

3RD INTERNATIONAL ONLINE CONFERENCE OF HEALTH WORKFORCE EDUCATION

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The Mediating Effect of Digital Literacy and Self-Regulation on the Relationship between Emotional Intelligence and Academic Stress among Healthcare University Students: A Cross-Sectional Study

Dr Rasha Atia Kadri Ibrahim, Academic Faculty, Fatima College of Health Sciences, UAE

Short Paper

Aim: To assess emotional intelligence and academic stress among healthcare students and investigate the mediating role of students' digital literacy and self-regulation.

Background: Academic stress is a prevalent issue affecting students' well-being and academic achievement in today's challenging educational environment. Furthermore, combining digital literacy and self-regulation enhances emotional intelligence, creating a holistic "digitally regulated emotional intelligence" strategy to reduce academic stress effectively. This study emphasizes the significance of developing these abilities in educational settings to prepare students for success in a complex and technology-driven world.

Methods: A cross-sectional study was conducted to examine correlations and describe quantitative data. 240 students' data was collected in the 2023-24 academic year from Fatima College of Health Sciences. Pearson's correlation coefficient was applied to assess the associations between variables, and univariate linear regression was employed to investigate the connections between emotional intelligence and pertinent variables. The Hayes Process Model 4 macro was used to study how students' digital literacy and self-regulation mediate the relationship between emotional intelligence and academic stress.

Results: Emotional intelligence, digital literacy, and self-regulation were high. Furthermore, the academic stress level was moderate. The mediation analysis revealed that the direct effect of emotional intelligence on academic stress in the presence of the mediators was significant (t=3.830*, p<0.001*). Hence, digital literacy partially mediated the relationship between emotional intelligence and academic stress. On the other hand, self-regulation had no mediation effect on the relationship above.

Conclusion: The study noted significant connections between study attributes, particularly showing the substantial relationship between emotional intelligence and academic stress. Higher emotional intelligence did not consistently reduce stress levels for moderately stressed students, suggesting that other factors may influence their stress levels. Furthermore, digital literacy mediated between emotional intelligence and academic stress, implying that proficient use of online resources could help reduce stress in students with advanced digital skills. Finally, self-regulation did not act as a mediator in the relationship between emotional intelligence and academic stress.

Supporting Documents: https://inhwe.org/system/files/webform/fig%201_0.docx

Digital Literacy in Health Care Academics: A Model of Best Fit

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Short Paper

Introduction: The development of digital literacy in academics is under researched, with only a negligible percentage of publications considering digital literacy of academics in higher education. As a part of my doctoral thesis, an influential model was built based upon best fit modelling and correlations withing domains of digital capabilities and the digital skills themselves. To ensure that digital literacy and professional development programmes are effective, it is imperative that such a model be considered when designing professional development opportunities.

Methods: The HEE A Health and Care Digital Capabilities Framework (HEE, 2018) was used to allow health care academics to self-report on their digital capabilities. A model of best fit was then produced using AICc in R of domain influence, and correlations considered between statements within the HEE Framework.

Results: In total, 52 health care academics completed the self-perception survey across Universities in England. There was found to be an influential relationship between the domains of Technical Proficiency; Teaching, Learning and Self-Development; Creation Innovation and Research. Other domains of Information, Data and Content; Communication, Collaboration and Participation; Digital Identity, Wellbeing, Safety and Security shown to have a unilateral or reciprocal influence on development. Correlations between agreement statements within these domains of digital capability were explored to consider co-development and dependence on development in health care academics.

Discussion: The development of digital literacy within health care academics is influenced by other domains, either through codevelopment or development a priory. Exploration of key areas within academics expected profession skills set, such as creation or collaboration, shown that these digital skills or capabilities cannot be developed in isolation and that instructional design requires to incorporate the development of skills from other areas of digital literacy to ensure that learning and development takes place. As such, a lack of consideration of these relationships will result in not only reduced efficacy in opportunities attempting to develop digital literacy through a lack of required digital skills and knowledge but can also cause frustration and reduced motivation in applying digital skills without sufficient holistic knowledge to support application.

References: HEE. (2018). A Health and Care Digital Capabilities Framework. Health Education England.

Involving Students In Their Learning - Creativity In Co-Creation In Healthcare Science Students

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Short Paper

The co-creation of skills development in healthcare education represents an innovative approach that actively involves students in the learning process, enhancing their engagement and fostering essential competencies. This method encourages collaboration between tutors and students, allowing for a more individualised educational experience that addresses the specific needs of future healthcare professionals.

Co-creation in healthcare education typically involves students in the design and delivery of learning activities and/or assessments. This engaging approach empowers students by allowing them to have an active role in their education. This enriches the teaching experience for both staff and students and increases student motivation and ownership of their studies.

This presentation will share the experience of Aston University healthcare science students who as a cohort discuss key skills required for a successful start to their university education. Students were also involved in deciding the pass/fail criteria for this assessment, which sits within a larger assessment portfolio in the module. Students were also provided with the flexibility and creativity to present their submissions in a multitude of formats, from a traditional written piece to graphics and more.

The presentation will highlight some example work and the tutor's reflections of the process, including tips for how others can implement this in their own programmes.

Enhancing CPR Training: Evaluating the Impact of Real-Time Feedback on Interns' Performance and Knowledge Retention

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Short Paper

This research aims to contribute to CPR training, determine the objective benefit of technology at the fallible points of the classical method, and contribute new information to the literature (Mei et al., 2011; Olasveengen et al., 2020).

We designed our research as a prospective experimental study, and 311 intern physicians studying at the Ege University Faculty of Medicine voluntarily participated. Our study consists of a pre-test, a two-stage application without and with feedback, and a post-test. Participants answered the pre-test with their current knowledge level without receiving theoretical training, and performed the first chest compression application on adult-child-infant models without receiving feedback. They executed the second application after receiving feedback, directing their practices accordingly. The device and an observer separately evaluated each stage and recorded the results. The feedback device examined the difference in cognitive level after answering the post-test, which contained the same questions as the pre-test. Upon comparing the effect of real-time feedback on the adult, child, and infant models, we observed a significant increase in the rate of adequate chest compression in the presence of feedback. We found all these results to be statistically significant (p = 0.0001). The agreement between observer and device evaluation in the absence and presence of feedback in assessing the overall quality of chest compression is poor. Observer evaluation varies depending on experience; as experience decreases, compliance with device evaluation also decreases. The device, not the observer, performed the pre-test evaluations, resulting in a statistically significant increase in the rate of correct answers to the questions in the post-test, leading to more accurate and objective results. We carried out the application without theoretical training, relying solely on receiving feedback. Consistent with the literature, our study found that the use of a real-time feedback device had a healing effect in CPR practice. Evaluations performed by the device rather than the observer yield more accurate and objective results. The comparison of observer evaluation and device distinguishes our study from the literature (Kim & Oh, 2020; Sabri Özden et al., n.d.; Wagner et al., 2019). Without theoretical training, practicing with feedback improves the level of cognitive knowledge.

Supporting Documents: https://inhwe.org/system/files/webform/FLOWCHART-Enhancing%20CPR%20Training.pdf

Preparing Pharmacy and Medical Graduates for Collaborative Prescribing: A Team-Based Learning Approach in Primary Care

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Dr Dariush Saeedi, General Practitioner, University of Leeds, UK

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Dr Kate Matheson, General Practitioner, Alwoodely Medical Centre, UK

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Short Paper

Background: The importance of interdisciplinary education in healthcare is widely acknowledged for its role in improving patient outcomes and fostering better clinical decision-making (1). The World Health Organisation has consistently highlighted the need for such collaborative education (1). Despite this recognition, primary care settings often face challenges in implementing effective interdisciplinary learning, particularly as student numbers increase and resources become limited (2). With the impending change in the UK healthcare system — mandating all pharmacy graduates to be independent prescribers by September 2024 — there is an urgent need to foster collaborative education between pharmacy and medical students to ensure safe and effective patient care (3).

Educational Challenge: The primary challenge lies in bridging the interdisciplinary gap and building confidence in collaborative practices among future healthcare professionals. Pharmacy students, who will soon be prescribing beyond Patient Group Directions (PGDs), must be equipped with the skills to communicate and collaborate effectively with medical colleagues. Current primary care teaching methods often do not provide scalable, resource-efficient models that prioritise teamwork and practical collaboration.

Objectives: The study aimed to implement and evaluate the effectiveness of Team-Based Learning (TBL) in promoting interdisciplinary engagement between third-year medical students from the University of Leeds and third- and fourth-year pharmacy students from the Universities of Huddersfield and Bradford. Conducted at Alwoodely Medical Centre from October to December 2024, the initiative was designed to assess how TBL impacts students' knowledge retention, collaborative skills, and confidence in applying their learning to real-world scenarios in primary care.

Methodology: The study was conducted through weekly or biweekly TBL sessions, each lasting two hours and facilitated by a practicing physician. Pre-session e-learning materials covered essential topics, including the Pharmacy First scheme and NICE CKS guidelines. Students were required to complete individual Readiness Assurance Tests (iRATs) to gauge their preparation, followed by team Readiness Assurance Tests (tRATs) to encourage collaborative problem-solving. The interdisciplinary teams, comprising four to five students from different fields, tackled clinical cases relevant to the Pharmacy First scheme.

Evaluation and Results: The study included 26 students, across 6 sessions and preliminary data collection involved quantitative and qualitative measures. Analysis of iRAT and tRAT scores indicated that team-based collaboration led to significant improvements: tRAT scores were, on average, 12% higher than iRAT scores, demonstrating enhanced understanding through group interaction. Notably, pharmacy students showed an 18% improvement, underscoring the value of interdisciplinary peer learning. Survey responses and focus group discussions reinforced these findings. All participants reported improved comprehension and confidence in clinical settings.

Key themes identified in focus groups included:

Interdisciplinary Insight: Students expressed appreciation for diverse perspectives, enhancing their understanding of each discipline's role.

Collaborative Learning: The format allowed participants to "build on each other's ideas," leading to more effective application of theoretical knowledge.

Engaging Environment: Compared to traditional lectures, students found TBL more interactive and conducive to knowledge retention. We will have a further one month of data at the time of presentation.

Discussion: The study demonstrated that TBL is a resource-efficient and effective method for enhancing interdisciplinary education in primary care, preparing pharmacy graduates for their expanded roles as independent prescribers. The findings advocate for the expansion of TBL to include other healthcare disciplines, as well as continued evaluation and feedback collection to refine the approach. Future research will investigate the long-term impact of TBL on clinical decision-making and teamwork skills among healthcare students.

Conclusion: Implementing TBL in primary care education provides significant benefits for interdisciplinary collaboration and knowledge application. This approach prepares pharmacy and medical students to navigate the complexities of real-world practice with greater confidence and competence. The ongoing data collection and analysis will further elucidate the strengths of TBL in fostering a capable and cooperative healthcare workforce.

- 1- World Health Organisation, 2010. Framework for action on interprofessional education and collaborative practice. Geneva: Health Professional Network Nursing and Midwifery Office, Department of Human Resources for Health.
- 2- Abu-Rish, E., Kim, S., Choe, L., Varpio, L., Malik, E., White, A.A. et al., 2012. Current trends in interprofessional education of health sciences students: a literature review. Journal of Interprofessional Care, 26(6), pp.444-451.
- 3- Michaelsen, L.K. and Richards, B., 2005. Drawing conclusions from the team-learning literature in health-sciences education: a commentary. Teaching and Learning in Medicine, 17(1), pp.85-88.

Affiliations: Alwoodley Medical Centre, University of Leeds and West Yorkshire Foundation school. We gratefully acknowledge the funding from the primary care placement innovation pilot funding from Academic Unit of Primary Care, University of Leeds.

Please be aware: an earlier draft of the study titled "Enhancing Interdisciplinary Learning Through Team-Based Learning in General Practice" has been accepted for presentation at the NET 2024 conference. While this current talk will include some overlapping content, it features updated data and a clearer, more focused aim, offering new insights and perspectives.

Professionalism Education: A Comparative Analysis of University Educational and Assessment Practices in the US, UK, and South Korea

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Mr Christopher Shin, Student, College of Medicine, The Catholic University of Korea, Republic of Korea

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Short Paper

Introduction: Medical professionalism is a set of values and behaviours that underpins the trust the public has in doctors, encompassing integrity, compassion and diligence. The United States and the United Kingdom have long histories of integrating medical professionalism into standards of practice. The concept of professionalism in South Korea however, is relatively new. The accepted consensus is that professionalism is not an inherent but a competency that must be developed through structured educational programs. This is, however, an emergent concept in Korea due to the lack of historical foundation, confucianism and the pseudocorporatist structure of medical practice in Korea.

This comparative analysis explores how the undergraduate teaching and assessment of medical professionalism differs between the US, UK and South Korea. This work touches on the cultural, historical, and regulatory contexts that shape these differences.

Method: We conducted a systematic search in OvidMedline, OvidEmbase, and Cochrane databases, as well as grey literature, for English and Korean articles published between 2000 and June 2024. Articles were screened in a two-step process (title-and-abstract, full-text) against the inclusion criteria. Thematic analysis was used to identify key themes and concepts.

Results: 2,316 database papers were screened at the title-and-abstract level, with 182 grey literature sources identified. 136 articles met the full inclusion criteria. The majority of studies were from the US (n=104), followed by the UK (n=20) and South Korea (n=12). Of these, 81 detailed on education, 26 on assessment, and 29 on both education and assessment. Reflective writing was identified as the most common educational feature (n=29).

Discussion: While institutional diversity exists, professionalism education and assessment practices remain relatively consistent in the US and UK. Although professionalism education has recently increased in Korea, some institutions still lack formal professionalism training or evaluation. "Rite of passage" white coat ceremonies, symbolizing responsibility and ethical commitment, are common in both the US and Korea, though less so in the UK.

Reflective writing and digital portfolios are being adopted more widely in all three countries, as is the mandatory signing of Student Professionalism Agreements or Codes of Conduct. During clinical rotations in the US and UK, professionalism is commonly assessed through feedback forms or checklists. Direct peer assessment is uncommon in both the US and UK, and absent in Korea.

The primary determinants of the quantity and quality of professionalism education and assessment are likely shaped more by institutional factors than by national context, with the hidden curriculum hypothesized to exert a significant influence.

