on improving student engagement when delivering synchronously online.

Aims: The purpose of this evaluation was to establish students' perceptions of their engagement with the learning on the post-registration pharmacy practice programme. Their

views on a blended learning approach and their preferential mode of delivery were also considered.

Method: A total of 44 students were invited to complete an online survey comprising ten open and closed questions over a four week period in February and March 2022. Participants reported their preferences for either face-to-face, synchronous or a blended learning approach, alongside their reasoning. They also responded to a series of questions related to their behavioural, emotional, and cognitive engagement with the course. The results were analysed qualitatively.

Results: The response rate was 100% (n = 44) and on average students reported positive engagement with their learning. Their preferences for synchronous, blended and face-to-face learning were 20/44 (45.5%), 14/44 (31.8%), 10/44 (22.7%) respectively. Synchronous learning offered students greater flexibility and was considered convenient. A total of 29/44 (65.9%) students perceived their engagement to be comparable when learning synchronously or face-to-face.


Discussion: Based on this evaluation, students appear to welcome the synchronous and blended learning modes of delivery, hence methods to enhance student engagement inclusive of synchronous delivery should be further explored to support their learning.

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Evaluation of the impact of a senior leadership programme for pharmacists

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Keywords: Behaviour change, Career change, Leadership, Pharmacy, Practice change

Background: The Top Pharmacy Leaders programme (TPL) is a senior leadership programme run in collaboration between the Centre for Pharmacy Postgraduate Education (CPPE) and the NHS leadership academy (NHSLSA) to ensure that senior pharmacy leaders are equipped to support the profession.

Aim: The aim was to investigate how and to what extent the TPL programme impacted on the leadership attitudes and behaviours of pharmacists.

Method: A qualitative research approach was used to collect opinions of learners using semi-structured interviews to obtain pharmacy professionals' perceptions of any changes in their attitudes and behaviours (Kvale & Brinkmann, 2009). Semi-structured interviews gave an overall focus whilst allowing flexibility to follow up areas of interest (Robson, 2011). The data this generated was analysed using thematic analysis (Braun & Clark, 2013) to highlight common themes.





Results: Key points to emerge were evidence that the programme changed the pharmacists' attitude towards leadership linked to networking and peer support, emotional intelligence, expectations of their role and their own resilience. The research showed changes in their leadership behaviours, specifically self-reflection and being more authentic, becoming braver and changing how they interact with their teams by having more honest relationships. The research identified areas attributed to practice change including networking and alliance building, their approach to situations, with a direct correlation to being pushed out of their comfort zone. Post programme career change was explored, with all describing either change in role or changes in how they had developed in their current role.

Discussion: In summary this course is highly valued, it has had a huge impact on the leadership journeys of those interviewed. The programme appears to be transformative in the leadership attitudes and behaviours of those attending and demonstrates the need for such a course to support senior pharmacy leaders.

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Exploring student concerns about the COVID-19 vaccine and the pandemic impact on academic attainment and progression

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Keywords: Academic attainment/ progression, Concerns, COVID-19, Professional development, Vaccines

Background: During the COVID-19 pandemic, the education sector saw a monumental shift in focus and operationalisation as national lockdowns required engagement via online lessons and limited direct social interaction (Clark *et al.*, 2021). Students were concerned about their health and that of loved ones and the impact of this disruption on their academic performance (Son *et al.*, 2020). COVID-19 vaccines were important, but students were conflicted about vaccination. Mental health deterioration resulted in additional counselling and academic support (Chirikov *et al.*, 2020).

Aim: To understand students' COVID-19 vaccine concerns and the impact of the pandemic on their academic studies.

Method: In November 2021 qualitative and quantitative data were collected from 210 undergraduate students, inclusive of pharmacy students, via a literature informed Microsoft forms survey. Ethical approval was awarded. Qualitative data was thematically analysed and reported (See Table I) and descriptive statistics applied.



Results: Most participants had some degree of vaccination (one to three doses). Both health-related faculties (Life Sciences and Health Studies) had higher vaccination rates than others (95% and 89%). Concerns raised about the COVID-19 vaccine related to the lack of information from clinical experts, side effects fears, and vaccination uptake pressure from the government/employers. Ineffective online learning, lack of support from staff and facilities and lack of interaction with staff and peers undermined academic pursuits. Cancelled placements led to a lack of practical experience. In response the university could focus on reducing assessment mode/timing, identifying skills negatively impacted by the conversion to online learning, supporting mental health, increasing academic engagement, and providing vaccine information directly from health professionals.

Discussion: Student COVID-19 vaccination rates were relatively high despite expressed reservations. Students purported there was a direct correlation between the COVID-19 pandemic disruption and their academic attainment and progression. They had concerns that changes in teaching practices would have a legacy impact on their professional skills/experience.

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Student perceptions of physical examination skills teaching within the M.Pharm. course

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Keywords: Clinical skills, Diagnostic skills, Physical examination skills, Preparation for practice, Prescribing, Simulation

Background: In preparation for prescribing, students must 'demonstrate effective diagnostic skills, including physical examination' (GPhC, 2021). Physical examination skills (PES) training was developed for fourth year Master of Pharmacy (M.Pharm.) students, including a webinar on background anatomy/demonstration of skills and a workshop where students practised PES. Skills included cardiopulmonary resuscitation, measuring vital signs and respiratory and cardiovascular examinations on simulated patients in a simulated ward environment (InterSim, 2021).

Aim: To gain student perceptions of PES training.

Method: Following ethical approval, a questionnaire was distributed (via Microsoft Forms) to fourth year M.Pharm. students (n = 96). Feedback was sought around delivery of PES training, its relevance to future practice, propriety of setting for learning and perceived confidence in undertaking PES. Non-parametric tests and logistic regressions were conducted to investigate whether gender or ethnicity influenced responses ($p \leq 0.05$). Analyses were performed using SPSS software and free-text responses analysed thematically.

Results: The response rate was 66%, with no significant differences according to gender or ethnicity. Students were satisfied with a flipped classroom approach for the webinar component. In terms of learning experience, students rated all PES highly $\geq 8.5/10$, with blood pressure rated as most relevant to pharmacist and independent prescribing roles. Other results are summarised in Table I. Analysis of free text responses elicited three themes:

- Confidence building
- Safety in a simulated environment
- Integration and contextualisation with other learning

Discussion: PES training increased student confidence in undertaking PES and their interest in the prescribing role. Students thought Intersim, using healthy volunteers, was the right setting for the initiation and practise of PES with high agreement that placement settings were appropriate for further practise. Most students wanted earlier introduction of PES within the M.Pharm. course. The findings of this research highlight the benefits of simulation in PES teaching and may assist M.Pharm. providers when incorporating more PES teaching, in order to embed prescribing in the undergraduate degree.

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Table I: Attitudes to general aspects of PES training

Questions	Percentage of Participants (%)				
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
The training has provided me with insight into the pharmacist independent prescribing role	38.7	51.7	8.1	1.6	0.0
Following the training, I am more interested in pursuing the pharmacist independent prescriber role	33.9	41.9	19.4	4.8	0.0
Following the training, I feel more comfortable physically touching a patient during examination	39.7	49.2	11.1	0.0	0.0
Following the training, I feel more confident about undertaking physical examinations of patients	73.0	25.4	1.6	0.0	0.0
The InterSim centre was the right environment for me to initiate practising physical examination skills	72.6	25.8	1.6	0.0	0.0
Practising the skills on healthy volunteers within InterSim was appropriate	58.1	38.7	1.6	1.6	0.0
I would prefer to initiate practising physical examination skills on patients in a placement setting.	9.5	7.9	23.8	46.0	12.7
Physical examination skills should be introduced at an earlier stage in the M.Pharm. degree	30.6	35.5	25.8	8.1	0.0
The InterSim centre would be an appropriate environment to continue practising physical examination skills	61.9	33.3	3.2	1.6	0.0
A placement setting would be an appropriate environment to continue practising physical examination skills	36.5	42.9	14.3	4.8	1.6
Being able to perform physical examination skills will add to my diagnostic skills (i.e. provides additional benefits to questioning patients)	41.3	54.0	3.2	1.6	0.0
Pharmacists should be able to perform basic physical examination skills in order to diagnose and monitor conditions	51.6	35.5	11.3	1.6	0.0

Optimising the utilisation of multisource feedback discussions during Professional Practice workshops on the M.Pharm

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Keywords: Consultations, Communication, Discussions, Feedback, Multisource feedback, Peer feedback, Professional practice

Background: Professional practice workshops take place throughout the first three years of the Master of Pharmacy (M.Pharm.) course. Groups of three students individually conduct consultations with a simulated patient (SP) and a professional practice consultant pharmacist (PPC), offering an ideal opportunity for multisource feedback (MSF).

Effective integration of MSF into professional practice would promote self-development and self-reflection (Royal College of General Practitioners, 2021). MSF increases motivation resulting in better performance (Atwater, Waldman, & Brett, 2002). Peer feedback is a critical aspect of MSF. Evaluating peer performance results in increased student engagement, better understanding of the assessment criteria, and better recognition of their strengths and limitations (University of Oxford Centre for Teaching and Learning, 2021). Feedback discussions increase feedback effectiveness as they facilitate active student engagement creating a feedback loop (Goldsmith & Underhill, 2001).

Aim: To identify the factors affecting the quality of MSF within professional practice workshops and develop recommendations to improve MSF utilisation.

Method: 145 questionnaires were completed by second year pharmacy students focusing on the feedback received and provided. Themes within the questionnaire included perceptions of feedback received and confidence in providing feedback to peers. Observation grids were utilised to identify feedback behaviours during workshops. Interviews were conducted with PPCs and SPs to determine perceptions on the use of MSF.

Results: • 93% of students received feedback from the PPC, 50% from the SP, 45% received some peer feedback with 21% receiving feedback from all their peers.

- The observation grid showed PPCs dictated feedback discussions.
- The interviews showed PPCs and SPs lacked confidence in the students' ability to provide constructive feedback.
- The interviews also highlighted discrepancies in role expectations regarding feedback.

The benefits of MSF were not completely realised as students were not consistently receiving feedback from all sources. Students felt comfortable in providing feedback and understood its value, however student competence was the



greatest barrier. Also, PPCs dominated the feedback discussion resulting in a lack of peer and SP feedback.

Discussion: The authors recommendations include providing feedback training to students as this is not directly taught within the curriculum and establishing clarity in feedback roles during PPC and SPs training.

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A questionnaire-based study to measure resilience of final year pharmacy students

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Keywords: Pharmacy students, Questionnaire, Resilience

Background: Resilience is an important attribute to nurture in future pharmacists and is particularly relevant given the deterioration in students' mental health (Department for Education, 2021) and the challenging times for the workforce.

Aim: To investigate Queen's University Belfast fourth year Master of Pharmacy students' level of resilience as determined by the CD-RISC-25 validated tool (Davidson, 2021) and ascertain their views on the role of the university and school of pharmacy in developing this attribute.

