

## CONFERENCE ABSTRACTS

# FIP COPENHAGEN 2025

83<sup>rd</sup> FIP World Congress of Pharmacy and Pharmaceutical Sciences in Copenhagen, Denmark,  
31 August to 3 September 2025

## Pharmacy technicians

### May the 4s be with you

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**Background Information:** KK Women's and Children's Hospital Emergency Pharmacy (KKH EP) operates on rotating shifts to maintain continuous service. However, the 2023 Employee Engagement Survey revealed that staff in EP reported significantly lower work-life balance scores compared to both the institutional and local norms. Recruitment challenges, primarily due to the nature of shift work, have led to frequent overtime, further straining staff well-being.

**Purpose:** The primary objective of this study was to assess whether implementing a four-day work week (4DWW) would enhance work-life balance scores among EP staff. The secondary objective aimed to evaluate the impact of the 4DWW on unplanned absences, overtime hours, and patient wait times.

**Method:** To identify factors contributing to poor work-life balance, discussions with staff highlighted issues such as insufficient manpower and recruitment difficulties. Temporary pharmacy assistants were engaged to alleviate manpower shortages. A comprehensive analysis of patient arrival data from January to June 2024 was conducted to determine the minimum staffing required to maintain patient wait times at or below 20 minutes. Simulations indicated that a 4DWW could be feasible with 18-20 staff members, allowing for three rest days per week without compromising service delivery.

**Results:** Surveys conducted before and after the implementation of the 4DWW showed a notable increase in favourable work-life balance scores. When favourable scores

were defined as 4 to 5, the proportion of positive responses rose from 19% to 32%, although this change was not statistically significant ( $p=0.127$ ). However, when scores of 3 to 5 were considered, favourable responses increased from 47% to 71%, approaching statistical significance ( $p=0.011$ ). Despite these improvements, unplanned absences increased from 42 to 74 days, and overtime hours rose from 148.25 to 386.5 hours during the trial period. Patient wait times remained consistent with previous periods, indicating no adverse effects on service delivery.

**Conclusion:** While the 4DWW implementation has positively influenced staff perceptions of work-life balance, challenges related to energy levels and stress persist. Continuous monitoring and adjustments are necessary to maximise the benefits of the new schedule while addressing any negative impacts on staff well-being.

### The impact of education, training, enablers and facilitators on the scope of practice of pharmacy, dental, and optical professionals in GB/UK: A scoping review protocol

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**Background information:** Healthcare services in the UK are currently under significant pressure due to staff shortages, financial challenges, recovery from the COVID-19 pandemic and increasing demand. Utilising an appropriate skill mix and enabling pharmacy, dental and optical professionals to optimise their roles is crucial to maintaining service provision. This review will explore the extent to which student and

registered pharmacy, dental and optical professionals in the UK are enabled to expand their scope of practice through education, training and other enablers and facilitators.

**Purpose:** The review will compare the education and scopes of practice of pharmacy, dental and optical professionals to identify:

1. The definition and characteristics of the term 'scope of practice'
2. Current educational strategies, and the extent to which they enable role development, optimisation, or expansion of scope of practice
3. Enablers and facilitators which impact on role development, role optimisation, or expansion of scope of practice.

**Method:** Peer reviewed literature will be searched via MedLine, EMBASE, ERIC, Education Research Complete, PsychINFO, and Scopus and limited to English language studies published between 2000 and 2024. Grey literature will be sourced from healthcare regulators, professional organisations, statutory education bodies and governments.

**Inclusion criteria:** studies relating to the education and training of pre-registration pharmacy technicians and pharmacy technicians in Great Britain (GB), and student dental technicians, dental technicians, clinical dental technicians, student dispensing opticians, dispensing opticians and contact lens opticians in the United Kingdom (UK). Studies and other literature exploring enablers and facilitators to role development, optimisation, or expansion of scope of practice will be included. Studies and other literature conducted in any academic or professional setting will be considered

**Exclusion criteria:** studies from outside GB (pharmacy) or UK (dental and optical). Studies relating to pharmacists, pharmacy assistants, dentists, optometrists or optical assistants only.

Study selection and data extraction will be undertaken by the author and sampled by a second reviewer. Data analysis will include qualitative content analysis and descriptive statistics.

**Expected outcomes and impact**

The review will identify effective education and training strategies that have enabled pharmacy, dental and optical professionals to develop their role or expand their scope of practice. It will enable comparison of data across the three professions to identify similarities and differences.

Key themes within the literature, including enablers or facilitators, will be mapped and presented as descriptive statistics to illustrate their significance. The review will also analyse how the term 'scope of practice' is currently defined and described in a GB/UK practice context, highlighting key characteristics and variations across professions.

The findings will contribute to the development of a theoretical framework to inform further empirical research. The review will also examine the research methodologies used within the existing body of research and identify any gaps in the literature to guide further studies.

## Stock data insights – Reducing waste and improving dialogues

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**Background:** Medication waste is a significant challenge in hospitals, leading to financial losses and environmental concerns. Traditional inventory methods are often insufficient to meet the fluctuating demands and availability of medicines. In Danish hospitals, medicines are available in medication rooms in each ward, which further complicates the stock management. Serving more than 500 medication rooms in the hospitals in the Capital Region, the hospital pharmacy staff needs elaborate understanding, insight and overview of the medication needs, locations, expiration dates, etc. By introducing a digital waste data system, we aimed at reducing waste by creating data insights.