Anna de Beer and Christopher Shin are co-first author.

 $\textbf{Supporting Documents:} \ \underline{\texttt{https://inhwe.org/system/files/webform/de\%20Beer\%20et\%20al.\%20\%20Figures\%20} \\ \textbf{pdf\%20.$

Developing An Interdisciplinary Student Leadership Academy: An Evaluation Of The Pilot Year

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Short Paper

A Wales-wide initiative to develop compassionate leadership within health and social care gave impetus to the development and implementation of an Inter professional Student Leadership Academy. Building on the drive for culture change within healthcare, supported by policy and evidence, students access further opportunities for leadership development and innovation.

Purpose: The theoretical and empirical background to the development of the Academy is based on current evidence on leadership development, the importance of this within the healthcare workforce, and regulatory requirements for healthcare professionals (Dawson and West 2018, James 2021, James et al 2022, West et al 2022). Building on the research of James (2021), it acknowledges students' experiences of leadership and the resulting emotional reasoning which can shape how individuals view their own leadership development. The program focuses on key areas from this work, experiential learning and self development, and provide the students with a further development opportunity which is not fully available within the undergraduate curriculum at present. Individual coaching and Action Learning Sets support students with a range of learning opportunities and the development of an improvement project. Evaluation of this leadership program during its pilot year involved the measurement of effectiveness to inform whether objectives and outcomes were met, as well as the impact for the students. The evaluation process includes narrative and empirical pre and post evaluations. This provided narrative evidence to measure the effects of the program for students' knowledge and behaviours, providing evidence of impact and effectiveness of the approach, content and activities. The philosophy of this development builds on the approach that interdisciplinary working is a positive influence on workplace culture and that both leadership and improvement should be possible and valued regardless of an individuals' hierarchical status or position. This progressive program aims to provide healthcare students with opportunities for interdisciplinary work, experiential learning and access to role models to support the development of compassionate leaders (Clouston 2017).

Methods: Applying the approach of Bowen (2017) the program was developed using the 'Backward design', which considers the desired outcomes required prior to designing content and activities. This enabled the design to evolve from the desired outcomes and focused on student learning and development which should be transparent to the student as they begin the program. Kirkpatrick's (2021) model was implemented for the evaluation.

Conclusion: This presentation considers the development, implementation and challenges of developing ISLA along with the evaluation results and next steps.

Results: Results demonstrated a positive narrative of student experiences and learning on the program. We have adapted the programme in response to suggestions and intend to build an alumni of ISLA students over the coming years.

Comparison of Three Methods for START Triage Training in Paramedic Students: Traditional, Role-Play, and Web-Based Game

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Short Paper

Introduction: Triage is a critical process in managing mass casualty incidents, enabling efficient allocation of limited medical resources. The Simple Triage and Rapid Treatment (START) method, developed in 1983, provides a systematic approach to categorize victims based on injury severity. This study explores the effectiveness of three distinct START triage training methods—traditional lectures, role-play simulations, and web-based game-based learning—among paramedic students. The goal is to assess which method best enhances triage knowledge and decision-making skills, thereby preparing students for real-world emergency scenarios.

Methods:

Study Design and Participants

The study employed a randomized controlled trial design involving 48 first-year paramedic students from Çanakkale Onsekiz Mart University. None of the participants had prior training in START triage. The students were randomly assigned to one of three training groups: traditional, role-play, and web-based game, with 16 students in each group.

Intervention Methods

- Traditional Training: Delivered through classroom-based lectures and instructor-led discussions.
- Role-Play Training: Involved simulated scenarios where students acted out roles of patients and responders. This method aimed to provide hands-on experience in a controlled environment.
- Web-Based Game Training: Utilized the "60 Seconds to Survival" simulation game, which presented various disaster scenarios requiring rapid triage decisions. The game offered immediate feedback on performance, enhancing learning through repetition and practice.

Data Collection: Participants completed a pre-test and post-test consisting of multiple-choice questions to evaluate their knowledge of START triage. Additionally, a demographic survey collected data on participants' age, gender, and previous experience with training methods. Ethical approval was obtained, and all participants provided informed consent.

Statistical Analysis: SPSS 26.0 was used for data analysis. Pre- and post-test scores were compared using Wilcoxon and Kruskal-Wallis tests to identify significant improvements within and between groups. Descriptive statistics were also computed for demographic variables.

Results: The study revealed a significant improvement in START triage knowledge across all groups. The mean pre-test score was 60.0 (SD: 16.63), which increased to 91.46 (SD: 12.55) in the post-test (p < 0.05). However, the analysis showed no statistically significant differences in the knowledge gains between the three training methods (p > 0.05).

Sociodemographic factors, including age, gender, and prior exposure to training, did not significantly influence the training outcomes. This suggests that all three methods are equally effective in enhancing triage knowledge, regardless of the participants' background characteristics.

Discussion: The findings align with prior research, highlighting the comparable effectiveness of diverse training modalities in disaster preparedness education. Role-play, as an interactive and experiential method, allows learners to engage deeply with the material, promoting retention and practical application of knowledge. Similarly, web-based games provide a dynamic and flexible learning

environment, enabling students to practice decision-making skills in simulated disaster scenarios. Traditional lecture-based methods remain a foundational approach, effectively conveying theoretical knowledge.

Previous studies have shown that web-based gaming and role-play methods can yield higher engagement and learning outcomes due to their interactive nature. However, the lack of significant differences between these methods and traditional training in this study may be attributed to the short-term evaluation period. Further research is recommended to investigate long-term knowledge retention and the practical application of skills.

Conclusion: This study demonstrates that traditional, role-play, and web-based game methods are equally effective for START triage training in paramedic students. The findings support the integration of diverse training approaches in paramedic education to accommodate different learning styles and resource availability. Future research should focus on assessing the long-term impact of these methods on skill retention and real-world performance.

Supporting Documents: https://inhwe.org/system/files/webform/TAbles.docx

From Peers to Practice: A Three-Year Evolution of Student-Led OSCE Education Demonstrating the Power of Educational Innovation in Healthcare Training

Dr Robert Leigh, Doctor (PGY-2), Manchester University NHS Foundation Trust

Short Paper

Introduction: Objective Structured Clinical Examinations (OSCEs) remain a significant source of anxiety for medical students, primarily due to unclear understanding of assessment criteria. Traditional preparation methods, often delivered by senior clinicians, frequently focus on clinical knowledge rather than assessment technique and fail to address the 'hidden curriculum' of how marks are awarded. This gap presented an opportunity for educational innovation through peer-led interventions, challenging traditional hierarchical teaching models while addressing a fundamental need in medical education.

Methods: A structured teaching series was developed and refined over three years (2022-2024), evolving from a local medical school initiative to a national programme. The series utilised a domain-based approach, breaking down OSCE assessment criteria into clear components (including communication, information gathering, clinical reasoning) and was delivered via online platforms to ensure accessibility. Content was mapped to UK Medical Licensing Assessment requirements, covering medical, surgical, psychiatric, and specialist stations. The programme specifically focused on efficient, mark-generating techniques and examiner perspectives, delivered by near-peer educators who recently succeeded in these examinations. Quantitative and qualitative feedback was collected after each session.

Results: The programme gained 779 survey respondents across five UK medical schools (Belfast, Manchester, Nottingham, Leeds, Lincoln). Over 95% of participants reported increased OSCE preparation confidence, with 99% positive feedback on the domain-based teaching method. Qualitative feedback emphasised the value of clear assessment criteria explanation, the accessibility of online delivery, and the benefits of near-peer teaching. The successful transition to online delivery demonstrated the potential for cost-effective, scalable medical education.

Discussion: This series demonstrates not only the effectiveness of peer-led, domain-based OSCE teaching but also broader implications for healthcare education, such as student-led redevelopment of curriculum. The programme's evolution from local to national scale challenges traditional assumptions about medical education delivery and educator seniority. Success in online delivery suggests a model for accessible, scalable healthcare education that transcends geographical barriers. The teaching approach could be adapted for other healthcare professions and assessments, potentially transforming how we prepare healthcare professionals for clinical assessments. This experience provides evidence supporting the integration of peer-led teaching into formal curricula and demonstrates the value of empowering junior educators in healthcare education reform.

Supporting Documents: https://inhwe.org/system/files/webform/INHWE%20Final.pdf

Cultivating Collaboration: The Role of Strategy in Interprofessional Education

Dr Vikki Park, Higher Education Teaching and Excellence Lead, NCG, UK Dr Fiona Cust, Associate Professor, Staffordshire University, UK

Short Paper

In health and social care programmes, students must develop competence to work and learn together within effective interprofessional teams. Interprofessional education (IPE) prepares students for real-world practice, aiming to create professionals who are safe, inclusive, and collaborative, placing the person receiving care at the centre. However, the design, delivery, and evaluation of IPE across diverse student programs presents significant challenges. This presentation explores the collaborative efforts of two nursing academics in developing and implementing IPE strategy within diverse higher education curricula. Their approach not only addresses the complexities of IPE but also fosters improved student outcomes and readiness for interprofessional collaboration. Attendees will gain insights into the development of IPE Strategy to strategically plan and implement IPE in Higher Education, highlighting best practices and lessons learned.

Lost in the Research Sea: Using Interdisciplinary Working to Embed Research Culture in Nurse Training

Dr Stacey Astill, Senior Library Assistant, Keyll Darree, Isle of Man Mrs Sinead Mary Parr, Student Lecturer, Manx Care, Isle of Man

Short Paper

In this presentation we discuss the process of using student feedback to inform the embedding of research skills and culture into a pre-registration nursing course.

Keyll Darree Education and Training Centre (KD) is an approved partner of the University of Chester (UoC) and runs, among other courses, a pre-registration nursing course accredited by UoC. In previous years parity of teaching has been required, meaning students are provided with the same literature searching sessions as UoC students. However, this year UoC has allowed more flexibility in teaching which has left KD staff able to work with the students to reshape their learning.

The landscape of research has increasingly changed with a move away from print to digital, developing technologies, and an impossible-to-keep-up-with level of growth in academic publications. When coupled with the reduction of librarians in schools to provide skills training and lower UCAS point entry requirements to the course, students felt under-confident and under-supported – as evidenced in their annual library feedback sessions. Permitted more freedom, a group of lecturers and library staff decided to work together with a focus on student feedback, staff perceptions and observations, and current best practice initiatives to redesign the way information literacy and research skills are delivered.

Making changes across modules we have settled on a cohesive approach to introducing research skills, working with the library team to ensure the students aren't overloaded by one long library-skills session. Library and nurse lecturing staff work closely together so the students can see how the skills will work in the classroom and their future nursing roles. We want to ensure they consider themselves researchers as well as students so that this attitude can be carried forward into their future nursing careers.

Developing a Competency-Based Approach to Facilitate Teaching, Learning and Assessment of Antimicrobial Stewardship to Student Pharmacists as part of a One Health Approach in Higher Education

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Dr Naomi Fleming Antimicrobial Stewardship Lead, NHS England, East of England, UK

Mrs Sandra Martin Associate Professor, University of Bradford, Bradford, UK

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Ryan Hamilton, De Montfort University, Leicester, UK

David Allison, University of Manchester, Manchester, UK

Diane Ashiru-Oredope, University College London, London, UK AND UK Health Security Agency, London, UK

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Short Paper

Background: The environmental impact of the inappropriate use of antimicrobials and antimicrobial resistance (AMR) is recognised by global organisations such as the World Health Organisation, the United Nations and the European Union. AMR is a critical global problem that affects human health, animal health and the environment and is potentially one of the best examples of the need to apply the One Health approach. Inappropriate antimicrobial use in animal husbandry, human health and contaminants in the environment all contribute towards the development of AMR.

Antimicrobial stewardship (AMS) is one strategy to promote appropriate use of antimicrobials to minimise AMR and it is a priority to implement this strategy to ensure sustainable prescribing. National consensus-based competencies for teaching AMS to undergraduate healthcare professionals in the UK were launched in 2018. (1)

Competency-based teaching, learning and assessment underpins the requirements for initial training and education of pharmacists (IETPs) in the UK as set by the General Pharmaceutical Council (GPhC). This competency-based pedagogic approach is conducive when teaching AMR and AMS. It ensures that rather than only reciting and absorbing content, student pharmacists gain the necessary skills and behaviours to apply knowledge effectively in clinical practice. This is particularly relevant since foundation trainee pharmacists (in their 5th year after completing the pharmacy degree and before the pre-registration exam) need to show competency in independent prescribing at the point of registration from 2026. Therefore, education needs to evolve to incorporate prescribing skills including decision-making and is at the heart of ensuring a future pharmacy workforce that can prescribe antimicrobials responsibly.

Aim: The aim of this project was to develop a UK-wide national AMS competency framework specifically tailored for student pharmacists and foundation year trainees.

Method: A working group of academics and pharmacy practitioners from all four nations and with expertise in AMS was set up in September 2022 (NAPEG - National Antimicrobial Stewardship Pharmacy Education Group). The diverse background of group members allows a healthy mix of ideas with academics informing the group of what may be achievable within the constraints and professional requirements of the pharmacy curriculum, and pharmacy practitioners providing input into essential AMS competencies for early career pharmacists. Student pharmacists from a national organisation (BPSA) have been invited to join the group to encourage

co-designing of this curriculum. National pharmacy bodies including UKCPA, UKHSA, NHSE, NHS Wales, HIS, BSAC and RPS are also members of the group.

Development of the consensus AMR and AMS competency framework for student pharmacists was co-ordinated by NHS England; relevant indicators from published frameworks (UK undergraduate medical students, and a UK wide set of generic AMS competencies for undergraduate healthcare professional education) were included alongside new indicators developed by NAPEG. (1,2) The results of a survey conducted across Schools of Pharmacy (SoP) aiming to determine the nature and extent of implementation of the latter generic competencies, also informed this project. (3) To ensure consistency, the group worked with the British Society for Chemotherapy (BSAC) to update the "Keep Antibiotics Working" (KAW) website, (that provides educational resources for both educators and students across a range of healthcare professionals including doctors, pharmacists, dentists and nurses)), and aligned pharmacy resources to the framework domains.

No ethics approval was required for this study since it did not involve any participants.