Method: Following ethical approval and an email invitation to participate, data were collected from consenting students via a pre-piloted paper-based questionnaire (tested November 2021). Data were coded, and analysis mainly took the form of descriptive statistics. To ascertain whether there were significant differences ($p < 0.05$) by gender, the Mann-Whitney U test was employed for attitudinal statements. The Welch Two Sample t-test was used for the CD-RISC-25 mean scores (male versus female) after checking the data were normally distributed.

Results: A response rate of 80.6% (79/98) was obtained. Although higher, the mean CD-RISC-25 score for males was not significantly different to the mean score for females (70.39 versus 67.18, $p = 0.2355$). Students' mean resilience rating increased significantly from 6.00/10 'at the start of the degree programme' to 7.96/10 'at the current time', $p < 0.001$. Activities deemed to help build resilience included simulation (role plays) classes in a mock pharmacy. The majority of respondents (93.7%, 74/79) considered that the school has a responsibility to develop resilience, yet few (< 15%) availed of free university or school resilience building events.

Discussion: The CD-RISC-25 mean score was lower than other studies including one involving nursing students in the United States of America (Lekan *et al.*, 2018). These findings, while only conducted at one institution, help inform the development of a school strategy and add to the wider literature. Further work is needed to ascertain why the uptake of existing resilience building opportunities is low.

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Cross sector preparation for Trainee Pharmacists undertaking community and hospital placements – a model for successful placement planning

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Keywords: Cross sector, Foundation year, Trainee pharmacists

Background: Within Sussex Integrated Care System, secondary care trainee pharmacists (TPs) undertake community pharmacy two-week cross-sectoral experience (CSE) placements. They host community TPs in return for their own community placement. Careful planning is key to successful placements (Hindi *et al.*, 2021; Jubraj *et al.*, 2002). Community and secondary care TP training leads organised a virtual CSE preparation event maximising this experience.

Aim: To design, deliver and evaluate a virtual CSE preparation event; introduce CSE key resources and make recommendations for future CSE planning.

Method: TP training leads planning meetings were held to agree event objectives and share sector specific resources to support CSE. The event content and teaching methodology were agreed.

Pre-event work for TPs to complete aimed to:

- Identify individual learning outcomes to be achieved during CSE
- Identify individual challenging learning outcomes to achieve in host site that could be completed in CSE

The event was held four weeks prior to the first placement.

TPs evaluated the event using an online survey for session satisfaction, identify benefits and areas for improvement. Qualitative comments were thematically analysed.

Results: Ten community and 14 secondary care TPs attended the CSE.

All TPs joined sessions and attended one of six virtual rooms for two different workshops. Evaluation response rate was 28% (7), positive for all sessions. Three common themes were identified from responses:

- CSE preparation event provided peer TP networking opportunities and benefits
- Preference of face-to-face events compared to virtual, due to virtual room technical complexities
- Resource signposting supporting placement preparation was valued

Discussion: Despite a low evaluation rate and technical challenges, attendants viewed the event as a success. Education leads identified appropriate objectives and delivery methods, particularly virtual rooms enabling small group work. Attendants highlighted the importance of peer networking, resource signposting and collaborative working with TPs undertaking CSE. The preparation event model is recommended for any CSE scheme.

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Mentorship arrangements within Secondary Care for Designated Supervisors

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Keywords: Designated supervisor, IET reforms, Mentor

Background: Mentoring (Anderson *et al.*, 1988; RPS, 2022) arrangements for everyone involved in foundation training year delivery are highlighted in the General Pharmacy Council 2021 Standards for the Initial Education and Training (IET) reforms.

Health Education England London and South East (HEELaSE) Pharmacy are investigating provision of mentoring starting with identifying current mentoring Designated Supervisor (DS) arrangements as part of overall explorative work on the current educational infrastructure project.

Aim: Explore current DS mentorship models existing within secondary care providing intelligence on current arrangements, highlighting essential additional work needed.

Method: Secondary care TP Educational Programme Directors were invited to participate in focus groups. Questions derived from semi-structured interviews held with HEELaSE Early Careers Training Programme Directors. Questions related to DS mentoring were provided in advance. Transcribed focus group interview data was thematically analysed.

Results: Three focus groups were held one week in February 2022, ten representatives of pharmacy professionals from ten secondary care Trusts (n = 54). Four main themes were identified:









- The need to define and clarify the role of a mentor, as opposed to the role of a buddy
- Lack of awareness within organisations of DS mentor provision
- Pharmacy departments have no formal mentoring structure or at early stages of developing and formalising these
- Lack of resource awareness to support and develop mentoring

Discussion: Results highlight a lack of clarity of mentor role definition compared to the traditional DS 'buddy' support system. It is recommended for HEE to generate a resource library such as mentoring platforms, develop networks and support mentoring guidance and strategies development within Trusts necessary for IET reforms. This work provides valuable insight to DS mentoring arrangements in secondary care and can be expanded to primary care and GP DSs mentoring arrangements.

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Exploring the nature and extent of interprofessional education in Schools of Pharmacy in the United Kingdom

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Keywords: Experiential learning, Interprofessional education, Interprofessional learning, Pharmacy education

Background: Interprofessional education (IPE) can prepare the future workforce for collaborative practice: a necessary requirement for safe, effective and efficient person-centred care within complex health and social care systems (World Health Organization, 2010). IPE is relevant when considering the pharmacist's expanding role and increasing input as an expert in medicines within the interprofessional team. Globally, regulators have mandated the inclusion of IPE within undergraduate pharmacy curricula.

Aim: To explore the nature and extent of interprofessional education in Schools of Pharmacy (SoPs) in the United Kingdom.

Method: An online survey was developed, piloted and distributed to a key member of academic staff in all 31 UK SoPs. Development took an iterative approach guided by the Biggs-3P Model (Biggs, 1993), discussion between the research team and review by an interprofessional expert panel. The survey included closed- and open-ended questions and a demographic section. Content analysis was employed for qualitative data.

Results: Ten SoPs responded. All deliver IPE as a compulsory requirement. Most (80%) reported a steering group with interprofessional representation overseeing development.

Formative/summative assessment approaches varied depending on year of study. Mechanism/purpose of evaluation varied with respondents reporting Kirkpatrick Evaluation Model Levels 1 - 3 (100%;80%;70%) (Kirkpatrick & Kirkpatrick, 2007). Two themes emerged from open-ended questions: 'Nature and Extent of IPE' and 'Factors Influencing Development and Implementation of IPE' (Figure 1). Formal

teaching is mainly integrated in other modules; various pedagogic approaches and topics are used for campus-based activities. Respondents referred to planned IPE during experiential learning (EL) placements; some still at pilot stage. Overall, respondents agreed that EL placements provided opportunities for unplanned IPE; a more focused approach is needed to maximise learning potential.

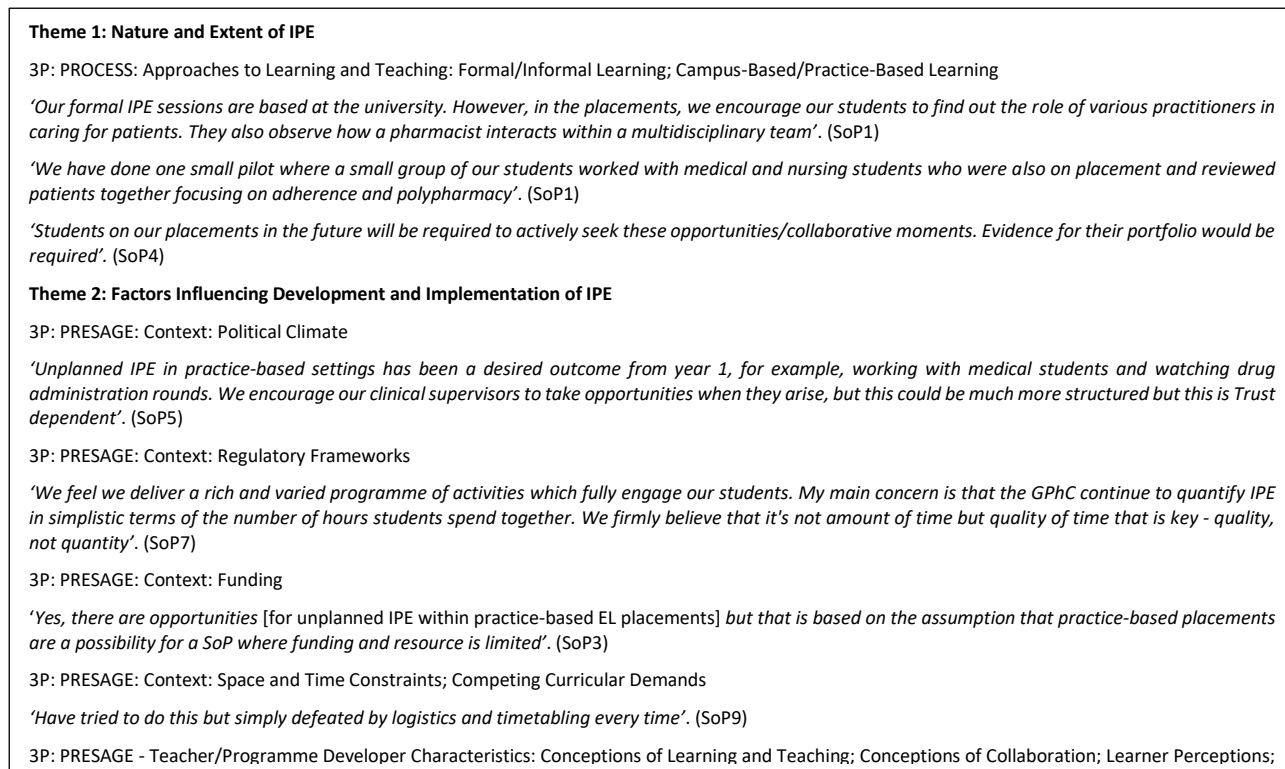


Figure 1: Emerging themes

Discussion: Although IPE has been incorporated in the curricula of responding SoPs, challenges remain. Better preparation and planning are needed to ensure opportunities for unplanned IPE during EL placements are not missed.

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Evaluation and comparison of two types of day long placements for third year pharmacy students

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Keywords: Communication skills, Consultation, Entrustable activities, Extended placement, Hospital placement, Pharmacy education, Pharmacy student, Preparation for practice

Background: With the increase in placement hours required in the new Master of Pharmacy (M.Pharm.) and the need to

increase the number of entrustable professional activities (EPAs) students participate in during placements, Health Education England funding was used to run a pilot of extended placements with the third-year cohort to inform future teaching.

Aim: To evaluate student opinions on full-day clinical placements, compare student preferences on placement activities in order to inform future placement design.