**Method:** A working group was established to explore the options for creating and implementing a structure for collecting, processing, exhibiting, and utilising data. Pharmacy staff were instructed on how to register medication waste. Based on this data, we developed a dashboard, providing a visual take on the multifactorial processes and data at hand. Metrics such as medication type, location, expiration date, and quantity are recorded continuously. Regular staff meetings reviewed data trends and adapted strategies.

**Results:** Examining data provided unique and powerful insights, creating improvement dialogues with pharmacy and hospital staff.

Interventions included:

- Focus on products with short shelf-life – reducing stock and order size
- Highlighting upcoming expiration of frequent medications – reducing stock and order size
- Redistributing near-expiry medications
- Procuring certain products only when needed.

Data analysis highlighted common issues like overstocking and slow-moving inventory, enabling targeted adjustments in ordering practices. Key factors for success included improved monitoring, increased staff awareness, and standardized procedures for handling near-expiry medications.

**Conclusion:** The digital tracking system improves data visibility and decision-making in hospital pharmacies. Real-time monitoring enables effective interventions, reduces expired stock, and enhances resource use as well as quality and employee satisfaction. Future improvements include refining the user interface and integrating predictive analytics to further optimise inventory management. Expanding this approach may enhance overall waste reduction efforts, supporting sustainable healthcare practice.

## Assessing UK pharmacists and pharmacy technicians' knowledge, attitudes, and practice towards antibiotics, antibiotic use, and antibiotic resistance: A cross-sectional national survey of 1020 pharmacy professionals

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**Introduction:** In 2021, bacterial antimicrobial resistance (AMR) caused 1.14 million deaths globally. Pharmacists play a key role in combating AMR, which is also highlighted in the FIP policy on antimicrobial stewardship (AMS) and FIP Development Goals 16 and 17. The UK's AMR action plan (2024–2029) aims to boost healthcare workers' knowledge by 10% from a 2019 baseline. This study aimed to assess UK pharmacists' and pharmacy technicians' knowledge, attitudes, and practices regarding antibiotics, their use, and resistance.

**Methods:** A validated 43-item questionnaire, based on the COM-B framework and previously used in a 2019 survey of HCPs across 30 EU/EEA countries (including the UK), was administered nationally from March 1–18, 2024. Patient-facing HCPs across all health sectors were eligible. Basis Market Research, in collaboration with a Project Advisory Group (PAG), employed quota sampling (100 per profession) from their database and supplemented recruitment through snowball sampling by PAG. The questionnaire included true (1) or false (0) questions to assess knowledge and 5-point Likert scales to assess perceived knowledge, attitudes, and behaviours.

Descriptive statistics were predominantly used, and a Kruskal-Wallis H test was used to determine the significance of differences in overall knowledge between healthcare professions. Data were analysed using Microsoft Excel (Version 2308) and Statistical Package for the Social Sciences Version 29 (IBM, US). Level of significance was set to  $p < 0.05$ .

**Results:** Responses from pharmacy professionals (pharmacists (25%, 762/2996) and pharmacy technicians (9%, 258/2996)) (n=1020) included all four UK nations (England (67.2%), Scotland (18.2%), Wales (8.7%), Northern Ireland (5.9%) and sectors (secondary care (53.6%), primary care (46.2%), long-term care facility/service (0.2%)).

Knowledge differed significantly between healthcare professions ( $H = 216.035$ , degrees of freedom = 6,  $p < 0.001$ ) with 72% of pharmacists (546/762) and 37% of pharmacy

technicians answering all seven knowledge question correctly (96/258). Overall, 62.0% (1,876/2,996) all HCPs respondents answered all seven knowledge questions correctly.

Knowledge levels were lower among pharmacy technicians for key AMR concepts: 85.3% (220/258) understood that healthy people can carry resistant bacteria, and 78.3% recognized that antibiotic use increases the risk of resistant infections, compared to pharmacists (87.4%). Awareness that resistant bacteria can spread between people was low across all professions (range: 51.9%–90.0%); pharmacy technicians (51.9%), pharmacists (85.7%).

Among pharmacists, 90.7% (691/762) believed they had a key role in tackling AMR, compared to 62.8% (162/258) of pharmacy technicians. Across all healthcare workers, the overall proportion was 84.0%. Overall, 87.8% (669/762) of pharmacists and 69.8% (180/258) pharmacy technicians reported having good opportunities to provide advice on prudent antibiotic use, although this could be increased with easier access to resources that facilitate prudent prescribing and use.

**Conclusion:** Given pharmacists' high levels of knowledge, current national strategies for pharmacy professionals should be continued. Tailored resources should be developed to enhance pharmacy technicians' understanding and sense of responsibility in tackling AMR, particularly in their interactions with patients filling antibiotic prescriptions. Further research is needed to identify the best channels for disseminating information to healthcare professionals and to assess whether increased AMR knowledge and resource awareness lead to behaviour change.