Results: The final framework consists of six domains: Infection prevention and control, antimicrobials and antimicrobial resistance, antimicrobial prescribing and stewardship, vaccine uptake, person-centred care and interprofessional collaborative practice. Each domain includes a competency statement together with accompanying descriptors (74) clearly outlining the knowledge and application required by newly qualified pharmacists. Descriptors stress the need for student pharmacists to demonstrate an understanding of the concept of One Health focusing on AMR and the inter-dependencies between human health, animal health, agriculture, food and the environment. To support student pharmacists in developing skills to make appropriate prescribing decisions, they need to demonstrate an understanding of factors contributing to AMR including inappropriate prescribing by healthcare workers.

This indicative curriculum was published by NHSE Workforce, Training and Education Directorate. The group has also developed a set of suggested practice-based activities aligned with the framework domains to support preceptors supervising and assessing students on placement.

Conclusion: Though it is not mandatory to implement this curriculum, it provides a benchmark for embedding AMS competencies into undergraduate pharmacy curricula and allows identification of topics that may not be adequately covered. It also promotes consistency of approach across schools. Considering the UN commitment to act on global antimicrobial resistance and the NHS Sustainable Development management plan, this project is timely and of great importance to support development of future pharmacists as leaders in environmental sustainability.

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Time for ACTion: An Innovative Approach to Supporting the Skills and Wellbeing of Medical Students

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Short Paper

Background

Rates of psychological distress are continuing to increase among the medical student population (1). Psychological Flexibility (PF) is an adaptive behavioural skillset that has demonstrated a positive relationship with managing medical student burnout and wellbeing. Evidence suggests that PF may mediate burnout and wellbeing outcomes and may be a protective factor (2). Acceptance and Commitment (ACT)-based approaches are increasingly being used as a way of increasing PF including amongst medical students (3). The work of My medic is largely provided on a one to one basis, and so the ACT course and study sought to increase the reach of the skills training, whilst assessing the benefits of small group-based training.

Summary of work

My Medic Learning Development Unit is a confidential, multidisciplinary support service for Cardiff medical students. The team designed, delivered and evaluated an online synchronous four-week ACT course for medical students who are actively supported by My Medic. Ethical approval was granted from Cardiff University School of Medicine Research Ethics Committee.

The study was designed to evaluate the impact of the ACT based Group Training programme on levels of stress, anxiety, depression, wellbeing, and psychological flexibility. The 4 week course includes weekly 90 minute modules, and offers online small group workshops and self-directed activities.

Quantitative data was collected via an online survey which included the following measures; Perceived Stress Scale 4 (PSS4), The Acceptance and Action Questionnaire (AAQ-2), Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS), Patient Health Questionnaire 9 (PHQ9) and the Five Facet Mindfulness Questionnaire (FFMW15). These were administered at three separate time points: baseline data was collected prior to students participating in the course (T1), at the completion of the final module, (T2) with a final survey 12 weeks post-course. Qualitative data was also collected via an online focus group at T2, designed to explore student perspectives around the intervention, in terms of acceptability, accessibility and delivery.

To date, three ACT courses have been delivered to three small groups of medical students (12 students in total) between April 2024 and December 2024.

Summary of results, discussion and conclusions

Pre- and post-course results from the ACT courses were highly encouraging, recording consistent positive change across the two cohorts on measures of psychological flexibility and wellbeing, with over 85% of items recording a positive change.

This result indicates an improvement in participants' ability to manage anxiety and handle challenging thoughts.

In particular, students reported significant improvement in their personal efficacy, including:

- Confidence about their ability to handle their personal problems
- · Ability to manage difficult thoughts
- Improved awareness of their unwanted or unhelpful thoughts
- Appreciation of their wellbeing needs
- Use of wellbeing and mindfulness strategies

Also of note, participants recorded robust improvement in their psychological flexibility and managing the effect of difficult thoughts. Students reported:

- The effect of difficult emotions as less problematic
- · Improved decision-making
- · Being less reactive to distressing thoughts or images.

Furthermore, qualitative data reinforced the quantitative data and included, amongst other comments:

- All participants would recommend the course to their peers
- The course offered participants 'alternative ways to view the situation'
- Small group participation was enjoyed, as 'one-to-one work would've been too intense'
- 'Learning that you have a choice about how to manage unhelpful thoughts'
- 'I liked being offered a range of techniques so that I could choose which one I used'

This study suggests that the online ACT small group training had a positive impact on students, by pairing ACT skills training alongside individual exercises and group reflection. This work is ongoing to develop the evidence base around the use of small group ACT skills training within the medical student population.

Further analysis of participant feedback will inform future ACT courses and study, and My Medic plan to deliver more ACT courses in 2025.

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Türkiye's Vision For Interprofessional Education

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Short Paper

Türkiye's vision for interprofessional education (IPE) aims to enhance healthcare effectiveness and patient safety by fostering strong collaboration among healthcare professionals. This vision focuses on improving interdisciplinary communication, teamwork, and shared ethical values, allowing healthcare workers to better understand each other's roles and responsibilities. Interprofessional education is designed to improve care quality, reduce error rates, and ensure patient safety. Accreditation processes play a crucial role in maintaining the quality and sustainability of IPE programs. Moving forward, expanding the scope of IPE programs, increasing professional development, and using detailed assessment tools are essential for further enhancing the effectiveness of interprofessional education in Türkiye's healthcare system.

Supporting Documents:

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Hybrid Approach to Clinical Training

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Short Paper

Introduction: Over the past few decades, the landscape of medical education has undergone significant transformation. The decline of traditional bedside teaching has paved the way for the rise of innovative digital approaches, such as simulation-based learning, distance education, and Al-powered tools. While these technologies offer numerous benefits, including the ability to replicate complex clinical scenarios and facilitate repeated practice, they cannot fully substitute for the essential human elements of medical education: empathy, patient interaction, and physical examination skills.

To address this challenge, we, as Undergraduate Education Fellows, designed a blended learning model that combines the strengths of bedside teaching and simulation-based learning for medical students at East Surrey Hospital, Redhill, UK.

Methods: We implemented a bi-weekly teaching program that integrated bedside teaching and simulation. Each session, customized to the students' year level, accommodated a group size of 2-6. While final-year students were encouraged to explore investigations, management strategies, and interprofessional collaboration, third-year students focused on honing their skills in history-taking, physical examination, and effective communication. Bedside sessions were designed to explore a range of body systems, whereas simulations centred on emergency scenarios. Junior doctors from the Trust were invited, via email, to join our faculty and facilitate these sessions.

Results: Over 14 weeks, we delivered simulation training to 81 students and bedside teaching to 61 students.

Both simulation training and bedside teaching significantly boosted confidence among undergraduate medical students. In bedside teaching, all 61 respondents found patient encounters and reflective discussions highly useful, with 58 reporting improved confidence in physical examinations. For simulation training, 97% found the course valuable, with strong agreement on the realism of scenarios and enhancements in both A-E assessment skills and non-technical abilities. Additionally, 80 students noted improved communication with colleagues. Minimal neutral responses and no disagreements across categories highlight the positive impact and high satisfaction levels, underscoring the effectiveness of these interactive, hands-on learning methods.

Discussion: A combined teaching model of simulation training and bedside teaching shows strong promise in enhancing diverse skills among medical students. Simulation training builds technical skills, confidence in patient assessment, and scenario-based problem-solving. Bedside teaching complements this by deepening clinical examination skills, patient interaction, and reflective practice. Together, these methods foster both technical and non-technical competencies, including communication, teamwork, and decision-making. Feedback indicates high satisfaction with both methods and a clear improvement in students' confidence and practical skills, highlighting this blended approach as an effective, comprehensive model for medical education.

Building the Task Shifting Culture in healthcare – The new curriculum of the TaSHI project

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Short Paper

Healthcare systems in Europe often face significant shortages or unequal coverage of health professionals. Not only sociodemographic changes, but also epidemiological health challenges shape the current and future workforces. Producing high-qualified health workers in the labour market takes time, so innovative solutions should be considered for quick wins. One essential aim of task shifting is to expand workforce efficiency, and to enhance more rational and optimal workflows. Task shifting can contribute to more effective organisation of care and management of human resources for health at different levels.

The "Empowering EU Health Policies in Task Shifting" - TaSHI project promoted evidence-based reforms in the health workforce field by designing and developing operational tools for the policy environment. TaSHI aimed to provide a novel understanding and up-to-date knowledge on task shifting and on transferability and uptake of good practices in task shifting implementation.

A complex mapping exercise by screening the academic literature and EU project documents, and focus-group interviews with key experts gathered information on useful tools, methods and practices in task shifting. A common framework followed a standard stepwise approach to summarise conclusions and maximize the lessons learnt from case studies. Pilot implementation sites in five European countries implemented task shifting initiatives.

The results underlined that task shifting supports facing workforce shortages by better utilization of the current staff, better use of current skills of various health professionals including job crafting, carving and enrichment. More collaborative interprofessional teams might lead to more integrated and person-centered care models. Improved collaboration of professional teams can result in improved resilience of the workforce. In terms of retention, task shifting enables health professionals to have extended roles, new scope of practice that increases motivation and job satisfaction. Along these, we might see higher work engagement and lower exhaustion and burnout

Based on the findings of the TaSHI project, we can conclude that several factors are necessary to realize task shifting-supportive environment and organizational climate. Some of the pre-requisites are suitable leadership, necessary resources, appropriate referral and documentation, evidence based guidelines and communication. The core and unavoidable factor is the open culture towards task shifting. Changing culture, such as shaping the mindset, attitudes and cultural sensitivity can and should be influenced and improved both on the health workforce side, as well as the patient side. The TaSHI project designed practical tools to foster task shifting culture in the healthcare sector. In terms of upskilling the workforce, the "Curriculum for task shifting in healthcare" and training materials support understanding generic and specific content. The TaSHI Booklet effectively promotes task shifting as a useful strategy, and awareness raising of workforce planners, leaders and managers to recognize the potential of task shifting. The Booklet can also be used to inform and educate patients and citizens, as they are key stakeholders in building and shaping the task shifting culture.

A Modified Delphi Study to Design a Framework Supporting Practice-Based Interprofessional Education Initiatives for Student Pharmacists

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Short Paper

Introduction: Interprofessional education (IPE) is recognised as a necessary requirement to prepare healthcare students for collaborative practice in complex health and social care systems.1 This study aimed to determine consensus among key stakeholders on the design of a framework to support IPE development and implementation during experiential learning (EL) placements for student pharmacists in Scotland.

Method: An action research strategy using an online two-round modified Delphi was conducted; involving a heterogenous group of panel members with representation from key stakeholder groups. Participants included academics from pharmacy, medical and nursing programmes, facilitators hosting student pharmacists on placements in various areas of practice, medical and nursing healthcare professionals, practice educators involved in the training of EL facilitators, student pharmacists, foundation year trainee pharmacists and patients/carers with lived experience of the impact of interprofessional collaborative practice on patient care. Delphi statements were developed from a literature review, a document analysis of international IPE frameworks and key findings from empirical studies completed as part of a wider programme of research of which this study forms part. This study was underpinned by systems theory - the Biggs 3P Model2 – with statements grouped into three sections linked to the 3P - presage, process and product – domains. A 4-point Likert scale was used. Data were analysed using descriptive statistics. Consensus was pre-set at ≥70% agreement (summative of strongly agree/agree) for individual statements. Panellists could provide comments at the end of each section; these were analysed thematically.3 Processes followed are outlined and aligned with quality assurance processes to increase the rigour of the modified Delphi process (Figure 1). Ethical approval was granted by the Robert Gordon University School Ethics Review Committee .

Results: Forty-five panellists consented to participate; a response rate of 82.2% (37/45) was achieved in round 1 and 71.1% (32/45) in round 2. Consensus was reached on 70/75 (93.3%) of statements/sub-statements included in round 1; with high levels of agreement on statements relating to IPE learning outcomes (83.7%-100%) and very high levels of agreement on statements relating to collaborative competencies that students should develop (97.3%-100%) and the need for a co-ordinated effort between universities, placement providers and interprofessional practice teams to support the development and delivery of formally planned IPE initiatives (3P:Presage;Process;Product). In round 2, consensus was reached on 9/11 (81.8%) of statements; five statements which did not achieve consensus in round 1 and 6 new statements based on panel members' comments. The two statements that did not reach consensus related to summative assessment (3P:Product). Two themes were identified from comments: "Realistic versus idealistic approach?" and "Looking at the bigger picture". Panellists identified presage factors (logistical, organisational and regulatory) and process factors (EL facilitator facilitation style) as potentially hindering occasions for IPE. Unplanned IPE experiences were viewed as supporting interprofessional learning; however, reliance on these opportunities alone was not perceived to maximise learning. A need for increased focus on context factors to optimise the teaching/learning environment was considered necessary.

Discussion: Results suggest that key stakeholders agree on the majority of presage, process and product factors that must be considered during the development and implementation of practice-based IPE initiatives. Further investigation is needed to clarify any factors potentially contributing to a lack of agreement on statements relating to assessment.

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Supporting Documents: https://inhwe.org/system/files/webform/Figure%201.docx

Simulation-Based Clinics: Integrating Problem-Based Learning and Growth Mindset to Enhance Paediatric Competencies in Medical Students

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Short Paper

Introduction: A survey done in our unit showed heightened anxiety among medical students preparing for paediatric rotations compared to adult medicine. This is because clinical presentations in children differ significantly from those in adults, requiring a unique set of skills and knowledge.

Simulation-based education has been recognized as an effective strategy to mitigate this anxiety and build confidence by offering a structured and safe environment to practice clinical skills. Whilst this is usually reserved for resuscitation or acute scenarios, we piloted its use in a routine, less acute setup as simulation-based clinics. This pilot study was grounded in problem-based learning to support adult learning, and utilised Growth Mindset principles by Carol Dweck for feedback.

Methods: A cohort of medical students participated in four simulation-based clinics piloted over a two-month paediatric rotation. Each session consisted of three scenarios, focusing on both acute and routine paediatric conditions relevant to their training needs. The scenarios were designed to simulate real-world consultations, with medical students taking on the role of primary healthcare providers. A paediatric trainee played the role of a caregiver, allowing students to perform consultations and manage cases, while conducting examinations on a paediatric manikin.

The clinics included structured elements such as history-taking, differential diagnosis formation, and the development of management plans based on the relevant clinical guidelines. Practical skills, including prescribing medications, cross-speciality SBAR handover, safety netting and effectively communicating sensitive information, were core components of the training.