Method: 145 students attended two full-day placements extended from a half-day. Clinical topics remained unchanged from previous years. The structure of the surgery placement remained patient care planning, reviewing, and discussing the patient notes and talking to the patient about their admission. For the stroke placement, half of the day was dedicated to care planning and discussion and the other half conducting an anticoagulation consultation with a patient and reviewing medication for a patient with a failed swallow assessment. Both activities were designed to mimic those which would be undertaken by a pharmacist for a stroke patient. After each placement the students completed an online questionnaire. This included quantitative and qualitative questions. Following the stroke placement students were asked additionally which placement they preferred and why.



Results: From the responses students felt that both placements were a positive experience with strong positive scores across all questions. These included improved communication with patients, confidence in a ward environment and understanding of the pharmacist's role within the multi-disciplinary team. For the students who expressed a preference a majority preferred stroke due to more varied and structured activities and tutor support.

Discussion: Students liked the opportunity to undertake different activities during the stroke placement and felt more confident overall. Some students describe initial struggles with confidence or 'imposter syndrome.' It is hoped that the introduction of longer placements from earlier in the M.Pharm. programme will allow pharmacy students to feel more confident and undertake a wider range of EPAs.

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Student views of climate actions and sustainable healthcare

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Keywords: Sustainability, Questionnaire, Student views

Background: Human activity has contributed to rising carbon emissions. Without urgent actions to reduce these, temperatures will continue to rise (European Commission, 2022). Rising temperatures have already impacted human health with increasing numbers of people dying due to extreme weather (WHO, 2021). There have been calls to include sustainable pharmacy practice within the undergraduate curriculum so students understand how they can minimise climate impact as a health professional (Self, 2021).

Aim: To evaluate student views of climate actions and teaching about sustainable healthcare.

Method: Master of Pharmacy students at the University of Nottingham were asked to complete an online questionnaire comprising mostly closed questions designed by the research team. Questionnaire responses were downloaded, entered into SPSSv27 and analysis consisted of frequency counts with percentages.

Results: 309 (35%) students responded, 77% (n = 194) were female. Almost all students (96%, n = 290) agreed climate change needs to be resolved, although whilst many were willing to take action, more than two-thirds (71%, n = 218) were unsure what they could do as an individual. Students knew climate change impacted health but most reported knowing only 'a little bit' (61%, n = 188) or being aware of an impact but not what that was (24%, n = 73). Fewer than one-fifth of students (18%, n = 47) recalled having been taught about the environmental impacts of medicines or health services. Students felt sustainability (50%, n = 137) and environmental co-benefits (76%, n = 216) should be included in the curriculum.

Discussion: Students reported being aware of the need to take action on climate change and the impact on health. However, many reported not knowing what they could specifically do either individually or as a pharmacist. Changes to the teaching are needed to support students to better understand the impact of climate change on health and how practices such as co-benefits can reduce that impact.

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Use of coloured imagery to enhance the computer assisted learning experience

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Keywords: Johnstone Triplet, Dissolution, Teaching, Excel, Visual

Background: The Johnstone Triplet is a concept that emphasises how chemistry practitioners transition between three cognitive domains of understanding: the observable, the atomic or molecular and the symbolic (Tasker, 2015). This model explains the importance of observable, practical experiments in developing molecular and symbolic thinking.

During lockdown, the researchers developed a series of 'digital mimics' (Akil, Breen & Ford, 2021) to replace online resources which could not be integrated with other activities in an existing undergraduate programme. In refining the digital mimic concept, they used coloured animations.

Aim: To assess student perceptions of the inclusion of animations in a digital mimic.

Method: To simulate dissolution, a digital mimic was built using Microsoft Excel with coloured shapes that changed as the experiment progressed. Second year student pharmacists used the digital mimic in an online workshop studying the effects on dissolution of halving/crushing sustained release tablets. Student perceptions of the digital mimic and animations were surveyed using a Zoom poll based on a five-point Likert scale which is reported here as positive, neutral and negative responses.

Results: 112 of 165 workshop attendees responded to the survey (Table I).

Table I: Survey responses

Question	Positive	Neutral	Negative
Did the Excel workbook help your understanding of dissolution?	77.7%	17.8%	4.5%
Did the colour/shading in the dissolution vessels/tablets help your understanding of the dissolution process?	91.0%	5.4%	3.6%
Was the Excel workbook easy to use?	61.6%	25.0%	13.4%

Discussion: Respondents reported that the interactive spreadsheet helped their learning, however, in the teaching session, the digital mimic was the only tool available. Respondents reported that the incorporation of animations into the simulation helped their understanding of the dissolution process, providing a link between the 'numbers/data on screen' and the 'observable phenomena' of an experiment. Future plans include integrating this tool into practical dissolution experiments on campus.

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Snakes and ladders: Gamifying risk analysis and project management

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Keywords: Gamification, Snakes and ladders, Transferable, Soft, skills

Background: Educators should teach the transferable skills that enable graduates to work in environments that are Variable, Uncertain, Complex and Ambiguous (VUCA) (OECD, 2018). Gamification is the use of a simulation, or game, to enhance learning (Routledge, 2016). The researchers adapted a popular game, containing defined levels of random uncertainty and unpredictability, to teach some of the project management skills (teamwork, decision making, project planning and risk management) that deal with competitive VUCA environments.

Aim: To assess student perceptions of gamification for enhancing learning environments and teaching transferable skills.

Method: Web-accessible versions of Snakes and ladders were designed and links shared with Masters of Science students (Ford, 2021). The simulation retained the random nature of the board game by using an 'electronic die'. Student teams were asked to predict the number of die rolls needed to finish the game under different game conditions. The groups competed for points which were awarded for the quickest predicted finish (the lowest number of die rolls), the approach

to making predictions and the way they considered risk. Points were awarded, or deduced, depending on the difference between their prediction and the outcome of the game's simulation.

Student perceptions of the inclusion into the workshop of gamified elements were surveyed using a Zoom poll based on a five-point Likert scale which was collapsed to positive, neutral and negative for reporting.

Results: 18 of 22 workshop attendees responded to the survey. 14 responded positively regarding engaging with the principles of project management. 15 responded positively that the game helped them enjoy the workshop and 14 would like to see gamification used more often in teaching. See Table I.

Table I: Survey responses

Question	Positive	Neutral	Negative
Did the 'game' help your engagement with the principles of project management?	14 (77.8%)	3 (16.7%)	1 (5.5%)
Did the game help you enjoy this workshop?	15 (83.3%)	2 (11.1%)	1 (5.6%)
Would you like to see more teaching activities using games/gamification as learning tools?	14 (77.8%)	3 (16.7%)	1 (5.5%)

Discussion: Transferable skills are essential. Students were positive about using gamification to enhance transferable skills teaching. Furthermore, students enjoyed the gamified approach and indicated they would like this teaching tool used more frequently.


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The climate emergency, how can pharmacy make a difference?

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Keywords: Climate emergency, Sustainability, Pharmacy, Pharmacy education, Climate change

Background: Climate change is acknowledged as 'the most significant health threat that modern society has ever faced' (Watts *et al.*, 2020). Medicines alone are responsible for approximately 25% of the National Health Service's (NHS) carbon emissions (NHS England & NHS Improvement, 2020). One aspect that needs to be explored is what is currently being taught in this area at undergraduate level.

Aim: To identify any current sustainable healthcare teaching included within pharmacy degrees in the United Kingdom (UK). Also, to establish whether respondents felt it was important for sustainability to be included within pharmacy degree programmes and if so then what specific content should be included.

Method: Two questionnaires (staff & student) were compiled on Microsoft Forms. The staff questionnaire was sent to Heads of School/Programme directors. These individuals were asked to forward the student questionnaire link to their final year Master of Pharmacy (M.Pharm.) students. It was requested that the staff version be completed by the most suitable staff member in the School/department.

Results: The staff questionnaire response rate was 28.6% (8/28). The response rate for Northern Ireland institutions was 30.2% (42/139) an estimated response rate of 4.7% (14/300) was gained from respondents studying in Scotland. No responses were received from pharmacy students studying at Welsh or English universities. The majority of respondents (students: 98.2% staff: 87.5%) thought sustainability teaching was important. When students were asked if their M.Pharm. programme had prepared them to apply sustainability in the pharmacy profession all respondents (100%) replied 'No' or 'Don't know'. All staff respondents replied 'No' to the same question. All student respondents stated that less than five hours teaching on sustainability had been completed in their degree to date.

Discussion: Sustainable healthcare teaching within pharmacy degree programmes is limited. There is however an awareness of the need for this content to be included by both teaching staff and students.

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Student opinions of what helps them feel more like a pharmacist using the analytical lens of the undergraduate researcher

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Keywords: Confidence, Development, M.Pharm. programme, Pharmacy students, Professional identity

Background: Supporting development of professional identity (PI) has gained momentum in professional education. It has been reported that students with a strong sense of PI can transition more readily into the workplace and tend to have greater confidence in fulfilling practice requirements, particularly more complex aspects (Ecclestone, 2009). The transition from trainee to practitioner is more problematic when a learner's identity as an undergraduate (UG) does not transfer to what they encounter in practice (Noble, McKauge, & Clavarino, 2019). This study will focus on final year Master of Pharmacy (M.Pharm.) undergraduates (UGs), their thoughts on PI, and where it is supported in the curriculum and beyond.

Aim: To interpret, through the lens of a student perspective, the viewpoints of final year M.Pharm. UGs on what influences PI.

Method: In total, 21 students (21% of cohort) participated in the study. UG opinions on PI were gathered via three focus groups (n = 8, 7 & 6) which explored which activities, interactions and experiences during the M.Pharm. programme helped UG to 'feel' like a pharmacist or not. Audio-recordings were transcribed verbatim and analysed using Reflexive Thematic Analysis (Braun & Clarke, 2006) to generate codes. These codes were interpreted to elicit meaning and organised into themes and sub themes.

Results: Confidence, holistic understanding of their role, a sense of belonging and personal growth were interpreted as the main themes. UGs highlighted confidence in the profession and their skills, public understanding of their role and feeling useful as impacting positively on confidence. Students valued opportunities to undertake authentic activities in a pharmacy environment. They expressed the need to feel part of something and this involved peer networks. They identified PI as a personal construct that can be influenced by external factors.

Discussion: This study is unique in that the lens for analysis is the student perspective. Participants voiced that social, educational and personal factors impact upon PI. The results provide insight into how curricula could help support PI formation. This study suggests that educators should present

opportunities to undertake authentic, meaningful activity, especially within pharmacy teams. Furthermore, they should encourage peer networking and foster a sense of confidence and pride in the profession.

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Benefits of post-registration multisector training in community, hospital and GP practice pharmacy sectors on early career pharmacists' career development, employability and system staff retention: South East London Foundation Pharmacist Vocational Training Scheme (SEL FP VTS) one year on from completion.

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Keywords: Integrated care systems, Independent prescribing, Multisector, Networks, Post-registration.

Background: South East London Foundation Pharmacist Vocational Training Scheme (SEL FP VTS) pilot feasibility tested a three-year post-registration multisector post-registration training programme across hospital, community, General Practice (GP) and integrated clinically enhanced independent prescribing (CEPIP) to support development of a workforce that works flexibly across the system (Health Education England, 2022).

Aim: Evaluation objective was to identify how training across 3-sectors influenced career and job roles, benefits early career pharmacists' professional practice, and retains staff within integrated care systems (ICS), one-year on from completion.

Method: A focus group enabled qualitative research methodology. Previous evaluations (Hindi, Willis, & Schafheutle, 2021; Reygate, Guffie, & Singal, 2019) and internal feedback enabled question development. Six of nine pharmacists participated: two pharmacists completed a two-year foundation programme, and four had completed a three-year programme (foundation plus CEPIP). Data was

analysed thematically from recorded meeting transcription. The session was moderated independently. Participants were given the session summary and questions, with consent forms completed in advance. Ethics approval was not required as pilot governance directed participation.

Results: Several themes were identified (see Figure 1). Multisector training in community, hospital and GP practice positively influenced career choices, enabled networking,

enabled moves between sectors, and changed pre-registration career intentions. Pharmacists were retained within SEL ICS, and employed in GP practice (4), mental health (1), and hospital/GP portfolio roles (1). Pharmacists credited their practice skills to multisector and IP training, expressing confidence to work in two sectors. Current employers valued the pharmacists’ 3-sector training for service provision. Patient benefits included effective medicines reconciliation and signposting between sectors.

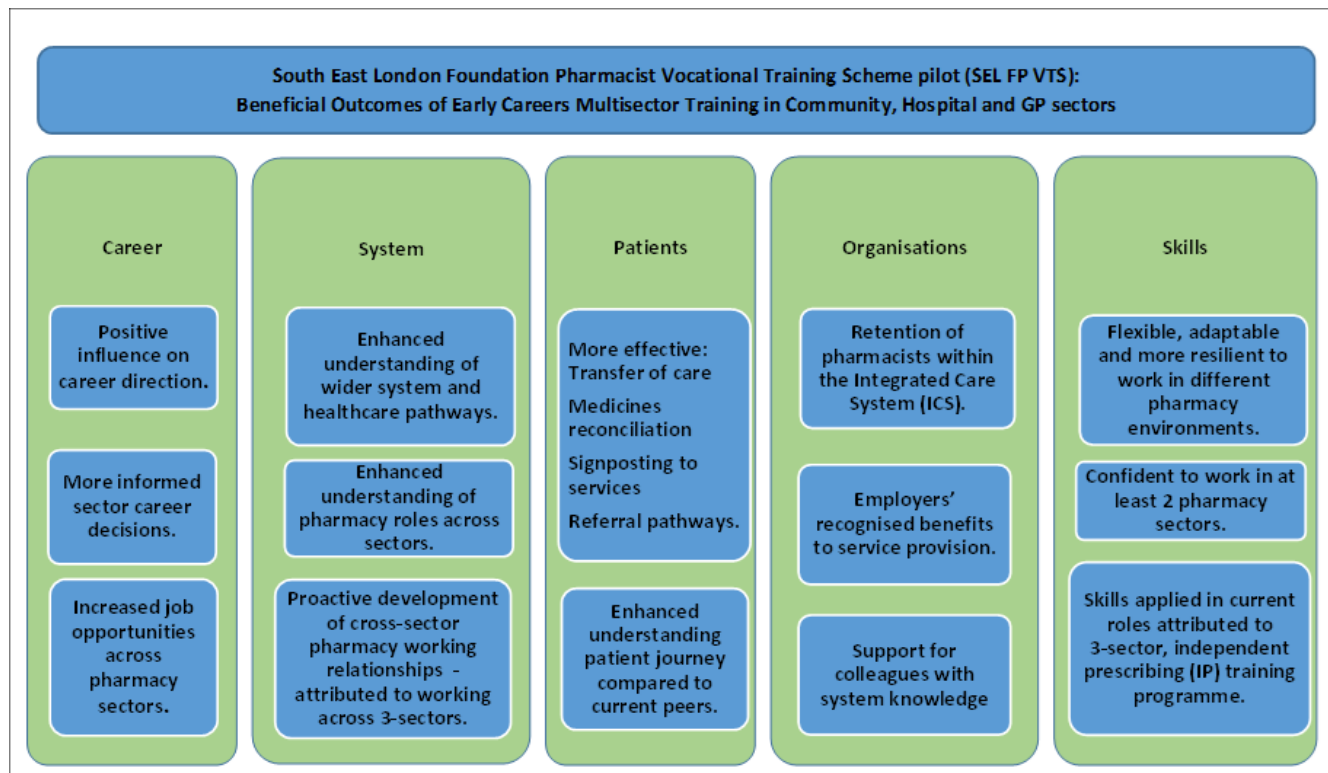


Figure 1: Themes diagram

Discussion: This evaluation provides evidence that early careers multi-sector training with independent prescribing supports pharmacist career and system workforce development. Experience in community, hospital and GP developed pharmacists who work flexibly and confidently across sectors and creates opportunities for different career routes. Benefits to patients included improved understanding of the healthcare system.

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Video killed the lecture star? An evaluation of a new blended learning approach delivered in a school of pharmacy

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Keywords: Active learning, Blended learning, Lectures, Technology

Background: The COVID-19 pandemic created educational challenges but also provided an impetus for change. In 2021-

22, the School of Pharmacy at Queen's University Belfast (QUB) retained pre-recorded lectures rather than switching back to traditional on-campus lectures. More active learning opportunities such as discussion boards, on-campus case studies, and quizzes were included in a blended educational model (Gleason *et al.*, 2011).

Aim: To determine the views of QUB Master of Pharmacy first and fourth year students about the blended model.

Method: Data was collected through an ethically approved, pre-piloted, online questionnaire, which was sent via an email invitation to all first and fourth year students in January 2022. Questions were mostly on a rating scale from one to seven. Data analysis took the form of descriptive and inferential statistics for year group comparisons.

Results: The response rate was 43.0% (105/244); with 35.8% (53/148) for first year and 64.5% (62/96) for fourth year. Fourth year students considered flexibility, having formative quizzes to check understanding and being able to watch content again to aid comprehension as the most positive aspects of the new model (mean scores 6.23, 6.11 and 6.02, respectively). First year students also found these aspects helpful, but less so (mean scores 5.55, 5.32 and 5.89, respectively). Both cohorts preferred the blended over traditional unrecorded lecture model (First year mean 5.13 versus 2.89; Fourth year mean 5.84 versus 3.10, respectively). Both cohorts reported a degree of social isolation due to the model (First year mean 3.91 and fourth year mean 4.18).

Discussion: Benefits of the blended model were recognised by both year groups (and more so by final year students who had experienced both models) at this single institution. It could be considered a viable educational approach going forward but more work is needed to address social isolation concerns.

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A novel simulation-based method for developing behavioural and consultation skills in first year M.Pharm. students

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Keywords: Immersive scenarios, Interactive consultation skills and behaviours, Patient-centred care, Simulation-based education, Theatre workshop

Background: The publishing of new Standards by the General Pharmaceutical Council has emphasised the key role clinical practice and skills play in pharmacist roles (General Pharmaceutical Council, 2021). It is important to upskill student pharmacists in patient-centred care at an early stage; a key component of which is advanced communication (behavioural) skills.

Aim: To develop a simulation-based educational (SBE) workshop to help first year Master of Pharmacy (M.Pharm.) students develop essential interactive skills and behaviours.

Method: In collaboration with a senior lecturer from the Drama department the researchers developed a flipped classroom theatre-style workshop using immersive scenarios where the students (n = 144) worked in pairs alternating between various roles (pharmacist, General Practitioner, and patient). The scenarios were successively made more complex, designed to manifest the complexity and randomness typical of real-life interactions, and help the students develop the necessary behaviours to deal with them. Following ethical approval, feedback was obtained via an online SurveyMonkey questionnaire which included Likert scales, five-point scales and open comment sections (n = 23 questions). The responses were entered into Microsoft Excel where data analysis was conducted. Responses to open-ended questions were analysed thematically.

Results: 75.0% (n = 108) of students completed the questionnaire. The average perceived confidence scores increased considerably by 31% from 54% to 85% (see Figure 1 for breakdown of scenarios explored). 96% of students strongly agreed or agreed that immersive roleplays help identify emotions and 98% agree that by doing so, they develop their behavioural skills in dealing with such emotions. Analysis of free text responses elicited the following themes:

- Peer to peer learning / gaining confidence by 'performing'
- Swapping roles / increasing complexity of roleplays
- Non-judgemental feedback

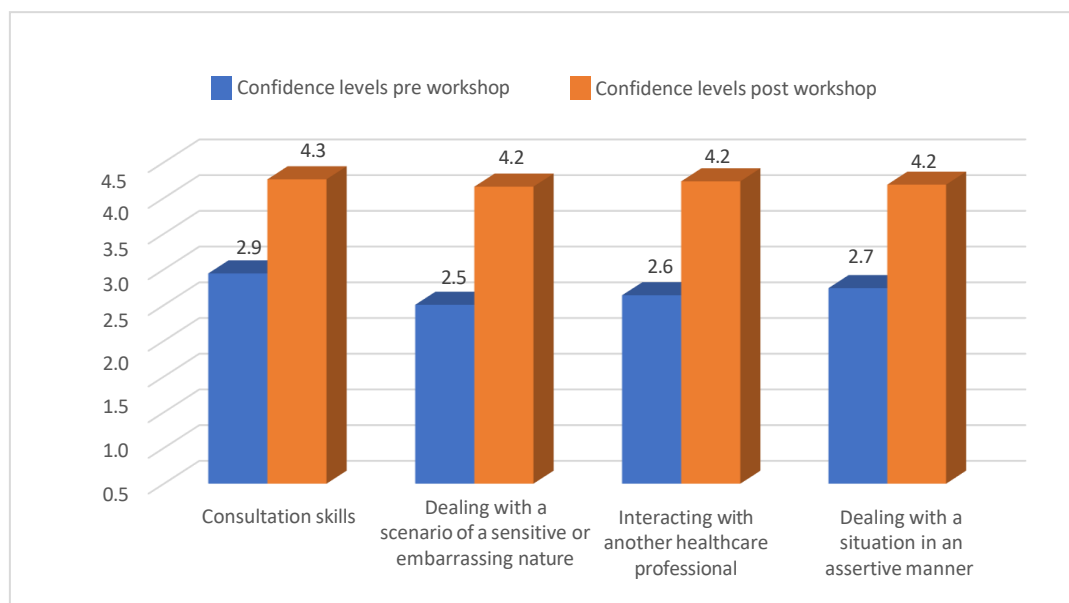


Figure 1: Perceived confidence levels of students pre and post workshop

Discussion: These statistics combined with overwhelmingly positive commentary were striking and have encouraged us to not only embed this workshop within the first year curriculum but explore more behavioural skills teaching across the M.Pharm. degree, spiralling in complexity of both content and interaction.