Each consultation was followed by a 10-minute feedback and reflection session, guided by Growth mindset principles, encouraging students to view challenges as opportunities for improvement. A survey was conducted after the last session to evaluate the value and effectiveness of these sessions on the students' learning and self-growth. Also, the final reflection session was based on Kirkpatrick's Model for Training Evaluation, examining the students' reactions, learning outcomes, behavioural changes, and overall results.

Results: The 5-point Likert scale survey assessed confidence in learning and clinical skills, relevance to learning outcomes, alignment with exams and future practice, promotion of critical thinking, and the perceived value of feedback.

Results showed that the sessions significantly enhanced students' confidence and satisfaction across multiple domains. Participants rated their confidence in applying clinical skills as high (mean = 4.4, SD = 0.5) and unanimously valued the sessions for their practical application (mean = 5.0, SD = 0.0). The relevance of the sessions to future clinical practice was also highly rated (mean = 4.8, SD = 0.3). Feedback was highlighted as a critical factor in skill improvement (mean = 5.0, SD = 0.0). Areas for improvement included perceived readiness for exams (mean = 3.9, SD = 0.6) and confidence in interpreting clinical findings (mean = 3.9, SD = 0.6). There was also a notable shift in students' motivation for self-directed learning (mean 4.5, SD 0.5) and in their approach to reflective practice.

Discussion: Simulation-based medical education (SBME) has proven effective in paediatric training by reducing anxiety and fostering confidence among medical students. Studies emphasize its value in enhancing clinical reasoning and technical skills through realistic, controlled practice environments. Integrating problem-based learning (PBL) into SBME further promotes active learning by simulating authentic clinical challenges. Feedback sessions guided by Growth Mindset principles, as utilized in this pilot, align with research highlighting debriefing as critical for reflective practice and skill consolidation, contributing to improved patient-centred care and professional development (Cheng et al., 2014; Dieckmann et al., 2011; Lopreiato & Sawyer, 2015).

Despite its strengths, SBME faces challenges such as resource intensity. However, addressing such issue through cost-effective design and enhanced deliberate practice could maximize its educational impact. Strong correlations between training relevance and confidence in clinical reasoning, as demonstrated in this study, affirm the importance of aligning simulation scenarios with real-world practice. Future work should focus on optimizing scenario design, long-term outcomes, and the accessibility of simulation in diverse educational contexts (Cohen et al., 2012; Rangarajan et al., 2020)

Conclusion: This study underpins the value of simulation-based clinics in medical education, particularly when they are designed to align with contemporary educational theories. Integrating PBL and Growth Mindset principles into paediatric training can significantly enhance clinical competencies and build a foundation for lifelong learning and professional development. Addressing the identified gap in exam preparedness could further refine the effectiveness of these clinics, ensuring that students are well-equipped to excel in both practical and academic assessments. By fostering a supportive and structured learning environment, simulation-based education has the potential to prepare future clinicians to meet the diverse demands of paediatric care with confidence and competence.

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Exploring Awareness and Prevention of Work-Related Musculoskeletal Injuries Amongst Ophthalmology Trainees and within their Postgraduate Education Programme in the UK

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Short Paper

Background: Growing literature reports increased risk of work-related musculoskeletal injury in Ophthalmology doctors. This can lead to distressing pain impacting doctors during clinic and theatre, outside of work and in some cases require to surgery. Preventative measures for trainees can reduce the risk of musculoskeletal (MSK) injury and ensure we better support the ophthalmology healthcare workforce in postgraduate education.

Aims: 1) To explore the awareness and prevention of work-related MSK injuries amongst Ophthalmology trainees in the UK 2) Identify views on how education should be provided to benefit all trainees.

Methods: An anonymous Google survey was distributed to all UK ophthalmology training deaneries, from December 2023 to February 2024, via Regional Training Group representatives/Programme Directors. Question formats included yes or no, multiple choice and qualitative responses. Quantitative data were analysed in Microsoft Excel and presented as percentages and graphs. Qualitative responses were thematically analysed to identify themes.

Results: 128 trainees responded from 19/20 deaneries, ranging from 1-10 years of training. 79.7% reported no prior MSK injury, 72.7% now experience MSK pain during clinical or theatre work and 85.9% report MSK pain in colleagues. The most affected areas are the neck (58.1%), lower back (53.8%), upper back (49.5%), and shoulders (35.3%). There were a range of ergonomic/preventative measures trainees used with the most common barriers to implementing these consistently being time pressure (79.5%) and inadequate equipment (60.7%). The majority (89.8%) wanted more education regarding work-related MSK injury and prevention. Participants expressed occupational health input (63.3%) and teaching incorporated into postgraduate teaching days (54.7%) as the most effective ways to benefit trainees. However, the majority (61.5%) did not know how to request occupational health support/assessment. Qualitative responses highlighted the responsibility of employers in protecting trainees and the inappropriateness of tick box e-learning modules.

Conclusion: Work-related MSK injury is an issue affecting trainees and improvements are required in the current education and support provided. Increasing accessibility to occupational health assessments can be an effective solution.

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An Audit Comparing the Impact of Vocalized Objective Structured Clinical Examinations (OSCE) Questions in Conjunction with Written Instructions Versus Written Instructions Alone on Student Performance

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Short Paper

This audit aims to systematically evaluates the efficacy of two modalities for delivering clinical exam questions—vocalized versus written instructions—on student performance in Objective Structured Clinical Examinations (OSCEs) within medical education. We conducted a comparative analysis involving two cohorts: one group received questions articulated by an examiner in conjunction with written instructions, while the control group relied exclusively on written instructions. Data were collected across multiple academic cohorts, primarily focusing on the first semester of second year, focusing on quantifiable metrics such as examination scores, and qualitative feedback from examiners regarding question clarity and comprehension. The projected hypothesis is that analysis may reveal that the vocalization of questions enhances cognitive engagement and comprehension, potentially facilitating improved performance in clinical scenarios. A delineation will be made between students who required additional time to complete examinations to assess whether this subgroup benefitted differently from vocalized instructions compared to their peers. This analysis aims to determine if vocalization provides specific advantages in comprehension and performance for those who may struggle with time constraints during assessments. These findings hope to identify if there are potential benefits of integrating both vocal and written instructional formats to optimize educational outcomes. Future investigations will examine the implications of these delivery methods and to see if there can be links made between retention of verbal information and self-efficacy among medical students in clinical practice.

Simulation-Based Education for IPE: Practising (Inter)Professionalism and Communication Skills in a Safe Environment

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Short Paper

Background: The Nursing and Midwifery Council (NMC) and Health and Care Professions Council (HCPC) Standards for education and training clearly outline that interprofessional education (IPE) should be integrated into health and social care pre-registration education. IPE is occasions where two or more professions learn with, from and about each other 'to improve collaboration, quality of care and services' (CAIPE, 2016:1). The NMC stipulates that student nurses and midwives must 'have opportunities throughout their programme to collaborate and learn with and from other professionals, to learn with and from peers...' (NMC, 2023:12). The HCPC concurs, stating programmes 'must ensure that learners are able to learn with, and from, professionals and learners in other relevant professions' (HCPC, 2017:35).

Both the NMC and HCPC state learning and teaching strategies should include a diverse range of approaches to meet the needs of all students – including simulation-based education (SBE) which is recognised as an effective pedagogy to develop and enhance the skills of healthcare professionals within clinical practice (WHO, 2018). Simulation has been defined by Gaba (2007:12) as 'a technique not a technology to replace or amplify real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully safe, instructive and interactive fashion'. This definition is still used today by Health Education England (HEE, 2020) to emphasise the wide variety of modalities encompassed by this term.

SBE approaches have been suggested to offer a wealth of benefits in addition to the traditional physical acquisition of skill dexterity within both a clinical and academic setting (WHO, 2018). Effectively designed simulation-based education has been suggested to assist in the development of interpersonal skills and reflective practice, attributes that are required within the curriculum of all the healthcare programmes mapping to professional standards (Dolan, 2018; Walsh et al., 2020).

Case Study: This case study explores the implementation of simulation-based education to teach communication and professionalism skills to first year student midwives, podiatrists, occupational therapists, and paramedics at the University of Northampton. The study used scenarios to create realistic opportunities for students to practice and develop their interpersonal and professional behaviours in a controlled, safe and supportive environment. By including service users in the scenarios, the facilitation team were meeting professional requirements by ensuring service users and carers are involved in all aspects of programme development and delivery: from recruitment to co-creation of resources, to delivery of teaching, assessment and evaluation (NMC, 2023; HCPC, 2017). The scenario created the opportunity for debriefing and a reflective discussion based on students' prior experiences and perceptions, leading to a comprehensive exploration of what communication and interprofessionalism mean within healthcare settings.

Outcomes: Intended learning outcomes included: what professionalism looks like; how to communicate effectively with different people; different communication styles and strategies and how to adapt in response to feedback. By running the workshop interprofessionally, (across 4 programmes) additional, unanticipated benefits were observed: cross-programme teambuilding and networking and an enhanced interprofessional respect and awareness of values. In addition to interprofessional interactions, students also practised interacting with service users to develop essential and transferable skills, fundamental to effective collaboration and teamworking. When students gain insight into the diversity of professional roles, this promotes collaboration, shared decision making and disrupts silo and uni-professional working. Creating a safe psychological and physical space for students to meet as an interprofessional learning community and creating opportunities to explore why IPE matters to holistic, safe, and collaborative person-centred care equips future health and social care professionals to become collaboratively competent and effective interprofessional members of the workforce.

Student feedback (n=111) was overwhelmingly positive, with 97% of respondents agreeing the workshop had a significant impact on them achieving the intended learning outcomes; 96% of respondents found the scenarios realistic, relevant and immersive; 100% of

respondents found the facilitation effective; 96% of respondents felt safe and happy to participate in the scenarios, evidencing that the facilitation team provided students with psychological safety in line with The Association of Simulation in Healthcare (ASPiH) Standards of Best Practice (2023). Findings suggest significant improvements in students' confidence and competence in handling complex service user interactions and interprofessional collaboration as a result of engaging with the learning.

This innovative approach to teaching communication and professionalism skills underscores the value of simulation-based education in bridging the gap between theoretical knowledge and practical application. By delivering the sessions interprofessionally, the facilitation team added an extra dimension to the learning to further enhance students' preparedness for working effectively within the wider interprofessional workforce as future health and social care professionals.

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'Curriculum 2024': An Innovation to Promote Learning With, From and About...

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Short Paper

Background: Interprofessional education (IPE) is occasions where two or more professions learn with, from and about each other 'to improve collaboration, quality of care and services (CAIPE, 2016:1). The University of Northampton (UON) has devised, designed and implemented an innovative approach to IPE entitled 'Curriculum 2024' (C24) for its midwifery, podiatry, occupational therapy and paramedic science undergraduate students which offers shared learning opportunities for students at all levels of study, facilitated by an interprofessional academic team.

At the start of year one, the level 4 provision focusses on interprofessional socialisation, identity, inclusion and academic integrity and what it is to be a professional within the wider interprofessional team. For levels 5 and 6 (years 2 and 3) research methods at level 5 and the dissertation module at level 6 are taught across the 4 programmes, with a proportion of the module being facilitated interprofessionally, with students being allocated into small interprofessional groups.

This presentation will focus on the level 4 provision (interprofessional socialisation, identity, inclusion and academic integrity), reflecting on its design, delivery and evaluation.

Case Study: In 2018 UON appointed a Faculty Lead for IPE with a remit to embed IPE into 17 undergraduate health, education and social care programmes, with IPE being assessed at all levels by a shared/common learning outcome. In 2022 the ambition was to further scaffold IPE within the 4 programmes across an entire module, rather than a single learning outcome. Eighteen months of Steering Group Meetings included quality assurance mechanisms such as Change of Approvals for module learning outcomes, the appointment of Core Module Leaders and alignment of teaching and learning content.

Outcomes: Student feedback and evaluation (n=61) of the level 4 provision was very positive. For the first face to face session, 95% of respondents found an introductory video about IPE at UON useful, with one student commenting: 'it gave a good foundation understanding of how working together benefits all' and another finding it 'inspirational'. In terms of their induction into university life, 100% of respondents found the introductions to central university services and teams useful. The Campus Discovery activity was enjoyed by 94% of respondents; it was a 'great, fun way to get to know other students and find our way around the campus' and for another student it 'was a nice activity... it forced me out of my comfort zone to talk with others'. Eighty six percent of respondents knew more about IPE after the session, stating: 'I understand more about other healthcare professions', and 'sharing ideas and communicating is very important to gaining knowledge, skills and developing my understanding of subjects at both University and in my future working environments. This way my experiences and the people I work with will be positive and much more productive'; 'It is good to be exposed to learning with and from other profession at this early stage as this is something that will continue throughout the rest of my career'.

For the synchronous online session, the pre-session introductory video and Padlet was deemed useful by 98% of respondents. All elements of the session were highly evaluated: 93% found the 'Introduction to technology and the online environment' session useful; 93% found the 'Introduction to the use of Al and digital competency' session useful. All respondents found the UON Plagiarism Avoidance Course and skills self-assessments useful. Qualitative feedback included: the session 'was very helpful and to know we have that support is reassuring'; 'amazing lecture, all the speakers were passionate about their specific field'.

To summarise, feedback on the C24 level 4 provision suggests sessions at the start of the programme focussing on supporting students to integrate into university life and studies were deemed valuable by the vast majority of students. Furthermore, by offering this learning

in an interprofessional context, the experience was enhanced through the provision of networking opportunities with students from other professional programmes to promote interprofessional socialisation.

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Teleconsultation in Medical Education: Lessons learned from and during COVID-19. Where do we go from here?

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Short Paper

Introduction: The COVID-19 pandemic accelerated the implementation of telehealth globally. In the United Kingdom, the rate of remote consultations between healthcare professionals and patients increased during times of lockdown. In June 2020 half of all appointments in general practice took place over the telephone. Lockdowns required universities to hastily implement teleconsultations and adapt curricula to ensure ongoing education for medical students. Universities and clinical placements provided opportunities for students to engage in remote patient consultations in simulated or clinical learning environments. Now it is time to reflect on those developments and learn from educators' and students' experiences with and opinions of teleconsultation education. The lessons learned may be the key to further improving evidence-based education, informing teleconsultation practice, and ensuring ongoing accessibility to safe and high-quality healthcare for all patients.