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Tutors' feedback of experiential learning in an M.Pharm. programme: TELL Project

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Keywords: Community pharmacy, Experiential learning, Hospital pharmacy, M.Pharm., Pharmacy education, Tutors

Background: Experiential learning (EL) tutors act as a bridge between learning in the classroom and putting this into practice (Zeitoun *et al.*, 2020), with students commenting that their placement experiences were highly dependent on tutors (Jacob & Boyter, 2020).

Aim: To determine tutors' perceptions about EL.

Method: A mixed-methods study was undertaken involving pharmacists working in hospital and community practice who were EL tutors. It involved a 16-item online survey and a series of qualitative interviews. Close-ended questions were analysed using SPSS Version 27 while thematic analyses were undertaken on open-ended comments and qualitative findings.

Results: There were 77 responses to the online survey (58 complete): 32 community; 45 hospital. Five focus groups consisting of 25 hospital tutors, and 11 one-on-one interviews with community tutors were conducted. 33/44(75.0%) of hospital tutors disagreed that having a student helped them complete their daily responsibilities compared to 16/31(51.6%) of community tutors. More than 40% (35/76) of all respondents agreed that having students increased their stress. Tutors were positive about the effectiveness of EL in developing students' clinical, technical, and professionalism and communication skills. Three key themes were developed: (1) being a tutor, (2) students on EL, (3) perception of the structure and content of EL. Student engagement and attitudes impacted their experience as tutors, with poor attitude noted as challenging. Opportunities for staff recruitment were noted as a benefit, however the limited time and duration of placements were challenging.

Discussion: While tutors were, on the whole, positive about their experience; key challenges were noted. A community-based participatory research approach should be adopted, where key stakeholders are involved in the co-design of experiential learning to ensure engagement and avoid future dissatisfaction.







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Perceptions of academic staff on practice-based facilitator involvement in competency-based assessments within student pharmacist experiential learning

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Keywords: Academics, Competency-based assessment, Experiential learning, M.Pharm., Pharmacist, Pharmacy

Background: Pharmacy Additional Cost of Teaching (ACTp) (Wright, 2019) supports the development of experiential learning (EL) for student pharmacists in Scotland. There is a desire for placement facilitators to assume enhanced roles in developing and assessing students' competencies during EL (Jacob *et al.*, 2021).

Aim: To obtain the perceptions of academic staff of facilitators assessing students during EL.

Method: Online focus group discussions were conducted, using a validated interview guide, involving staff from Robert Gordon University (RGU) and the University of Strathclyde (UoS). Purposive and sampling methods were used in recruitment. Findings were thematically analysed.

Results: A total of 11 teaching staff participated in two focus groups: five UoS, and six RGU. Five themes were developed: perception of current assessment method, perception of facilitator involvement in assessments, preference for structure and content of assessments, support/resources and assistance that should be provided to facilitators, and steps forward. General support was expressed for facilitators to assume this role as it would provide a more accurate assessment of the competencies students had developed during EL. Students would benefit from real-time feedback, while university staff would benefit from closer collaboration with practitioners and reduced workload. Challenges noted included variation in marking, extra burden on facilitators and their lack of experience in assessment. It is suggested that

universities and NHS Education for Scotland should work together to provide training and resources to support facilitators. Competencies that could be assessed were communication, clinical skills, and professionalism. No consensus was achieved about tools and methods to be used. Assessment on a scale was preferred; respondents were open to pass/fail.

Discussion: There was overall support for facilitators undertaking this role, however potential drawbacks were highlighted. The next steps are to draw from the experience of programmes with established assessment practices, and involve facilitators in the design of the assessment.

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Addressing 'challenging conversations' through a formative OSCE-based workshop

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Keywords: Challenging conversations, OSCEs, Equality, Diversity and Inclusion

Background: Pharmacists in all sectors of practice encounter 'challenging conversations' with it cited that many feel unprepared on how to best manage such situations (Eukal *et al.*, 2021). There are many reasons as to why a conversation/consultation may be considered 'challenging', including; communication difficulties, unfamiliarity with an area of practice, patient-related factors such as health or financial concerns, cultural or gender sensitive issues etc. To help prepare students for potential 'challenging conversations' they may encounter, a novel workshop was developed to expose students to a selection of 'challenging conversations' using formative OSCE-based activities.

Aim: Design, deliver and evaluate a learning activity, namely 'challenging conversations' workshop using OSCE-focused activities.

Method: All fourth year Master of Pharmacy students (n = 96) attended a workshop where strategies to managing 'challenging conversations' were discussed (Mesgarpour *et*

al., 2021). These resources were also recommended as prereading. Students completed three formative OSCE stations based on a 'challenging' scenario (topics covered were safeguarding, transgender patient query and counselling a patient who was deaf). Students then worked in groups to develop an OSCE station based on a situation they considered challenging. The workshop was evaluated using an online questionnaire distributed to all attendees.

Results: There was a 45% questionnaire response rate with 98% agreeing or strongly agreeing that the workshop helped prepare them for future practice. Student comments reflected this sentiment e.g. 'So helpful to see a variety of difficult conversations because that's what I'm most nervous about - dealing with situations that don't have a clear cut right or wrong answer.' In terms of OSCEs developed by students, interestingly, all were based in a community-pharmacy setting and covered a range of issues such as vaccine hesitancy, dispensing errors, abusive relationships, amongst others.

Discussion: This learning activity was an appropriate way to introduce and discuss 'challenging conversations'. Students benefited from exploring these scenarios through group work and development of a case as it allowed them, in a safe environment, to reflect and discuss challenging scenarios they have encountered during training. Staff gained insights into what students consider 'challenging' which in turn can be used for experiential learning preparation for future cohorts.

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Evaluating the impact of using MyDispense to develop clinical decision-making in minor ailment management

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Keywords: Active learning, Clinical decision-making, MyDispense, Pharmacy education, Simulation

Background: New standards for initial education and training of pharmacists published by the General Pharmaceutical Council introduce an outcome on demonstrating effective diagnostic skills (General Pharmaceutical Council, 2021). A

new clinical decision-making (CDM) teaching strategy for minor ailments was delivered to third year pharmacy students using MyDispense – an online pharmacy simulator – to enable students to develop a 'think-aloud' approach to CDM (Pinnock *et al.*, 2015). Students engaged with pre-workshop simulations which included intuition and hypothetical prompts for clinical-reasoning. On completion of simulations, students were provided with feedback capturing pharmacist educators' 'think-aloud' account. Learning was then applied to new scenarios in workshops.

Aim: Evaluate the impact of using MyDispense to develop CDM in minor ailment management in third year pharmacy students.

Method: University ethical approval was obtained. A 29-item questionnaire was designed on perceived confidence in identifying and managing minor ailments and perceptions on utility of MyDispense using a five-point Likert scale (1 = strongly agree; 5 = strongly disagree) and distributed to all third year pharmacy students. Statement responses were analysed using independent t-test and Spearman's rank-order correlation to explore relationships between responses.

Results: Response rate was 51.9% (n = 69/133). Students agreed MyDispense increased perceived confidence in gathering information, identifying minor ailments, identifying red flags and formulating management plans (M = 2.23 ± 0.89; 2.43 ± 0.92; 2.54 ± 0.96; 2.28 ± 0.78). Students with no community pharmacy work experience versus those with community pharmacy work experience, were significantly more likely to agree that MyDispense gave more opportunities for CDM compared to traditional teaching methods (M = 2.16 ± 0.75 versus M = 2.57 ± 0.76, t(67) = 2.16, p < 0.05) and provided a safe environment to practice CDM (M = 1.44 ± 0.71 versus M = 1.86 ± 0.73, t(67) = 2.33, p < 0.05). Strong positive correlations (Spearman's rank-order correlation coefficient (r_s) > 0.4) were found in statement responses relating to future practice, consultation skills and CDM tools (Table I).

Discussion: Students felt MyDispense was helpful for developing CDM skills and increasing confidence in minor ailment management. MyDispense could support pharmacy students CDM skills, essential for future practice.

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Table I: Statement responses

Statement correlation	Spearman's rank-order correlation coefficient (r_s)	p-value (p)
MyDispense will help me manage minor ailments in the future and it allows me to learn from the mistakes I made	0.58	<0.001
MyDispense will help me manage minor ailments in the future and it helped me understand the process of forming an impression of a minor ailment in a logical order	0.43	<0.001
MyDispense will help me manage minor ailments in the future and it has helped me understand the process of safety netting in a logical order	0.44	<0.001
MyDispense will help me manage minor ailments in the future and it has provided me with a logical framework to support my consultation skills around minor ailments	0.55	<0.001
MyDispense will help me manage minor ailments in the future and it has provided me with an opportunity to practice consultation skills	0.57	<0.001
MyDispense will help me manage minor ailments in the future and has made me feel more confident for talking to patients in the future	0.49	<0.001
MyDispense will help me manage minor ailments in the future and has given me an insight of how real practice would be in community pharmacy	0.57	<0.001
MyDispense will help me manage minor ailments in the future and I found the interface/environment to be realistic	0.54	<0.001
MyDispense will help me manage minor ailments in the future and using MyDispense will help me prepare for my OSCE examination	0.50	<0.001
MyDispense has supported my learning around the application of clinical decision-making tools such as ASMETHOD and SOCRATES and increased my confidence in formulating a suitable management plan (e.g. product recommendation or referral)	0.42	<0.001
Using MyDispense has helped me understand the process of formulating an impression of a minor ailment in a logical manner and feedback provided by MyDispense is useful	0.45	<0.001

Evaluation of actor co-designed simulated GP pharmacist consultations as an introduction to general practitioner (GP) practice

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Keywords: Actor, Consultation, Online, Stimulated

Background: Experience of working with patients is necessary throughout the Master of Pharmacy (M.Pharm.) for a spiral curriculum. Engagement in General Practice (GP) patient consultations is challenging during early stages due to limited curriculum exposure. In 2022 an online simulated experience was co-designed with an actor (with experience of medical simulation) for stage 2 students with preparatory patient notes aligned to topic coverage to empower students to interact with simulated patients (medical actors).

Aim: This study aimed to evaluate whether design enabled student participation in consultations and if it gave an insight into GP pharmacy consultations.

Method: Students participating ($n = 110$) were emailed an online survey (six questions: Likert scales and free text responses) to gauge opinion of the session. Actors ($n = 3$) role-playing the patient gave feedback on the session and student participation via an online feedback form (13 questions).

These formed part of the annual monitoring of professional experiences (no ethics approval was required).

Results: The student survey completion rate was 10.0% ($n = 11/110$). All ($n = 11$) agreed it was a positive learning experience, and of those 81.8% ($n = 9$) agreed that: the pre-session notes supported their learning, gave an insight into GP pharmacist work and that actors gave constructive feedback on communication. Students highlighted 'it shows the complexity of working...in the GP practice'. Two actors (66.7%, $n = 2$) completed the feedback form and agreed that: the information enabled their preparation, that students were well prepared and approached the consultation professionally. Actors highlighted that not all students used cameras or considered how the patient might feel whilst checking resources. The staff facilitator of the session reported high engagement with the activities.

Discussion: Session design enabled online participation of stage 2 M.Pharm. students with simulated patients and gave an insight into GP pharmacy consultations. As online consultations are likely to continue post-pandemic further guidance is needed for students on the etiquette of virtual consultations.

Final year pharmacy undergraduate experience of structured medication reviews

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Keywords: Pharmacy undergraduates, Placements, Primary care, SMR, Structured medication reviews, Supervision

Background: Structured Medication Reviews (SMR) are integral to primary care pharmacist roles (NHS England, 2020). With the expansion of trainee pharmacist primary care (PCN) placements as part of the implementation of contemporary pharmacist initial education and training (GPhC, 2021), it is important to prepare pharmacy undergraduates for practice via exposure to SMR. Sussex University final year pharmacy undergraduates had the opportunity for an additional placement observing SMR within primary care.

Aim: Evaluate the experience of undergraduates observing SMR.

Method: Undergraduates attended a workshop outlining the purpose and value of SMR. After successful completion of required primary care organisation checks, optional SMR placements were timetabled. East Sussex Foundation to Advanced Multisector pharmacists whom had Health Education England Practice Supervisor accreditation on rotations through their PCN were placement supervisors. A lesson plan was developed supporting placement structure and consistency of session delivery by different pharmacists. Undergraduates evaluated the SMR placement using an online survey.

Results: Final year undergraduates who undertook the optional SMR placement were found to be 86% (18/21) with an evaluation survey response rate of 60 % (11/18). All felt the placement increased their knowledge and understanding of SMR whilst also recognising the value of pharmacists undertaking SMR, and would now consider primary care for their foundation year.

90.9% (10/11) advocated that placements should be from second year onwards, will all agreeing that SMR should be part of undergraduate placements.

90.9% (10/11) observed virtual SMR and 63.6% (7/11) observed three different SMR with 63.6% (7/11) feeling prepared for their placement. Workshops using simulation outlining the SMR structure and questioning techniques were recommended by the undergraduates prior to undertaking SMR placements as well as common resources used by primary care pharmacist.

Discussion: Awareness and value of the primary care pharmacist role increased through incorporating SMR into undergraduate placements. The placement highlighted this sector as one to undertake their Foundation Year. Further preparation for SMRs was requested by undergraduates maximising the placement opportunity.

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Evaluating team-based learning in a foundation training for trainee pharmacists

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Keywords: Active and collaborative learning, Foundation training, Pharmacist, Pre-registration, Team-based learning, Trainee pharmacist

Background: A new programme has been created to provide supplementary training to trainee pharmacists (TPs) in the North of England. The new programme incorporates online study days delivered using Team-Based Learning (TBL) (Michaelsen & Sweet, 2008). To the researchers knowledge, TBL has not been used before in educational programmes for trainee pharmacists designed to supplement their workplace learning.

Aim: The project aims to evaluate the impact of TBL on the engagement, learning and satisfaction of TPs.

Method: An online anonymous survey using a validated assessment tool, TBL Student Assessment Instrument (TBL-SAI) (Mennenga, 2012), was administered to all TPs attending the last TBL study day of the programme. The tool, consisting of 33 items, assessed TP's accountability to their team, preference for, and satisfaction with TBL. The results were analysed using Mennenga's analysis tool (2012). Ethical approval was granted by the University of Bradford.

Results: The last study day was attended by 202 TPs (attendance rate = 97%). The online survey was completed by 147 TPs (response rate = 73%). The results from the TBL-SAI (Table I) suggest TPs developed accountability to their team,

had preference for and satisfaction with TBL as a method for the online delivery of teaching, with all scores being above neutral.

Table I: Results from the TBL-SAI survey for the programme.

Sub-scale	Accountability score	Preference for TBL	Satisfaction with TBL	Total score
Possible range	8-40	16-80	9-45	33-165
Neutral score	24	48	27	99
Study's score	29	51	32	112

Discussion: The implementation of TBL in online study days indicated positive contribution towards TP's engagement, learning, and satisfaction compared to traditional didactic online lectures. The results are in line with other TBL studies in undergraduate pharmacy and nursing students (Branney & Priego-Hernández, 2018; Tweddell, 2020). Further work will include analysis of collected qualitative data.

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Modelling the relationship between student in-person attendance rates and exam performance

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Keywords: Blended learning, Exam performance, In-person learning, Online learning

Background: Students experienced a learning shift in 2021-2022 – from remote learning over the COVID-19 pandemic period to in-person learning post-pandemic. Previously, equivalent learning outcomes were achieved with 30-79% reduction in classroom time (Müller, & Mildemberger, 2021). On the contrary, although with no difference in academic performance, students have preferred face-to-face lessons for in-person interactivity (Kemp, & Grieve, 2014). With three modes of teaching (in-person, online and blended) nowadays,

will the frequency of in-person affect students' performance in exams?

Aim: To find out whether performance on the in-class test (ICTs) is correlated to student in-person attendance.

Method: Attendance was monitored for all in-person teaching sessions in the first semester of the 2021-2022 academic year through recorded card swipes. The study population was made up of the first cohort of students in the new Master of Pharmacy (M.Pharm.) degree in Swansea University. Marks from the ICTs were recorded for the three compulsory modules of M.Pharm. 1. Pearson product-moment correlation coefficient and linear regression analysis were performed on SPSS to compare the ICT marks by in-person attendance.

Ethical opinion has been sought from the Medical School Research Ethics Sub-Committee. The study comprises of anonymised group data and no new data (no questionnaire, interviews or participant recruitment) was collected; therefore, the evaluation of this study is okay to be presented.

Results: There was a medium, positive correlation between in-person attendance and performance on the ICTs which was statistically significant ($r = 0.422$, $p = 0.002$, $n = 50$). 17.8% of the total variation in the performance on the ICT can be explained by in-person attendance ($R^2 = 0.178$, $n = 50$).

Discussion: Remote learning has allowed students to work at their own pace and around other commitments. However, there are benefits exclusive to in-person learning – students reportedly felt more engaged (Kemp, & Grieve, 2014). It is not yet possible to pinpoint which disciplines, or for which competencies, a blended learning format is particularly suitable (Müller, & Mildemberger, 2021). Despite synchronous online learning still being offered, based on results in this study, pharmacy students should be encouraged to attend teaching sessions in-person for better academic performance. A questionnaire to follow student preferences will be useful as future work.

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An evaluation of the methods used to teach cultural competence in pharmacy curricula

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Keywords: Cultural competence, Culture, Education, Training, Pharmacy

Background: Cultural competence (CC) has been shown to enable the provision of high-quality care to diverse populations and reduce health inequalities (Cooper, 2014). The General Pharmaceutical Council explicitly acknowledge this and have included ‘...respecting diversity and cultural differences’ as a learning outcome in the updated standards for the initial education and training of pharmacists (GPhC, 2021). It is therefore essential for Schools of Pharmacy to prioritise teaching CC within their programmes.

Aim: To evaluate the methods used to teach CC within pharmacy programmes and to make recommendations for educational practice and future studies.

Method: A literature search using relevant keywords was carried out using appropriate databases. A PRISMA-style method was used, including articles that involved pharmacy students and focussed on multiple marginalised groups, and excluding those not in English or fully accessible.

Results: Nine articles met the inclusion criteria. Discussions were the most used method, and all used at least three teaching methods. The mean number of methods used was eight, with a range of three to 15 number of methods in the studies. The participants ranged from first year to final year students, with the latter showing more CC. A mixed mode approach used by the University of California San Francisco resulted in the largest statistical shift in CC, followed by a Team-based Learning approach used by Southern Illinois University Edwardsville. A gap in literature from Schools of Pharmacy in the United Kingdom was noted.

A novel model, known as ‘COMPETENT’, has been developed based on the literature findings and lays out the key themes of CC. This could be used to introduce CC to pharmacy students.

Discussion: Some recommendations from this study are:

- Use multiple teaching methods together to teach CC.
- Incorporate CC concepts into existing modules and case studies and utilise active teaching methods.
- Consider use of the novel ‘COMPETENT’ model.
- Conduct further studies on the delivery of CC in pharmacy education.

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Enhancing student experience with the use of an interactive academic planner

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Keywords: Clinical pharmacy, Distance learning, Student experience, Time-management

Background: There is growing use of distance learning (DL) in Higher Education (POST, 2021). Whilst this offers a convenient method of study for adult learners, they can face significant challenges, including having to ‘create balance between education and work’ (Kara *et al.*, 2019). Kara and colleagues (2019) argue students should be provided with guidance around how to take control of their learning and time.

Aim: To evaluate whether the use of an interactive academic planner empowers pharmacists studying on the DL Pharmacy programme at De Montfort University to plan their studies.

Method: An interactive planner was developed, on MS Excel, which included:

- A homepage with ‘live’ countdowns to key dates
- Portrait and landscape calendars with key tasks pre-populated (printable calendar area pre-set)

Students studying on two modules were provided with the Planner during Induction. An online, anonymised questionnaire was distributed via email to 133 students four weeks later and students asked to partake in online focus groups. The questionnaire included declarative statements on a Likert scale, exploring the extent to which the planner encouraged understanding and planning of required learning and free text boxes for further comment. Quantitative data was analysed using descriptive statistics and qualitative data thematically analysed. Ethics approval was obtained.

Results: 28 questionnaire responses were received. 79% of respondents agreed the planner helped to plan self-directed learning. Improvements suggested in the responses included having adjustable print areas and the capability to personalise every column/row.

One focus group with two participants was held. Three themes arose, including the planner being motivating due to

its 'live' nature, useful for presenting the 'big picture' required for planning and valuable for adding own goals to the planner.

Discussion: The planner inspired students to take control of their time. It will be made more personalisable prior to collaborating with colleagues for use on other modules.

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Findings from an exit questionnaire demonstrating value and outputs of multisector pharmacist training

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Keywords: Evaluation, Multisector, Recruitment and retention, Vocational training scheme, Workforce development

Background: East Sussex Multisector Pharmacist Foundation to Advanced (ESMFtA) Vocational Training Scheme (VTS) two-year programme was collaboratively designed in 2018; offering structured work-based training, incorporating clinical governance, research, education and leadership skills; to meet local pharmacist workforce needs in East Sussex, across several sectors (East Sussex Multisector Pharmacist Foundation to Advanced (ESMFtA) Vocational Training Scheme (VTS), 2021).