Data collection: Based on the findings of a systematic literature review showing limited evidence-informed telecommunication and teleconsultation in undergraduate healthcare education, a mixed-method, cross-sectional study was conducted. This aimed to explore experiences and opinions to determine the value, benefits, and caveats of teleconsultation education in UK undergraduate medical schools. Between May 2021 and April 2022, all undergraduate medical students studying in the UK and medical educators supervising students in the UK were invited to participate in an online questionnaire with the option to sign up for a follow-up semi-structured interview.

Results and lessons learned: Results indicated that most students as well as educators working in academic and/or clinical settings had their first experiences with teleconsultations during the pandemic. The rapid responses to lockdowns and social distancing in both academic and clinical learning environments did not allow for the development of comprehensive, theory- and evidence-informed teaching and learning strategies. Teleconsultation education was often the means to ensure ongoing educational experiences, which was often unilateral and did not account for the interprofessional collaborative nature of (digital) healthcare. Educators who have no experience in teleconsultations themselves further shared worries about their competencies to educate students on this topic. Both students and educators expressed some levels of concern regarding patient safety when teleconsultations are offered without formal education which highlighted the need and desire for the development of educational materials and guidelines.

The findings from this study underline important implications for telecommunication and teleconsultation education. To prepare future health professionals to work in a growing digitalized healthcare system, undergraduate healthcare education needs to a) integrate teleconsultation and telehealth education in existing curricula and b) support the development of educators' confidence and skills in uniprofessional- and interprofessional telehealth education.

To date, the observation that the COVID-19 pandemic increased the demands for teaching and learning teleconsultation skills, seems outdated. Basic principles of remote consultations have not yet been formally and sustainably integrated into healthcare curricula, and the rates of remote consultations in both education and clinical practice declined again. In July 2022, less than one-third of all primary care appointments in England were over the telephone. Nevertheless, healthcare education and practice are interested in telehealth and digital health. In healthcare education, new technologies and tools such as artificial intelligence and virtual reality for clinical simulations are of increasing interest to educators and students alike. Despite enormous efforts to deliver healthcare education that reflects the current standards and needs for high-quality and safe care in a digitalized healthcare setting, educators might have underestimated the complexity and rapid developments in telehealth. Advanced digital health strategies can only ensure patient safety if fundamental skills and competencies in remote and virtual patient consultations are acquired. Structured learning opportunities for

both students and educators are warranted to ensure that teleconsultations are taught and learned confidently and competently. This is the only way to ensure that teleconsultations and subsequently digital health interventions are offered safely, that healthcare remains of high quality and is not increasing health disparities by reducing accessibility to care.

Embedding Interprofessional Education in Colleges: Exploring Opportunities to Introduce and Integrate IPE into UK College Based Higher Education and Further Education

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Short Paper

In the United Kingdom (UK), professional statutory regulatory bodies mandate that registered professionals must develop interprofessional collaborative knowledge, skills and competence to promote safe and effective practice (Power et al., 2021). Interprofessional Education (IPE) is recommended as an effective means of achieving this by preparing students to become 'collaborative practice ready' for the workforce (World Health Organization, 2010) and IPE is therefore embedded in many UK health and social care university programmes.

However, in England, around 10% of higher education is delivered within colleges, in College Based Higher Education (CBHE) (Kadi-Hanifi and Keenan, 2020), and health and social care is additionally taught within further education (FE) for students aged from 16 years old. Having reviewed literature, there appears to be no formal consideration or recognition of including IPE within these educational settings and this presents a new pedagogical approach for the tertiary education sector. There is therefore great opportunity to introduce and integrate IPE within college-based programmes to further prepare students for interprofessional collaborative practice and to promote care quality and team working in health and social care.

This presentation reflects on the CBHE and FE landscape in England, exploring the range of programmes, the needs of students, and the potential for IPE opportunities aligned to employability and educational gain. To begin to introduce the concept of IPE into a Northeast of England CBHE provider, a workshop was delivered to Level 5 (2nd Year) Integrated Health and Social Care degree students. The design, delivery and evaluation of this workshop is explored within this presentation, with a call to action to consider how IPE can be embedded within UK college-based educational environments.

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Innovating Radiotherapy Training: A New Clinical Education Approach

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Short Paper

The Portuguese higher education system in Medical Imaging and Radiotherapy (MIR) at the undergraduate (1st cycle) level increasingly demands enhancements in clinical education. Health schools are adopting a hybrid teaching approach, implementing laboratory practice that simulates hospital clinical environments, which strengthens students' ability to acquire responsibility and self-knowledge in clinical placements. While technical competencies within the curriculum are crucial, it is equally important for students to cultivate and apply transversal skills during placements, focusing on patient-centered care.

At the School of Health Sciences, University of Aveiro, MIR undergraduate students are required to complete 280 hours of clinical education in radiotherapy as part of their curriculum. To enhance this experience, an innovative clinical education model has been developed to promote student autonomy, enabling them to collaborate effectively with professional teams. This model emphasizes studying and managing selected clinical cases and supporting patient care, rather than simply adhering to routine daily workflows. The purpose is to prepare students with essential competencies, including critical thinking, decision-making, and problem-solving skills.

As part of this initiative, the MIR 1st cycle degree programme at the University of Aveiro piloted a novel clinical teaching model in training to study a possible implementation of a new concept for clinical placement in radiotherapy. In alliance with a Portuguese Radiotherapy Department, two students were integrated in this model. The design included practice in pre-treatment and treatment phases over eight weeks, with students working seven-hour days to complete a total of 280 hours. Activities covered CT simulation, dosimetric planning, and participation in linear accelerator (Linac) treatments.

This approach recognizes that effective teaching, training, and assessment strategies within the clinical environment are vital. Such policies empower students, enabling them to develop not only their technical knowledge but also essential soft skills needed for professional practice.

Interprofessional Education Module for Cost-Conscious Oral Health Care

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Short Paper

Objective: To Develop and Interprofessional educational module for cost conscious oral health care.

Methodology: Medical, dental and nursing interns were involved in this interprofessional educational module.

The module was developed in collaboration with medical and dental specialist. It was a 3-month program induction based, with simulation exercises, didactic lectures on health cost care, awareness regarding cost effective practice. Need assessment for cost conscious oral health care was being evaluated initially by qualitative study. Further, we assessed Interprofessional Professionalisms assessment score and developed interprofessional module for Undergraduate medical and dental students' interns, to make then understand the cost related barriers and overcome them.

Result: Pre and post test score showed statistically significant difference post module exposure. The module was delivered in a span of 3 months and evaluation was done every 3 weeks duration.

Conclusion: Cost conscious dental treatment for oral health care can help in educating both medical and dental students towards holistic health care approach.

Supporting Documents: https://inhwe.org/system/files/webform/free%20poster.pptx

Towards a Person-Centered Care Approach in Community Mental Health Services

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Short Paper

Person-centered care (PCC) offers a transformative shift towards a more holistic healthcare model, emphasizing the autonomy and individuality of each person rather than focusing solely on their deficiencies and challenges. This approach broadens the scope of care to include the individual's preferences, values, and needs. Within this context, the present study aims to explore the value and contribution of PCC to community mental health services. As noted by the World Health Organization (WHO, 2021), these services are crucial in promoting social inclusion and participation within community life. Despite the recognized importance of PCC, there is a noticeable lack of research on its implementation within community mental health services, particularly in Malta. Galea and Mallia (2024), in their seminal study on this subject, strongly recommended further exploration, practice, and research on person-centered approaches in mental healthcare services. They highlighted the need for continuous professional development among healthcare professionals to align with the latest PCC principles. Transitioning to a person-centered approach within community mental health services not only empowers individuals but also leads to improved clinical outcomes, thereby benefiting the broader community.

Supporting Documents: https://inhwe.org/system/files/webform/INHWE%202025.docx

Using Appreciative Inquiry in an International Scoping Workshop of HPE Experts: An Experience Report

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Short Paper

Background: Health Professions Education (HPE) is an emerging interdisciplinary field, yet structured career pathways for early career researchers are underdeveloped. To address this, approximately 20 experts in medical, interprofessional, and health professions education from several countries and institutions attended a 2.5-day Scoping Workshop (SW). The primary goal of the SW was to explore ways to promote early career researchers and how to implement these support initiatives. An interesting aspect of the workshop was evaluating whether the methods used could unify the diverse professional cultures and national contexts of the participants.

Method: The workshop followed the Appreciative Inquiry (AI) method, structured into four phases: (1) Participants examined how their organizations support various HPE roles in advance (Discover). (2) Attendees exchanged on the status quo at each of the institutions. Afterwards they envisioned improved career pathways (Dream). (3) Key positions were identified, evaluated, and prioritized. Goals were set for each position to be achieved within defined timeframe (Design). (4) Practical steps for achieving these goals were mapped, focusing on responsibility, implementation steps, and feasibility (Deliver). While brainstorming characterized the beginning of each phase, they continued as joint writing workshops in small groups. Participants collaborated on pre-structured online documents with clear instructions and time frames. Groups produced continuous text for each phase, which a moderator consolidated into a single draft. The moderator facilitated consensus discussions on the collective findings.

Results: Despite initial concerns about whether this approach could be implemented well with so many people with such heterogenous backgrounds and perspectives, the AI method and writing workshop format succeeded. As a result, in a very interactive and productive exchange process, six key positions, associated goals, and next steps for promoting early career researchers in HPE were identified. This work result will subsequently lead to the creation of a position paper in a joint online writing process.

Discussion: Structured approaches like AI effectively integrate diverse viewpoints. A skilled moderator is essential to oversee group dynamics, synthesize findings into cohesive texts, and guide discussions. This approach proved effective for developing multiple ways to promote early career researchers in HPE.

Enhancing Student Success through Predictive Analytics, Targeted Interventions and Impactful Solutions

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Short Paper

Introduction: In a time of unprecedented global challenges, including the aftermath COVID-19 pandemic, the cost-of-living crisis, and international uncertainty, universities must support students through some of the most difficult periods of their lives.

At the University of Sunderland, we have a commitment to addressing the unique challenges faced by healthcare students. Data from the Higher Education Policy Institute (HEPI) shows that, on average, students work 15 hours a week in addition to their studies (HEPI 2024), but for healthcare students, they often face even greater demands. We know that nursing, midwifery, and allied health students face a particularly demanding workload, balancing academic studies with demanding clinical placements.

The cost-of-living crisis has a significant impact on our students (HEPI 2024), particularly in the North of England. From our previous work we have identified that whilst a strong widening participation agenda has been integral to increasing access for diverse student groups to HEIs, it has also brought a range of challenges. Many of these students have complex needs, often coming from socioeconomically disadvantaged backgrounds, have a disability, or may possess significant caring responsibilities. This often results in students having increased demands on their time and often working more than the average 15 hours a week, further straining their ability to focus on and complete their studies, especially given the demands of placements.

Addressing barriers to student success efficiently is critical for ensuring the retention and success of future healthcare professionals. The University of Sunderland has a demonstrable commitment to improving retention and student success in Nursing, Midwifery, and Allied Health programmes. Since 2022, the University has dedicated posts focused on student success and retention in Nursing, Midwifery and Allied Health. This has resulted in sector-leading approaches with tangible successes and demonstrable impact that can be rolled out across the region.

Underpinning our approach is the use of data-driven strategies and dashboards highlighting student engagement, attainment, leave of absences and withdrawals. Utilising this evidence-based approach, our Faculty Academic Support Leads (FASLs), who specialise in healthcare student retention and success, can measure the success and impact of strategies that improve retention, academic attainment, and progression aligned with the NHS Long Term Workforce Plan (LTWP) and the Safer Learning Environments Charter (SLEC).

Methods: At the University of Sunderland, we have developed an innovative solution to monitoring engagement: the Predictive Analytics Dashboard (PAD). This unique tool dynamically tracks over 50 student metrics, generating individualised risk scores to identify students at risk of withdrawing from their programmes. Updated in real time, the PAD alerts Personal Academic Tutors (PATs) to at-risk students, enabling timely, targeted support interventions. As part of a Health Education England-funded initiative, we conducted a qualitative study focusing on pre-registration nursing students identified by the PAD as high-risk. The study aimed to uncover the underlying barriers impacting their success through one-to-one interviews. Despite initial recruitment challenges, we successfully engaged over 30 students, capturing a diverse range of experiences and perspectives.

Results: Themes which emerged from the study included, financial difficulties, lack of academic confidence, and challenges in balancing study with personal responsibilities. Based on these insights, we developed and implemented a series of targeted program interventions designed to address specific student needs. These interventions, ranging from enhanced study skills support to SpLD screening and an assessment transformation programme, have been evaluated and shown significant improvements in both retention and student outcomes.

Discussion: This presentation will explore the development and implementation of the PAD, the qualitative research process, and the key findings from the student interviews. We will also share the resulting interventions and their measurable impact on retention and student success. Attendees will gain insights into the practical application of predictive analytics in higher education and how data-driven, student-informed strategies can create more inclusive, supportive learning environments.

International Educated Nurses: Exploring Recruitment and Retention Solutions

Ms Aurora Domenique Gatt, Staff Nurse, University of Malta, Malta Prof. Maria Cassar, Associate Prof, University of Malta, Malta

Short Paper

Migration is a prevalent characteristic of the current global nurse workforce. Nurse migration is predicted to continue to grow steadily in view of shortages in the nurse workforce, because such shortage is known to fuel migration. (Botezat, 2024). International reports document that one in eight nurses worldwide is foreign-trained. (Buchan & Shaffer, 2022, Pressley et al., 2022) The nurse workforce across the archipelago of Malta is believed to require the recruitment of internationally educated nurses (IENs) because home-grown supplies of nurses do not adequately address the national demand for nurses. Recruitment and retention continue to pose significant challenges; the latter to a much larger extent. (Malta Chamber of Commerce, 2022, Thake et al., 2020). Approximately nine percent of the nurse workforce are IENs in Malta (Thake et al., 2020) and incoming data clearly suggests a growing upward trend. In parallel an upward increasing trend is observed in the number of foreign nurses leaving the country(Malta Chamber of Commerce, 2022). Between January 2020 and September 2022, a total of 185 non-EU migrant nurses resigned from Nurse employment in Malta and left Malta for other countries (Ministry for Health Malta, 2022). The importance of offering effective and efficient support to IENs is widely recognised and valued in the literature as the key for integration and retention of these key workers. In turn, identifying how to meet their expectations and aspirations requires more research and investment from policy makers, academia and industries. (Pressley et al., 2022).