Aim: Show how a tailored exit questionnaire can:

- Measure retention and progression of multisector pharmacists (MSP) exiting scheme;
- Identify positive and negative programme themes amongst MSP.

Method: MSPs exiting ESMFtA completed an online survey with questions tailored towards the VTS using a combination of five-point Likert scale questions (strongly disagree to strongly agree) and qualitative free-text answers. Participants additionally identify up to three positive and negative aspects of VTS which were thematically analysed. Ethics approval was not required.

Results: 20 MSP successfully appointed to ESMFtA since 2018, with 14 eligible for survey by June 2022.

71.4% (10/14) MSP confirmed moving to another job within the local Integrated Care System, supported by undertaking ESMFtA.

Ten out of 14 MSPs agreed or strongly agreed there were sufficient learning opportunities to meet the objectives of training. All but two (uncertain) either agreed (5/14) or strongly agreed (7/14) that the programme provides opportunities to experience and learn from others including other professions.

Thematic analysis showed very strong positive trends in 'networking and sharing of expertise', 'learning and skill development' and 'career progression'. Negatively themed trends in 'workload', 'organisation of the programme' and specific 'rotational plan' were cited less, and improving progressively.

Discussion: ESMFtA offers high level of retention meeting goal to develop local workforce, demonstrated via bespoke programme exit evaluation.

MSP unanimous that ESMFtA valuable in developing knowledge and skills with significant contribution to professional development.

Recommend tailored exit evaluation survey, supporting educational governance of other programmes, and contributing to workforce plans.

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Supporting trainee pharmacist programme development within community health services across London and the South East (LaSE)

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Keywords: Community health services, Cross-regional, Early Careers, Initial education and training standards of pharmacists, Trainee pharmacists

Background: Community health services (CHS) is a diverse sector comprising primary and secondary care (Charles, 2019). CHS have had limited involvement with Trainee Pharmacist (TP) development. The General Pharmaceutical Council (GPhC) Initial Education and Training Standards of Pharmacists (IETP) (GPhC, 2021) encourages adaptability therefore CHS experience would enrich training programmes, whilst supporting a workforce pipeline in this sector.

Aim: To support IETP implementation via CHS TP Programmes, with the objectives of:

- Identify current TP recruitment and placements within CHS
- Explore support needed to expand CHS TP Programmes
- Create a network of CHS Pharmacy Education Leads (PELs)
- Evaluate network participant satisfaction
- Make recommendations for future networking

Method: HEE Early Careers Training Programme Directors presented IETP key messages to individual CHS PELs across LaSE, from which, shared themes to support TP programme development were identified. These formed session themes at the LaSE-wide network of CHS PELs (Table I). Network evaluation was undertaken using an online survey and focused on TP programmes and recruitment, benefits of sessions presented, future networks and supportive measures. This study did not require ethics approval.

Table I: Session themes

1	National TP recruitment
2	GPhC requirements for TP programmes
3	Experiences from the Sussex Multisector Training Scheme, including CHS

Results: PELs from seven organisations attended, 100% completed the evaluation survey. Six organisations had never recruited a TP, three provided placements for externally employed TPs. Six felt the network event had increased confidence to partner with external organisations to deliver TP programmes, four would consider recruiting TPs directly. Network feedback was positive and future events on training plans, post-registration development and online resources were identified as supportive measures.

Discussion: This evaluation highlights the importance of cross-regional relationships in developing training opportunities for future pharmacists, delivering IETP and raising the profile of CHS. Future network events are scheduled, with scoping required post-recruitment 2023/2024 to assess if CHS TP programmes have increased.

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Evaluating the implementation of a new ear examination workshop to support teaching on minor ailments of the ear

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Keywords: Ear examination, Diagnostic skills, Pharmacy education, Physical examination

Background: New standards for initial training and education of pharmacists published by the General Pharmaceutical Council, introduce an outcome on demonstrating effective diagnostic skills, including physical examination (GPhC, 2021). A new workshop on conducting ear examination using mannequins was delivered to third-year pharmacy students to support minor ailments teaching of the ear (included pre-workshop e-learning on overview of conducting ear examination and management of related minor ailments). Students were made aware that this was an introduction to ear examination, and that competency would only be achieved further in supervised clinical practice.

Aim: To evaluate the impact of a new practical workshop on perceived comfort, confidence, knowledge, and ability on conducting ear examination and related minor ailments in third-year pharmacy students.

Method: University ethics approval was obtained. A 13-item questionnaire was designed on perceived comfort, confidence, knowledge, and ability on conducting ear examination and distributed to all third-year pharmacy students. Students were asked to rate their abilities for each statement using a five-point Likert scale (1 = lowest level and 5 = highest level of confidence/ comfort/ knowledge/ agreement). Statement responses were analysed using an independent-samples t-test to explore differences in mean pre-completion and post-completion scores to investigate impact of the workshop on perceived comfort, confidence, knowledge and ability in conducting ear examinations and related minor ailments.

Results: 95/133 students completed the pre-workshop questionnaire and 87/133 post-workshop. Statistical differences in perceived comfort, confidence, knowledge and ability were found; magnitude of difference was large (0.8 effect size), when comparing responses from the two time-points (Table I).

Discussion: On completion of the workshop, students felt more confident and comfortable in their ability to conduct ear examination and their knowledge of ear ailments, understanding that to be deemed competent they would require further supervised experience in clinical practice. This type of workshop could increase pharmacy student's confidence in demonstrating effective diagnostic skills essential for future practice.

Table I: Comparison of mean scores pre and post ear examination workshop

Item	Pre-workshop Mean (SD)	Post-workshop Mean (SD)	t	p	Effect size
Confidence in conducting ear examination	2.19 (0.90)	3.84 (0.57)	-14.77	p < 0.001	0.77
Feeling of comfort in conducting ear examination	2.55 (1.01)	3.93 (0.62)	-11.15	p < 0.001	0.85
Confidence in conducting ear examination in OSCE	2.26 (1.02)	3.84 (0.59)	-12.79	p < 0.001	0.85

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A qualitative analysis of pharmacist independent prescriber training

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Keywords: Distance learning, Preparation for practice, Prescribing, Student participation

Background: Queen's University Belfast runs a postgraduate pharmacist independent prescribing (IP) programme, delivered using a blend of face-to-face teaching and distance learning, which has incorporated some changes to delivery during COVID-19.

Aim: To evaluate thoughts and opinions of pharmacists on course content, delivery and support.

Method: Following ethical approval, all 20 pharmacists who completed in 2021 were invited to participate in semi-structured interviews. Interviews were audio/video recorded on Microsoft Stream, transcribed verbatim and analysed thematically.

Results: Eight pharmacists participated. Themes identified were distance learning, support, course content and preparing for/prescribing in practice. Sample quotations are shown in Table I.

Discussion: Advantages were apparent for both virtual and face-to-face teaching, with some students finding it easier to participate virtually. Concerns around prescribing in-practice were in keeping with the literature, where lack of confidence (Graham-Clarke *et al.*, 2018) and risk aversion (Cox, 2020) have been highlighted as potential barriers. Encouraging peer support, reduction of assessment burden, and building confidence around prescribing, will all be considered when

making improvements to the programme and may be of interest to other IP providers.

Table I: Themes and subthemes, with sample quotations from the interviews

Theme 1: Distance learning
1.1 Work, study, life balance: 'Everything was given to you well in advance so... you could plan' [P5]
1.2 Participation: 'I was more likely to participate in the virtual (environment)... interestingly enough' [P3] 'Because you could raise your hand. You didn't feel like you're being rude by interrupting' [P5]
Theme 2: Support
2.1 University support: 'I felt like they were with me every step of the way' [P8]
2.2 Peer support: '(A WhatsApp® group) opened up that communication ...support network for us' [P5]
2.3 In-practice support: 'He (medical mentor) was very supportive; he always made time for me' [P8]
Theme 3: Course content
3.1 Student satisfaction 'I'm very happy with the course' [P1]
3.2 Residential 'The people teaching us were able to pick up on things and give us better advice [in person]' [P4]
3.3 Assessment 'It was pretty hard with almost an assignment every month' [P7]
Theme 4: Preparing for and prescribing in practice
4.1 Ownership of evolving as a prescriber: 'Things have to happen in practice' [P3]
4.2 Opportunities to prescribe: 'To find the reason to prescribe when there're junior doctors' [P3]
4.3 Concerns: 'Knowing what or when I can and cannot prescribe' [P2] 'Just making a mistake I guess' [P4]

Key

P: Participant

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Investigating the factors that influence the decisions of subject matter experts when setting Angoff scores

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Keywords: Modified Angoff, Standard setting, Subject matter experts

Background: In 2016, modified Angoff methodology was introduced to set the pass mark in the GPhC's Registration Assessment (Cizek & Bunch, 2007). Subject matter experts (SMEs), all pharmacists in the United Kingdom were recruited. SME's work in patient facing practice in community, hospital, and primary care settings. Conceptualising the performance of barely passing candidates is cognitively challenging (Ricker, 2006) and SMEs are supported with guidance and reflective sessions in an annual workshop.

Aim: To explore the factors SMEs consider when conceptualising the performance of barely passing candidates during standard setting panels.

Method: Before the 2022 workshop, a survey designed by the General Pharmaceutical Council (GPhC) was sent to SMEs. The survey listed potential factors to consider, and SMEs could add further free text information. The list of factors was developed from our experience of working with SMEs from 2016 to 2020. Ethics approval was not required.

Results: 31 of 35 SMEs responded. Each could choose all applicable factors (see Table I).

Table I: Applicable Factors and responses

Factor	% of SMEs
Number of steps to correct answer	100%
Own current practice	84.4%
Own pre-registration experience	56.5%
Experience of working with newly registered pharmacists	96.9%
Experience of working with barely passing candidates	81.3%
Similar question in GPhC examples	93.8%
Predictability of topic being in the assessment	93.8%
Previous feedback from GPhC on same or similar question	84.4%
Views of other panellists	96.9%
Own ability to answer question	90.6%

Free text responses included:

- Experience of undergraduates and their teaching
- Time taken to answer question
- Knowledge and experience of pharmacy

Discussion: Considerable attention is paid to the selection and training of SMEs to enable decisions based on a careful balance of experience, performance, and judgement.

Results show that SMEs take a wide and appropriate range of factors into consideration when conceptualising the performance of barely passing candidates.




Results were shared and discussed in the SME review workshop.

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Development of a feedback tool for education supervisors: An e-Delphi study

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Keywords: Educational supervision, Pharmacy, Supervision

Background: Educational supervision underpins the Centre for Pharmacy Postgraduate Education's (CPPE) publicly funded national training pathways for pharmacy professionals working in primary care in England (NHS England, 2016). As part of CPPE's quality assurance processes, there is a need for education supervisors to demonstrate that they are fulfilling the requirements of their role by seeking learner feedback on their performance.