This paper reports a qualitative research study which was carried out to explore the integration of internationally educated nurses in the small island context of Gozo (Gatt, 2023). Gozo is a small island in the archipelago of Malta. The findings of the research study are interesting because they bring to light the influence of IENs' plans for the near future on the extent of integration in a receiving country. The IENS' plans impact IENs' intention to, and their investment towards integration. Moreover, such plans impact IENs retention, in the receiving country. An exploratory qualitative research design drawing upon a descriptive phenomenological approach was adopted to conduct the research study. Twelve participants were conveniently recruited from amongst the IENs who, at the time of data collection, had worked in the health system in Gozo for more than one year. The participants had completed pre-registration nurse education in Asia and had completed the mandatory short bridging programme for IENs which the professional registration as a nurse in Malta demands.

This mandatory programme is offered by licensed educational entities in the country. A brief induction programme to employment as a nurse at any service entity is expected from respective employers. IENs are also expected to attend basic Maltese language class within a stipulated time from the commencement of employment as a nurse. Using one-to-one open-ended semi-structured interviews data was collected online. The recorded interviews were transcribed verbatim and thematic analysis was carried out using the online software, MAXqda. The research study was approved by the research ethics committee of the University of Malta. The respective employers of the participants permission to conduct the research study and written consent was sought from all participants. No funding or sponsorships were associated with the research study. No conflict of interest was claimed by the researchers.

The findings illustrate that the factors which impact the participation and integration of IENs in Gozo span personal, societal, environmental or contextual or organisational elements and namely included language, cultural and management aspects such as poor language proficiency, and racist attitudes. (Gatt, 2023) The plans of an IEN at the point of migration, "to stay" in a receiving country, or "to go" and relocate elsewhere, determine the IEN's participation and integration in the receiving country. This is the major finding of the research study. The findings strongly suggest that an IEN's plan "to stay" or "to go" strongly influences one's intention to invest towards integration and the eventual retention or otherwise in the receiving health system, context and society. This finding is particularly interesting because it offers a reasonable explanation for reported gaps in the integration and retention of IENs in counties and contexts which receive and seek to host them across long or indefinite periods. This evidence is of value for policy development related to IENs recruitment and retention strategies. Also the findings of this research study challenge in-place strategies and investments which focus on post-arrival measures towards integration of IENs in a receiving country. Existent cultural education adaptation programmes, navigation guidance, and language support opportunities. (Smith et al, 2022) may need to start to co-exist with policies and strategies that address an IEN's plans, at the point of migration, to stay or to go in a receiving country. These findings

of this study suggest that innovative measures that actively seek to influence the IENs' plans to stay or to go at the earliest possible stage in the migration process, are called for.

Specifically plans of IENs "to stay" need to be actively targeted, encouraged and nurtured and plans "to go" require active attention. Their plans at the point of migration influence their successful integration and retention, or otherwise of IENs. The implications of the above to policy and strategy related to workforce development and support are discussed. The limitations of this research study are outlined.

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SimPRENA Project: Examples of Good Practice in Managing Inappropriate Aggression in Healthcare

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Short Paper

The SimPRENA project aims to address a critical need within healthcare education: preparing nursing and paramedic students to navigate the challenges of a violent healthcare environment with confidence and competence. Aggression and violence towards medical staff are pressing concerns that jeopardize both patient and staff safety. By providing simulation-based training, this project seeks to bridge the gap between theory and practice, empowering students and educators alike to effectively handle real-life scenarios. Through immersive experiences with role-playing and real actors, the SimPRENA project aims to foster a safe learning environment where students can develop essential clinical and decision-making skills.

This presentation describes a several options as a good practice example which can prevent and solve the verbal conflict or non-appropriate aggression in healthcare area.

Emphasis is placed on the simplicity and effectiveness of the technique. Examples of good practice in non-verbal and verbal communication are described. Group engagement exercises, interactivity to promote critical thinking and case studies will also be presented as examples of good practice. The presentation will also include examples of mistakes made in practice, which can also contribute to learning what not to do in certain crisis situations.

Sickle Cell Treatment Outcome and Research in the Midwest (STORM) Network Health Workforce Education Strategies

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Short Paper

Background: Sickle cell disease (SCD) is a painful, chronic disorder with comorbidities difficult for healthcare providers to manage. Diagnosed at birth with newborn screening, sickle cell disease affects the red blood cells leading to significant, life-threatening acute and chronic complications, including severe pain leading to high doses of pain medication. Sickle cell disease also predominantly affects minority populations, predominantly African-Americans, which leads to bias, stigma and racism in the healthcare setting as several studies have shown. While it is the most common genetic disorder in the United States, it is thought to affect nearly 100,000 Americans which also qualifies as a rare disorder. Healthcare providers often self-report limited confidence and knowledge in treating patients with SCD. This leads to health disparities and inequities, including a lack of access to knowledgeable, non-biased healthcare providers for children and adults with SCD across the United States, and globally.

Sickle Treatment and Outcomes Research in the Midwest (STORM) is a federally-funded, regional sickle cell learning network in the Midwestern region of the United States (8 states, 10 clinical sites) that was established in 2014 to improve outcomes for children and adults with SCD in the United States. STORM consists of pediatric and adult healthcare providers and is led by the Cincinnati Comprehensive Sickle Cell Center at Cincinnati Children's Hospital Medical Center. As a strategy to increase provider knowledge about sickle cell, STORM adapted Project ECHO © telementoring to provide multidisciplinary continuing education about evidence-based management for children and adults with SCD. Project ECHO © was created by the University of New Mexico and has a worldwide following as a framework for transferring knowledge in a democratized approach. The STORM team hypothesized that this remote telementoring team-based learning approach would be beneficial for increasing workforce knowledge about SCD among medical and psychosocial healthcare professions.

Methodology: STORM first utilized Project ECHO © to host monthly sessions using Zoom to host one-hour sessions beginning in 2016. Sessions include a 45-minute didactic presentation from a subject matter expert, followed by a 15-minute de-identified patient case, where all participants can provide feedback and suggestions from medical and psychosocial perspectives. Interdisciplinary healthcare providers received continuing education credits for participation. In March 2020, the STORM ECHO team quickly pivoted to launch a COVID-19 and SCD series in response to the global health pandemic to create a community of practice among healthcare providers and it was particularly timely as individuals with SCD were determined to be in a high-at-risk immunocompromised category by the US Centers for Disease Control. In spring 2022, a Health Equity ECHO cohort learning series for healthcare providers caring for individuals with SCD was launched and focused on racial justice, race, racism and whiteness. This series also utilized an online Learning Management System platform (Canvas) to supplement participant learning and engagement. This cohort was also repeated in 2023 and 2024. In 2024, a Transition to Adult Healthcare in SCD cohort was launched with an optional introductory session and 5 subsequent sessions. This cohort also utilized Canvas for participant engagement.

Results: STORM TeleECHO program has hosted over 100 sessions with over 500 unique multidisciplinary attendees receiving over 2200 continuing medical education credits; and 320 nursing credits. Providers from 40 states and 8 countries have attended and evaluations indicate the program has increased self-reported knowledge and confidence of providers. After the launch of the COVID-19 and SCD ECHO, there was an increase of 172% in attendance with representation from 21 states and 4 countries. The three Health Equity cohort included learners from 14 states and 2 countries; while the Transition ECHO had 20 participants from 9 states. Participants have included a range of the health workforce including physicians, nurse practitioners, nurses, social workers, laboratory staff, state and federal government staff, community health workers, newborn screening coordinators, psychologists, school intervention staff and other healthcare professionals.

Conclusion: Adapted to meet what began as a multi-state regional educational need in the United States, STORM TeleECHO programs have shown to be a promising virtual tool to learn about evidence-based best practices in SCD. Utilizing web technology to link participants can reduce financial, travel and time constraints faced by learners and can build global communities of practice around medical and psychosocial management of SCD. The STORM ECHO projects have also shown that interdisciplinary providers from beyond the United States are also interested in this and it has the potential to be successfully adapted to be disseminated and implemented even more broadly to provide targeted global health professions education, including medical, psychosocial and health equity curriculums to multidisciplinary providers, about SCD.

From Classroom to Career: How Teaching Influences Medical Students' Career Choices

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Short Paper

Introduction: The NHS faces a critical challenge in retaining its core workforce. Understanding the factors influencing medical professionals' career choices is vital. This study explores how teaching impacts the career intentions of medical students, a key demographic in the healthcare system, yet relatively under-explored in terms of specialisation and attrition.

Methodology: The study utilised a qualitative approach, conducting 27 semi-structured interviews with medical students across various year groups. The methodology incorporated opportunistic snowball sampling and one expert interview to integrate broader perspectives. The data highlighted four meta-themes: learning activities, student engagement, teaching and the medical school learning environment

Results: The analysis revealed that student engagement, responsibilities during placements, and the learning environment significantly influence career intentions. Active involvement correlated with positive perceptions of learning, while the absence of responsibilities or belonging in clinical spaces led to decreased interest in certain specialties. A notable theme was the impact of teacher presence, where lack of educator engagement discouraged students from pursuing specific career paths.

Conclusion: The study recommends several initiatives, including co-creation workshops, peer collaboration training, and the implementation of structured learning frameworks like Peyton's 4-step and Pendleton's feedback model. Additionally, introducing a comprehensive healthcare module aims to provide holistic education from the first year onwards. These strategies intend to foster a teaching culture in the NHS, enhancing student engagement and teaching effectiveness, thereby addressing workforce retention challenges. The study underscores the need for improved teaching methods in medical education, with a focus on positively influencing the future NHS workforce.

From Feedback to Action: Quality Improvement Module Development

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Short Paper

Introduction: Quality improvement (QI) methods are arguably essential for enhancing care quality and are mandated by the UK General Medical Council. In 2016, a London medical school introduced a QI module in its MBBS curriculum. Feedback highlighted need for improvement in supervisor support, learning experience, and project standardisation. This evaluation aims to assess the impact of changes implemented on student experience between 2016-2021 to share learning for other centres.

Methodology: A retrospective qualitative analysis of anonymised student feedback was conducted using inductive thematic and sentiment analysis of white-space questions to understand student perspectives. Proportion z-tests and chi-squared tests evaluated changes.

Results: Analysis revealed overall improvements across themes. Supervisor involvement was a key theme, with positive feedback fluctuating significantly, indicating varied experiences. The creation of job descriptions for site QI leads, clear supervisor briefings and annual faculty development days was associated with increased student satisfaction. The learning experience saw a marked increase in positive responses over time, reflecting improvements in module delivery. A decline in feedback in the final year, potentially influenced by COVID, was noted.

Conclusion: This study highlights the importance of continuous feedback and iterative improvement in QI module implementation. The significant positive shift in student feedback over the years reflects the effectiveness of responsive adaptations. Key improvements, particularly in supervisor involvement and learning experience, demonstrate the module's capacity to evolve and align more closely with student needs. The module's evolution demonstrated actionable insights for other centres implementing QI curriculums, and the transformative potential in medical education, emphasising the value of student-led feedback in refining educational approaches.

Community Based Medical Education (CBME): Creating A Unified Definition

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Short Paper

Background: In the UK in the last 40 years, there has been a significant increase in the number of medical schools awarding a primary medical qualification (1). The number of medical schools has doubled from 24 in 1985 to 47 in 2024 with a further 3 in the planning phase. To accommodate the increase in students, and to fulfil the desire to improve community healthcare, as outlined in the NHS Long Term Workforce plan, an emphasis has been placed on delivering medical education within community settings (2).

Aim: This literature review aims to examine the original 1985 WHO definition of CBME (3) and discuss a unified definition, to provide the basis for describing an example framework for a CBME programme for the purpose of curriculum development.

Methods: A systematised review of the CBME literature was undertaken using OVID, EMBASE, HMIC and ERIC databases. A total of 1052 international papers (of which 55 were UK based) relating to CBME were identified. They were reviewed for a definition of CBME and descriptions of community-based medical education programmes.

Results: Multiple broad definitions of CBME are described within the literature. Themes include education programmes undertaken in the community, understanding health concerns related to that community and the involvement of the health sector with social services. The definitions mainly focus on the learning environment as opposed to teaching methods. Additional features of CBME programmes describe an element of social accountability, its utility in recruitment into primary care and improving understanding of the role of social factors in health

To date, no UK-specific framework exists to provide guidance for the construction of community-based programmes suited to the needs of the NHS.

Discussion: This literature review has demonstrated a need for greater clarity regarding CBME. The authors propose that a community based medical education programme should:

- 1. Utilise community settings for learning, such as community hospitals, general practices and health centres
- 2. Focus on the holistic health needs of the local population
- 3. Improve understanding of the interaction between health and social sectors
- 4. Place emphasis on social accountability within the curriculum such as the social determinants of health and health inequalities
- 5. Have a longitudinal element to foster relationships and explore the impact of health issues over time
- 6. Aim to alleviate pressures on the health service over time by targeting issues such as shortfalls in recruitment

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- 1. DHSC response to reporting on medical school places (February 2024)
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Culturally Responsive Interprofessional Education: Reimagining Pacific Oral Health Education

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Short Paper

In Pacific Island nations, healthcare delivery operates within unique cultural and linguistic contexts that significantly impact professional interactions and patient care. Current interprofessional education (IPE) models often reflect approaches that may not fully address the distinct challenges and opportunities present in Pacific healthcare settings. This perspective paper proposes a culturally-responsive IPE framework specifically designed for integrating oral health education within the broader health professions education landscape in the Pacific.

Drawing from experiences at Fiji National University's School of Dentistry and Oral Health, we explore how understanding of Pacific cultural values, multilingual environments, and community health approaches can enhance IPE initiatives. The paper examines three key dimensions: cultural concordance in team-based learning, effective communication across language barriers in healthcare teams, and community-centered approaches to oral health education.

The proposed framework addresses unique regional challenges, including geographical dispersion of healthcare services, linguistic diversity across Pacific nations, and the need to develop culturally appropriate communication strategies. It emphasizes the role of inclusive dialogue in fostering interprofessional relationships, effective cross-cultural communication, and the importance of community engagement in healthcare education.

This conceptual framework offers practical strategies for implementing culturally-informed IPE, including structured cross-disciplinary learning activities, language-conscious communication training, and community-based interprofessional projects. The paper concludes with recommendations for adaptation across different Pacific healthcare education contexts and suggests evaluation metrics that reflect the regional healthcare education environment.

Integrating Point-of-Care Ultrasonography (POCUS) into Undergraduate Medical Education

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Short Paper

Background: Modern medical education increasingly recognises Point-of-Care Ultrasonography (POCUS) as an essential component. Its integration into undergraduate curricula enhances students' understanding of anatomy, physiology, and pathology in preclinical phases while serving as a diagnostic tool during clinical phases. POCUS contributes to patient safety, improves clinical decision-making, and fosters multidisciplinary collaboration. This study aims to outline the process of integrating POCUS into the undergraduate medical education program at Ege University Faculty of Medicine.

Methods: In July 2018, Ege University Faculty of Medicine initiated the vertical integration of POCUS training into its six-year medical curriculum. A multidisciplinary core group, comprising representatives from basic and clinical sciences, led the development and implementation of the program. The training included theoretical lectures and hands-on sessions delivered progressively over six years. The training covered key topics such as ultrasonography fundamentals, non-cardiac and cardiac applications, lung ultrasonography, and extended focused assessment using sonography in trauma (E-FAST). Using simulated patients, the students focused on mastering 11 essential POCUS skill objectives, which ranged from identifying gallbladder stones to detecting abdominal aortic aneurysms.

Results: The curriculum successfully integrated the POCUS training program, emphasizing a competency-based approach. Students demonstrated high levels of proficiency and satisfaction with the program. The integration of POCUS skills during preclinical and clinical phases enhanced their ability to perform problem-solving diagnostic assessments and improved their readiness for clinical practice.

Conclusion: This study represents a pioneering effort to integrate POCUS into undergraduate medical education in Turkey. The successful implementation and positive outcomes highlight its potential as a cornerstone of contemporary medical training. Findings from this study provide valuable insights for the broader adoption of POCUS in medical education worldwide.

Funding: The Ege University Scientific Research Project Coordination Unit supported this research under project number TSG-201920543.

Supporting Documents:

 $\underline{\text{https://inhwe.org/system/files/webform/INHWE_Integrating\%20POCUS\%20into\%20Undergraduate\%20Medical\%20Education.docx}$

Assessment of Interprofessional Education Academic Confidence and Professional Identity

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Short Paper

Background: Professional identity and confidence among health professions students play a critical role in student engagement, influencing participation in academic activities.

Aim: This study aims to measure and compare professional identity and confidence levels among health professions students in interprofessional education (IPE) activities at Qatar University.

Methods: A cross-sectional survey of health professions students using validated instruments was conducted. The IPE Academic Behavioral Confidence and Macleod Clark Professional Identity Scale questionnaires were utilized. Descriptive and inferential statistics, as well as multivariable linear regression, were computed.

Results: 814 students were included in the study. Results showed students aged below 21 years had lower confidence levels compared to those above 21 years. Females had a higher professional identity compared to males. Physical therapy, pharmacy, and dental medicine students had the highest professional identity levels. Confidence levels increased with professional year. Students with prior participation in IPE activities and prior completion of a practice placement course/rotation had higher professional identity and confidence levels compared to those without prior participation. Multivariable regression showed that males had lower professional identity compared to females [coefficient 0.925 (95% CI: 0.889-0.962)], and biomedical students had lower professional identity compared to medical students [coefficient 0.943 (95% CI: 0.894-0.995)]. Prior IPE participation was associated with higher professional identity [coefficient 1.064 (95% CI: 1.015-1.115)]. Professional year 4 students had higher confidence compared to year 1 students [coefficient 1.110 (95% CI: 1.017-1.213)]. Students who completed a practice placement course/rotation had higher confidence compared to those who had not [coefficient 1.037 (95% CI: 1.007-1.069)].

Conclusions: The study highlights significant variations in confidence and professional identity among health profession students, influenced by age, gender, academic year, and prior experiences in IPE and practice placements. These findings suggest that targeted interventions, such as early exposure to IPE activities and practice placements, could enhance student confidence and professional identity, ultimately improving engagement and outcomes in health professions education.

Readiness for Interprofessional Education Among Health Profession Students at a Nigerian University: A Cross-sectional Study

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Short Paper

The implementation and sustainability of interprofessional education (IPE) depends substantially on the readiness of healthcare students. This study assessed the readiness of undergraduate healthcare students in Nigeria with regard to interprofessional practice. A cross-sectional survey of a convenience sample of 300 students from a public university was conducted using a 19-item tool. Data were summarised using descriptive statistics, while differences in readiness based on students' gender, year of study and course of study were identified using inferential statistics. The majority of the students who responded to the questionnaires (55%) were from the fifth year and had a mean age of 24.5 years old. Most of them were from Faculties of Medicine and Pharmacy (33% each). The overall median score of 80 (out of 95) showed a high readiness score among the students. A significant difference was observed in the case of the gender of the respondents as to the roles and responsibilities score (p = 0.001). Furthermore, a significant difference was observed with regard to the course of study of the respondents and their professional identity score (p = 0.012). A post hoc analysis showed a p value of 0.007 between medicine and pharmacy students, indicating that the respondents' professional identity had a strong influence on their readiness to practice IPE. The total score was not significantly different in all the other scenarios. Healthcare students in Nigeria are ready to undertake and showed positive attitudes towards IPE; therefore, IPE should be integrated into undergraduate healthcare professions curricula to help improve attitudes towards interprofessional practice.

Disaster Preparedness and Management through Interprofessional Education: A Simulation-Based Study among Health Profession Students

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Short Paper

Introduction: Interprofessional education (IPE) equips health profession students for collaborative practice. Simulation-based IPE allows students from different professions to learn together in simulated scenarios, enhancing teamwork and patient care. This study aims to conduct a comprehensive evaluation of a simulation-based IPE activity focused on disaster preparedness and management for health profession students.

Methods: An IPE simulation focused on disaster preparedness and management phases (mitigation, preparedness, response, recovery) was conducted for undergraduate health profession students. Students, assessors, and standardized patients (SPs) participated. Data was collected from students using the Team Perception of Collaborative Care, from assessors using the Modified McMaster-Ottawa Scale, and from SPs using the Standardized Patient Team Evaluation Instrument.

Results: Thirty-three students, 13 assessors, and 8 SPs participated. Students self-reported positive perceptions of teamwork, with over 90% agreement across all domains. Assessors' ratings corroborated these findings, with over 80% of students scoring at or above expectations in all domains. While not statistically significant, a trend towards improved performance across cases suggested a learning curve effect. Students with prior IPE experience demonstrated significantly better performance, with a mean score of 2.42 (95% CI: 2.24-2.60) compared to 2.06 (95% CI: 1.80-2.33) for students without prior IPE experience. Similarly, students who completed a practice placement achieved a higher mean score of 2.48 (95% CI: 2.30-2.65) compared to 2.12 (95% CI: 1.86-2.37) for those who did not. SPs evaluations aligned with these positive trends, with over 70% strongly agreeing or agreeing on positive interprofessional practice behaviors.

Conclusion: This study provides evidence supporting the integration of IPE into health profession curricula to enhance disaster preparedness and interprofessional collaboration.

Effectiveness of a Web-Based Personalized Oral Health E-Learning Module for Parents and Teachers of Preschool Children

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Short Paper

Background and aim: Preschool oral health is significant as it lays the foundation for lifelong dental health, preventing early childhood caries and promoting overall well-being. The aim of this study was to evaluate the effectiveness of a web-based, personalized oral health e-learning module developed for parents and teachers of preschool children in rural public schools.

Materials & Methods: Three rural public preschools conducted a quantitative-descriptive survey study in 2024. A total of 314 parents of children aged 3–6 years and 23 teachers participated. Educational needs were assessed using students' oral and dental examinations, along with a pre-test for parents and teachers consisting of 52 questions in five sections, the Early Childhood Oral Health Impact Scale (ECOHIS), and a caries assessment questionnaire via the e-learning module called DISOKULU. Based on these assessments, tailored educational content was developed and delivered to 170 parents and 23 teachers through the e-learning module. Post-test evaluations were conducted, and satisfaction feedback was collected. Statistical analyses included Shapiro-Wilk, Mann-Whitney U, Kruskal-Wallis, Pearson Chi-Square, Fisher's Exact, and McNemar tests.

Results: The mean dfs score was 6.73 ± 7.64 , with scores increasing with child age (p = 0.010) and higher carbohydrate intake (p = 0.007). Regular dental check-ups were associated with lower dfs values (p = 0.001). Parental employment and education levels significantly influenced children's oral health outcomes (p < 0.05). Significant associations were found between ECOHIS subscales, dfs, and gingivitis (p < 0.05). Parental pre-test accuracy improved from 57.1% to 76.3% post-training, while teachers improved from 77.4% to 94.5%. Participant satisfaction with the internet-based module was high (\geq %90).

Conclusion: This study found that a web-based, personalized oral health e-learning module is effective in improving the knowledge and practices of parents and teachers of preschool children, particularly in rural public school settings. The increase in post-training test scores for both parents and teachers indicates a significant enhancement in understanding oral health principles. Moreover, the associations among improved oral health behaviors underscore the importance of ongoing educational interventions. High participant satisfaction with the module suggests that it is a feasible and acceptable method for promoting oral health awareness.

Supporting Documents: https://inhwe.org/system/files/webform/INHWE abstract Neda NDY1.docx

Collective Efficacy in Action: Pedagogical Wellness and Resilient Interprofessional Teams

Dr Teresa Maggard Stephens, Professor and Associate Dean for Academics, Medical University of South Carolina, USA

Short Paper

Clinician burnout has been named a public health crisis and is known to begin in academia. In 2019, the World Health Organization categorized burnout as an occupational phenomenon arising from systemic issues leading to chronic workplace stress. The COVID-19 pandemic heightened awareness of systemic issues causing moral injury and burnout, especially among clinicians, educators, and health professions students, leading to urgent calls for a radical transformation of health sciences education. Mental health and well-being have become a global priority for health professions students, yet true transformation has been slow. Educators worldwide are urgently seeking strategies to support students in crisis while also grappling with their own chronic workplace stress.

Academic burnout significantly contributes to the healthcare crisis, leading to mental health issues, reduced professional efficacy, high turnover rates, financial costs, and decreased quality of care. Resilient interprofessional teams are vital in this context as they can better address the challenges posed by chronic stress and systemic issues. The power of resilient teams lies in their collective efficacy, which enables them to address barriers to change effectively and minimize personal risk. This collective approach not only supports individual well-being but also drives systemic improvements, creating a more sustainable and fulfilling academic environment.

Pedagogical Wellness integration into interprofessional education could potentially serve as an effective strategy to prevent burnout and moral injury, while simultaneously fostering well-being and professional satisfaction among faculty and leaders. Despite its limited adoption, its application in interprofessional education remains unexplored. Implementing Pedagogical Wellness into interprofessional education leverages collective efficacy in building capacity for resilient teams to prevent clinician burnout from academia onwards, while fostering well-being and professional fulfilment among faculty and students.

Navigating the AI Revolution in Medicine – Adopting Strategies for Medical Education

Dr Colin John Greengrass, Academic Director for Technology Enhanced Learning, RCSI-MUB, Bahrain

Short Paper

The integration of Artificial Intelligence [(AI]) into healthcare is set to fundamentally transform the role of medical professionals. This presentation takes a dive into the future specifying several strategies to prepare medical and other health professions students for an AI-driven healthcare system. It highlights the current and potential applications of AI in healthcare and discusses in the immediate term, the necessity of incorporating AI education into medical curricula, including hands-on training and interdisciplinary collaboration. With a view to a more distant future, it also addresses probable ethical considerations, the evolving roles of healthcare professionals, a need for contingency, and emphasises the importance of maintaining clinical skills amidst AI advancements. These strategies all aim to equip future medical graduates with competencies in knowledge, skills, and ethical grounding required to thrive in an AI-dominated healthcare environment. This framework is intended to stimulate discussion and provide a foundation upon which more detailed, context-specific strategies can be developed by educators, policymakers, and other stakeholders

Talking About Death? Ensuring End-Of-Life Education For Health Care Students Is Effective, Psychologically Supportive And Informative

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Short Paper

Effective end-of-life (EoL) education for health care students is vital for promoting compassionate care for any patient at the end of their lives, regardless of age or condition. It should be a privilege to be able to provide optimal care for every patient and their families at this very difficult time. A comprehensive EoL curriculum should include advanced communication skills, ethical considerations, spiritual/cultural sensitivity, and simulation; together with wellbeing strategies to support the students. Additionally, interprofessional approaches in education can emphasise collaboration among various healthcare disciplines, leading to enhanced learning and improved patient care. This in turn can foster teamwork, allowing exchange of skills and insights, resulting in a more holistic treatment for patients.

This presentation offers an insight into an innovative end-of-life education workshop with a focus on the healthcare student exploring death in more depth, confronting their own perceptions and experiences of death, beliefs and anxieties. The delivery of this essential but emotive aspect of the curriculum was explored at Swansea University where this initiative around EoL care was first developed for the Paramedic students and then the Children's Nursing Students.

Looking back at previous pedagogical approaches about death, the students had expressed apprehension, concern and fear both before and after sessions. This anxiety is evident within the nursing profession and many other healthcare disciplines too, sometimes leading to death anxiety and impacting on the provision of optimal EoL care. This highlighted a need to address the taboo nature of the subject in a way that was psychologically safe in the classroom with support and wellbeing strategies built in throughout. The discussion around death needed to be sensitive and supportive, taking into account the students' comfort levels, previous experiences and beliefs. It was felt that by addressing these concerns and balancing the level of sensitivity, emotion and humour, a more positive engagement with the topic of death was encouraged and in fact forthcoming.

Death cafes were first introduced as a social concept in the UK to encourage discussion around general awareness of death. The idea of celebrating life by talking about death helped to alleviate the issue of death anxiety. Whilst they have been used in universities before, it was recognised that the premise needed adapting for healthcare students and the delivery demanded a compassionate leadership style to encourage participation. Once the safe, supportive and non-threatening environment was right, the students were able to build on their death self-efficacy; their skills and capabilities around dealing with death, through exploration of their previous perceptions, beliefs and experiences. Consequently, they are building their resilience and being furnished with the skills and confidence necessary to navigate end-of-life care in their professional practice.