Aim: The aim of this study was to design an online feedback tool for CPPE education supervisors.

Method: The Delphi method is commonly used to achieve consensus and is useful in areas with limited research as survey items are generated by an expert participant pool (Hasson *et al.*, 2000). A classic e-Delphi survey (Day & Bobeva, 2005) was used, with round one inviting participants to generate items based on the attributes of an ideal education supervisor and aspects of performance on which they would like feedback. Potential feedback statements were developed and then prioritised by experts in three subsequent rounds using an online survey tool, Qualtrics.

Results: Ten education supervisors agreed to become expert panel members. 100% completed surveys for all four rounds. Data from round one were analysed thematically using NVivo and using these, together with the supervision literature (Kilminster *et al.*, 2007), 34 statements were developed. In round two, experts were asked to rate the extent to which

they agreed with each statement. In round three, average group scores for each statement were shared, and experts asked to review their initial scoring. Ten statements were eliminated, and experts were asked to prioritise the remaining 24 statements in round four (see Figure 1).

Discussion: Consensus was reached on 22 statements. The prototype online instrument will be piloted and its content validity assessed by a panel of education supervisors and learners.

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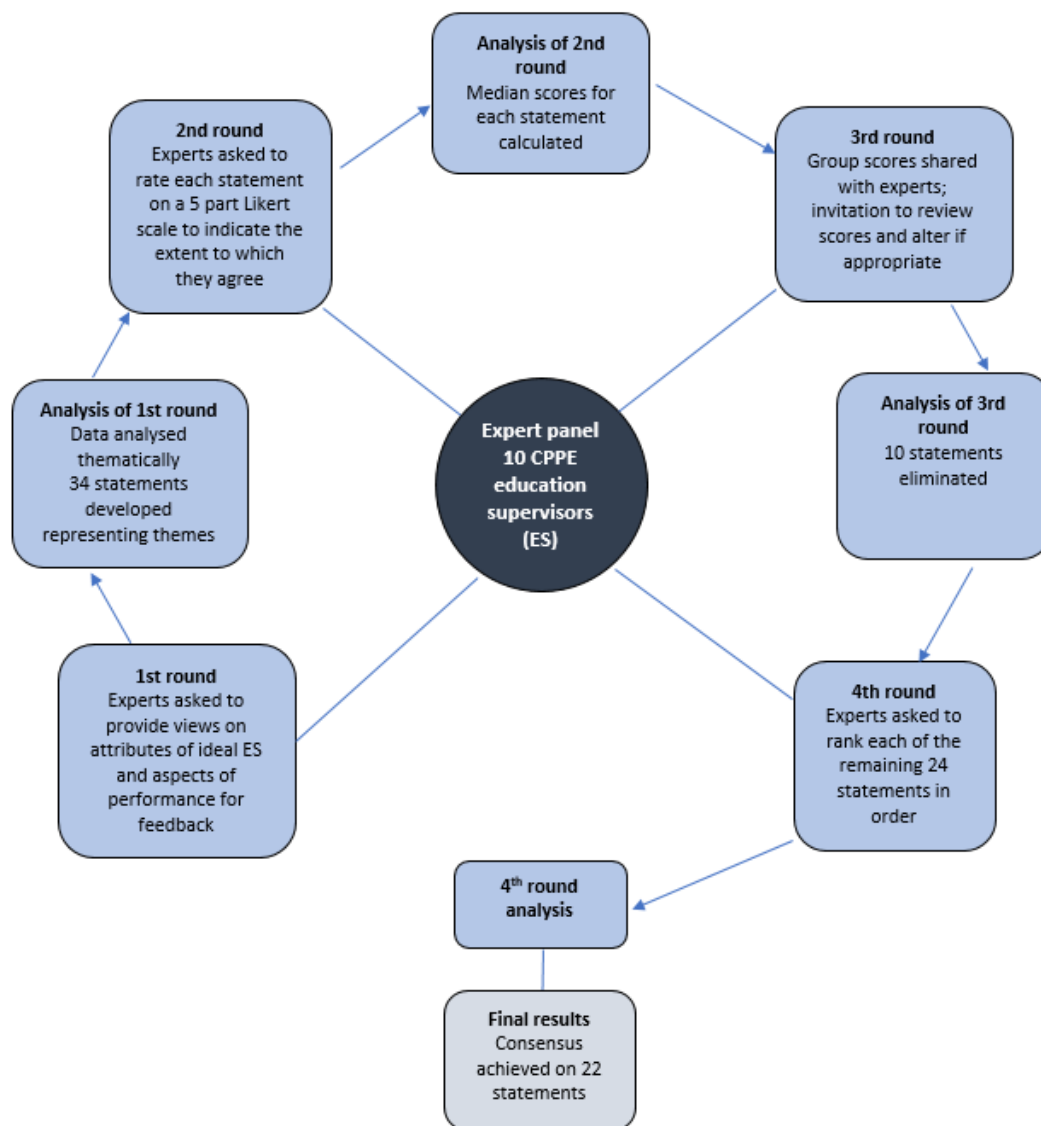


Figure 1: Data collection and analysis procedure

'It was a big learning experience because they were real patients': An exploration of pharmacist trainees views and perceptions of the involvement of patients and carers sharing their experiences as part of undergraduate teaching

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Keywords: Active learning, Active teaching, Education, Pharmacy, Qualitative research

Background: There is an increasing policy and practice imperative for involving patients and carers in health-related undergraduate courses. (Royal Pharmaceutical Society, 2015; GPhC, 2022) This authentic teaching links teaching to future practice allowing students to remember more by viewing the learning as significant and relevant. (Lockman, Thomas, & Hill, 2019) In view of this, a new module was developed where patients and carers were invited to share their experiences of living with a particular disease such as dementia, stroke and epilepsy to support didactic teaching and workshops linked to the disease state being covered. Students were asked to prepare questions to ask the patients and carers as part of a discussion with them and all sessions were facilitated by a member of staff.

Aim: To explore pre-registration pharmacy trainee views and perceptions of the involvement of patients and carers sharing their experiences as part of the Master of Pharmacy (M.Pharm.) curriculum.

Method: Qualitative, semi-structured, telephone interviews were conducted with pre-registration trainees who had studied a module involving patients and carers in their final year of the M.Pharm. degree. Interviews were audio-recorded and transcribed verbatim following participant written consent. The interview schedule was developed based on the research aim, an extensive literature review and peer discussion before piloting. Data were analysed thematically using the framework approach.

Results: 13 pre-registration trainees were interviewed. When compared to other opportunities for exposure to patients and carers, trainees perceived this form of active teaching to improve their knowledge and skills, increase their awareness of the disease and the role of the pharmacist in managing this, better prepared them for their future practice and provided a more suitable learning environment. Overall, the shared experience was more enjoyable than other forms of learning. Trainees also made recommendations for improvement including the need for more such sessions and a need to standardise the sessions. They were also aware of the importance of safeguarding the patients.

Discussion: This study adds to the body of evidence in an area of pharmacy education where very limited research is available but findings are similar to research conducted with other healthcare professionals. The involvement of patients and carers has now been embedded in the curriculum and future research may explore how this experience has impacted on graduates' practice. The module has been well received by students and has won student led awards.

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'They wanted to know what it was like through my eyes': Patients and carers views and experiences of active involvement in the delivery and design of an undergraduate pharmacy curriculum

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Keywords: Active learning, Active teaching, Education, Pharmacy, Qualitative research

Background: The increased emphasis on patient centred care requires greater involvement of patients and carers in health-related undergraduate courses (Royal Pharmaceutical Society, 2015; GPhC, 2022). This authentic teaching links teaching to future practice allowing students to remember more by viewing the learning as significant and relevant (Lockman, Thomas, & Hill 2019; Jebara, Edwards, & Tonna, 2022).

Aim: To explore patients and carers' views, and experiences of their active involvement in the delivery and perceptions of potential future involvement in the design of the pharmacy curriculum.

Method: Face-to-face semi-structured interviews were carried out with patients and carers who were actively involved in the delivery of the pharmacy course with all invited to participate (n = 8). Interviews were audio-recorded

and transcribed verbatim following participant written consent. The interview schedule was developed based on the research aim, an extensive literature review and peer discussion before piloting. Data were analysed thematically using the framework approach.

Results: Seven out of eight patients and carers involved in the module, agreed to be interviewed; one was not available. Overall, patients and carers were very positive about their involvement in curriculum delivery, citing aspects such as supporting students to be more reflexive when in practice, enriching student's learning through real-life examples and encouraging more holistic patient care. Aspects such as lack of time, lack of session structure and large student classes were cited as challenges and areas for improvement. Patients and carers were not confident with involvement in curriculum design.

Discussion: The involvement of patients and carers in delivery of teaching through sharing of their experiences living with a specific disease has now been embedded in the curriculum. Ways of broadening patient and carer involvement and engagement are being explored such as having an increased pool to ensure sustainability and reaching out to the community to recruit a more diverse patient and carer population. This research indicates that patients and carers need to be encouraged to participate in curriculum design.

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An evaluation of peer facilitated sessions to enhance mentoring skills

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Keywords: Enhancing skills, Mentoring, Mentors, Peer support, Professional development tool

Background: Mentoring is a key tool in facilitating professional development (Hudson, 2013). The Royal Pharmaceutical Society (RPS) mentoring programme unites members to advance pedagogical knowledge. Recent mentoring research in pharmacy has highlighted a desire for mentors to have access to peer support (Mantzourani *et al.*, 2022). To enhance skills of experienced mentors, RPS created and delivered a series of peer support sessions.

Aim: To explore the value of peer support for mentors through facilitated peer support sessions.

Method: A series of peer support sessions were co-designed and delivered by RPS and two experienced mentors (pharmacists who had mentored several healthcare professionals), creating a confidential space for discussion and professional development. Sessions focussed on mentors' skills in managing complex issues when supporting mentee's professional needs. Attendees were encouraged to share experiences, reflect, and discuss approaches to overcome complex situations. Following the session, attendees (n = 41) completed an online survey about the value of the sessions. The survey comprised of quantitative and qualitative questions. Data was thematically analysed (Braun & Clarke, 2006). Ethics approval was not required as this was considered to be a low-risk study.

Results: Across 2021, three peer facilitated mentoring sessions were delivered. Survey results (n = 11, 27% of mentors responded) showed that 100% of attendees would recommend the sessions to colleagues and 99% agreed the learning outcome of enhancing mentoring skills were met.

Qualitative data fall into three themes:

- Value of peer support
- Enhancement of mentoring skills and knowledge
- Learning from peers

It appears that peer sessions contribute to professional development and the enhancement of mentoring skills.

Discussion: This study suggests peer support is highly valued by mentors, and support in this capacity serves as an appropriate professional development tool. Mentors appreciate a safe space for confidential discussion of their mentoring approach. These findings could inform and shape national and international peer support delivery models to a wider audience.

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