The workshop is now delivered over two days and includes the death café concept, end-of-life simulations, advanced care planning, personal experiences within practice, preparations at EoL for an infant/child/adult, supporting the family, difficult conversations and supporting each other through debriefing methods. In recognition of the difficult discussion expected, resilience-based tasks are included throughout along with signposting to self-care platforms and well-being support.

This successful and well evaluated approach is soon to be shared across nursing fields and healthcare disciplines with some aspects being taught inter-professionally. Whilst there is a recognition for specific EoL education around different disciplines, the discussion around death is conducive to learning inter-professionally, with shared learning experiences, allowing students from diverse fields such as medicine, nursing, and paramedicine to understand each other's roles, develop mutual respect, and improve their enhanced communication skills. By fostering this safe environment for discussions and reflections around death, healthcare programmes can help students navigate their feelings and develop resilience, ultimately improving the quality of care they provide during these sensitive moments.

Supporting Documents: https://inhwe.org/system/files/webform/240226-Getting-end-of-life-education-right-for-childrens-nursing-students 0.pdf

Attitudes Towards and Outcomes from Vacation Studentships for UK Medical Students

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Short Paper

Introduction: Vacation studentships enable medical students to undertake research projects outside of term time. Studentship programmes are often highly competitive, but carry opportunity costs including alternative placements, employment, or resting. This study surveyed UK medical students and graduates to capture their attitudes towards and outcomes from vacation studentships, aiming to inform future organisation of these programmes.

Methods: Anonymous survey responses were collected online between January 2022 to March 2023. Descriptive statistics and thematic analysis of text responses were conducted. Forty-four respondents were medical students and 38 were graduates. Thirty-one respondents had completed vacation studentships (23 students, 8 graduates).

Results: Motivations: The most common motivation for undertaking a summer studentship was 'experiencing research' (68% 'to a great extent') followed by 'help making career decisions' (45%). Financial incentives and recommendations from others were weak motivators (13% each).

Outcomes: Positive outcomes included transferable skills such as presentation practice, and developing research topic interests (Fig.1). 74% reported achieving paper co-authorship and/or conference presentation because of their studentship. Excluding consultants, respondents who had completed a studentship were more likely to have (co-)authored publications (with studentship = 68%, without studentship = 30%, X2 p = 0.02) and conference presentations (91% versus 40%, X2 p < 0.001). Negative outcomes were reported less frequently but included feeling isolated, financial costs, and lack of perceived tangible outcomes.

Conclusion: This retrospective survey study suggests medical students are motivated by a desire to experience research and career insights/advancement. Studentship programmes should aim to provide these alongside tangible outputs.

Both Ms Ria Patel and Mr Rahul Shah are first authors of this paper.

Supporting Documents: https://inhwe.org/system/files/webform/Figure%201_0.png

UHC2030 Goals in Nursing Curriculum: Survey Among 29 WHO-Europe Member States

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Short Paper

Aim: To explore curriculum of nursing education to achieve the Universal Health Coverage (UHC) 2030 agenda in WHO Europe member states.

Method: This study was planned as cross-sectional. The data collection and validation was conducted with key informants of countries from December 2020 and to June 2021, from March to September 2023, respectively. It was analysed by using descriptive analyses. Eight UHC2030 goals were surveyed. If the goals were integrated in the programme, they were classified as not available (not discussed at all, partially discussed in a general introduction) and available (being a dedicated course, dedicated specialisation or practical hours).

Results: 29 of countries responded the survey. Organization of nursing education varies among WHO/Europe member states. It depends from 55% VET (n=16) to 90% BA (n=26), to 76% MA (n=22) programmes. All eight UHC2030 are not entirely integrated in the nursing curriculum that those are replaced 38% in VET (n=6) and BA (n=10); 45% in MA(n=10). Among member states, Primary care and community based primary healthcare and supporting and improving mental health are involved 69% in VET (n=11), 85% in BA (n=22), 68% (n=15) in MA. 81% member states' bachelor programmes (n=21) consist of supporting reproductive, maternal, newborn and childcare; Preventing, managing and monitoring non-communicable diseases. 56% of VET, 42% of BA, 36% of MA programs in member states do not consist of working with and caring for vulnerable populations. The ratio of adolescent care is lower both BA (50%) and MA (54%) compared within member states.

Conclusions: UHC2030 goals in nursing curriculum are mostly part of BA programmes of nursing education.

Supporting Documents: https://inhwe.org/system/files/webform/INHWE.docx

Nurturing Tomorrow's Healthcare Workforce: The Transformative Potential of Virtual Reality and Augmented Reality in Health Professions Education

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Short Paper

Background: The dawn of Virtual Reality (VR) and Augmented Reality (AR) has led to a paradigm shift in the realm of Health Professions Education (HPE). It not only offers immersive, hands-on training that enriches the learning experience of students but also reduces the carbon footprints of HPE. These unprecedented technologies address the increasing demands of contemporary HPE while fostering the sustainability of the ecosystem. Furthermore, by decreasing the necessity for in-person clinical skills training and resource intensive simulation, it promotes remote and virtual learning making healthcare education more accessible.

Objectives: This review seeks to map the existing literature on the applications of VR and AR in HPE and to explore the effectiveness of VR and AR to enhance academic outcomes compared to conventional teaching strategies.

Methods: A systematic literature search was conducted across databases PubMed and Google Scholar to identify studies investigating the applications of VR and AR in HPE. The articles were selected based on the inclusion and exclusion criteria outlined for this review. Data was extracted from the included studies and variables were analyzed to obtain key findings.

Results: A total of 28 studies were included for this review following a rigorous screening process. Studies predominantly originated from Europe or the United States. Most of the studies reported the boundless potential of VR and AR in subjects surgery and anatomy. A majority of the studies included VR and AR based training outside formal medical curriculum. Learning with VR and AR based technology were regarded as interactive, immersive and engaging.

Conclusion: The integration of VR and AR holds great potential to transform the landscape of HPE. Nevertheless, it is imperative to formulate standardized guidelines for assessing AR and VR based education. Moreover, most of the studies emerged from developed nations highlighting the geographical disparity in the adoption of this technology. Research into the long term impact of VR and AR in HPE is critical for validating its utility. A multifaceted approach involving collaborative development, seamless integration into curricula and robust evaluation framework ensures the utilization of these novel technologies to its maximum potential.

Spirituality: The Master Key for Health Education, Self Care, and Healing

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Short Paper

Background: Spirituality is increasingly recognized as an essential component of holistic healthcare education, enabling practitioners to address the multifaceted spiritual care needs of individuals, families, and communities in health and healing. Despite its importance, gaps remain in the integration of spirituality into professional education, limiting the preparation of healthcare professionals to engage with the spiritual dimensions of care effectively. This project explores how spiritual pedagogy can bridge these gaps through innovative curricula, reflective practices, and person-centered approaches.

Aim: This workshop aims to discuss the integration of spiritual pedagogy into healthcare education to enhance ethical awareness, cultural sensitivity, and holistic care practices. The findings of our multi-phased study have contributed to the development of spirituality-informed teaching modules, assessment tools, and experiential learning strategies for preparing practitioners to provide holistic care with integrity and humility.

Methods: A three-year mixed-methods research design was employed, incorporating qualitative and quantitative approaches. Data collection included focus groups and semi-structured interviews with educators, students, field practitioners, elders and community stakeholders. A systematic literature review focused on existing and best practices of spiritual pedagogy. Curricula and educational practices were evaluated for their incorporation of biopsychosocial spiritual frameworks, reflective practices, and spiritual and cultural sensitivity. Data analysis informed the creation of targeted teaching modules and workshops.

Results: Findings revealed significant gaps in existing curricula regarding spiritual pedagogy, alongside opportunities for the integration of transformative spiritual pedagogy. The literature review across professions informed a competency framework. A spirituality course evaluation highlighted that experiential learning, reflective practice, the use of digital stories, and focused spiritual self care enhanced students' sense of competence and ethical frameworks for spiritually sensitive practice. Elders and stakeholders emphasized the importance of mentorship, dialogue, and practical tools in fostering spiritual humility and holistic care.

Discussion: This research underscores the transformative potential for the integration spiritual pedagogy into healthcare education. By bridging theoretical frameworks with practical applications of spirituality, the study offers a model for preparing professionals to engage ethically and compassionately with the spiritual dimensions of care. Outcomes include enhanced reflective practices, ethical awareness, and person-centered approaches, and focused spiritual self care, which collectively promote holistic care and professional integrity and a spiritually sensitive practice approach.

Supporting Documents:

https://inhwe.org/system/files/webform/Spiritual%20Pedagogy%20Course%20Evaluation%20INWHE%202025rev.pdf

Ethical and Legal Considerations in the Decision-Making Process in the Dental Curriculum. Instructional Resources

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Short Paper

Dentistry is a profession based on a social contract that includes social, moral, and political aspects in addition to the duty to provide care for vulnerable individuals and meet their needs through ethical practices. The healthcare industry, including dental care, is constantly evolving with new products, techniques, technologies, and services. Dental treatments are now more preventive and less invasive, with the use of smart technology. This makes the occupation of dentistry easier, faster, better, and more enjoyable for patients. However, today the active participation of patients from the beginning of the treatment planning process to its successful completion is a "condition sine qua non". This partnership requires consent based on the patient's understanding of the proposed treatment procedures and the dentist's knowledge of the market and moral limitations. Shared decision-making is an important factor that influences the choice of dental treatment by private general practitioners and prevents risks of litigation. The integration of evidence-based and ethical decision-making into dental education acquiring critical thinking and decision-making skills is also important. A comprehensive appraisal of the preference-match strategy in dentist-patient communication, which addresses the conflict between patients' interests and patients' rights could assist in avoiding overtreatment or neglect of a patient's need and thus adequately answer the professional and market-born challenges. Adequate education and decision-making competence: both professional ethics and leadership must be taught and appropriate courses should be part of the undergraduate medical curricula and continuing education at all levels.

 $Supporting\ Documents: \ \underline{https://inhwe.org/system/files/webform/instructional\%20\%20 resources.pdf}$

Development of Humanization Competencies in Facilitators-Orientators Project in the Waiting Room of a High Complexity Emergency Hospital

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Short Paper

Background: As part of a Volunteer Project, which is developed in a High Complexity Emergency Hospital (HUAP), an institutional strategy is developed to improve the proactive orientation of the consulting population in the waiting room, especially at times of high demand. To address the low quality perceived by users, the strategy considers a support and orientation service for users in the waiting room, with roles and functions of facilitators and navigators for patients, families, and the community. This project involves 4th and 5th year students of the nursing career, since these students have as part of their graduation profile, the development of competencies of humanization of health care.

Approach: A Volunteer Program was designed and implemented with the characteristics of service learning, allowing students to have experiential learning as an educational methodology based on the idea that students learn best through direct experience and reflection on user satisfaction, as a dimension of the quality of the service provided, which is the result of multiple interactions that significantly distinguish a person, from the moment he/she enters our health care center until the moment he/she leaves, whether it is a patient who comes for an emergency medical service or his/her companion who assists him/her in the care process. The project will formulate an explicit model of care, support, and coordination, which will provide an innovative scheme of action and roles associated with the functions of facilitator and guide for networked, person-centered, and humanized care. The framework of professional competence in the field of health humanization is based on those formulated by the Center for Humanization in Health of Spain. The competencies evaluated at the beginning and at the end were: Relational, Emotional, Ethical, Spiritual, Cultural and Management.

Results: Both the exercise of the facilitating role and the guiding role have made it evident that user satisfaction is fundamentally based on personal perception (of the patient, family members or companions), as well as on the explicit or implicit recognition of the influence of psychological, social, economic and political conditions present, which directly or indirectly influence their way of classifying the experience. The relational domains with active listening, ability in the empathic response, capacity to personalize, adequate use of confrontation, prudent and ethical management of persuasion, and assertiveness, and the Emotional domain is adequate management of own and others' feelings, assertive management of feelings and their expression, temperance and tolerance to stress, are those that have been identified as having greater deficits and therefore greater needs for additional training for undergraduate students.

Implications: This project has highlighted the need for training in skills and abilities that foster humanization in the relational, emotional, ethical and cultural dimensions of care. The skills of active listening, empathic response, ability to personalize, appropriate use of confrontation, prudent and ethical management of persuasion, and assertiveness, are key to the function and roles of healthcare navigators. The participation of students in these functions and roles provides them with key experiential learning to bring about change in their future professional behaviors.

Approaches to Visualize Classification in eHealth System

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Short Paper

Background: Finland is currently undergoing a significant shift towards nationwide electronic processing of patient and client data within the social and health care sectors. The primary objective is to enhance patient safety and improve the availability of information. This transition aims to boost the interoperability of eHealth systems and streamline the national transfer of patient data. The implementation of the Finland Care Classification (FinCC) plays a crucial role in this initiative, as it assesses patient needs through nursing diagnoses, executes necessary interventions, and assesses the accessibility and transferability of care results (THL, 2024). However, a descriptive study conducted in 2022 revealed suboptimal utilization of FinCC in Finnish hospitals. The three most frequently used nursing diagnosis components covered only about one-third of the total 17 components. The study also highlighted variations in the prevalence of different components among different hospitals, offering opportunities for benchmarking (Mykkänen et al., 2022).

Aims: The aim is to enhance the expertise of nursing faculty members in the construction of FinCC within the eHealth framework and discover innovative approaches for visualizing the classification. This is intended to support supervisors and lecturers in guiding students through the implementation process.

Methods: This action research project comprises three phases. In the initial stage, a survey was carried out to assess the faculty members' future educational needs. The second phase involves developing supplementary materials to enhance the visualization of the classification. The third and final phase will focus on the evaluation of the project.

Results: Initial findings reveal the design of a structured education program, which includes workshops tailored for faculty members. The FinCC structure has been organized into a concise pocket-sized folder that is printable and applicable in both clinical classes and actual clinical practice. However, a thorough examination of the improvements in teaching still needs to be conducted.

Conclusions: The project is still ongoing, conclusion will be published.