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Pharmacy technicians: an assessment of the current UK landscape, and proposals to develop community pharmacist and pharmacy technician roles and skill mix to meet the needs of the public

Chapter 4

4 Pharmacy technicians – a European outlook

4.1 Pharmacy technician practice across the European continent

In each European country, there are important differences in the roles of pharmacy staff which support the role of the pharmacist, as pharmacy technicians do in the UK. For ease of reading, the most highly-trained pharmacy support staff role supporting the role of the pharmacist in countries outside of the UK is referred to in this chapter and elsewhere in the report as a “comparable pharmacy technician role”. That is notwithstanding the difficulties in comparing the roles and the other issues outlined in this report.

Training for comparable pharmacy technician roles involves an undergraduate course in the following European countries:

- Albania (three years)
- Belgium (two years)
- Czech Republic (three years)
- Denmark (three years)
- Finland (three years)
- Germany (two years)
- Malta (two years)
- Serbia (four years)
- Spain (one year)
- Turkey (two years). [158]

Complementary support roles working under the supervision of a pharmacist, akin to those of pharmacy technicians, are present throughout Europe and worldwide. However, the systemic conditions, such as the level of training for the role, staffing levels and the national healthcare system in operation, are variable and these must be taken into account whenever a comparison is being made.

In Europe, whilst the training and professional activities of pharmacists are standardized at a high level by the European Union (EU) Recognition of Professional Qualifications Directive,

the training and activities of pharmacy technicians and comparable roles are not. Throughout the EU, since 2005, a person who has trained to become a 'pharmacist' will have training of at least five years' duration, including a four-year University degree. No similar European standards exist for pharmacy technicians or staff in comparable roles. [159]

4.2 Previous research

A comparative study on pharmacy technicians in Denmark, the Netherlands and Sweden was commissioned by the Department of Health and undertaken by researchers at the School of Pharmacy, University of Manchester. The report was published in 2004. It revealed that staff groups comparable to pharmacy technicians ('pharmaconomists' in Denmark, 'pharmacist's assistants' in the Netherlands and 'prescriptionists' in Sweden) were, on the whole, better trained, undertook a number of additional tasks and had greater levels of responsibility than UK pharmacy technicians. [79] These staff groups undertook long periods of training, often comprising theoretical learning at a college and practice-based work placements. Indeed, 'prescriptionists' in Sweden are trained to bachelor degree level.

In terms of the higher levels of responsibility assumed relative to the UK, 'pharmaconomists' in Denmark dispensed prescriptions without the direct supervision of the pharmacist. They had extended their roles by developing clinical specialisms, for example in asthma management, and business skills such as quality control. Some pharmaconomists were also responsible for managing a sub-branch of a pharmacy in the absence of the pharmacist.

'Pharmacist's assistants' in the Netherlands undertook a wide range of tasks, including dispensing prescriptions without the direct supervision of a pharmacist, counselling patients and undertaking medication reviews. They had also developed the business role by gaining managerial responsibilities.

Within the community pharmacy setting, 'prescriptionists' in Sweden performed a similar range of tasks to the pharmacist. They were responsible for the daily management of the pharmacy and a prescriptionist was often employed as the 'chief pharmacist'.

A culture of developing safe systems of working within the community pharmacy sector across these three European countries enabled these comparable pharmacy technician staff groups to extend their roles. A commitment to quality control was a feature, as were underpinning safe systems of working. Prescriptions included more detail such as the clinical indication of the prescribed drug. The electronic transfer of the majority of prescriptions allowed for the incorporation of a series of internal checks on the computer system. In turn, the pharmacy computer system had been designed to specifically support such an activity. For example, original pack dispensing and barcode matching in all three comparator countries guarded against dispensing errors by the comparable pharmacy technician groups.

Unlike the UK, the tasks undertaken by these occupational groups were defined and clear. They were protocol driven, but were delivered by those who, as a group, had significantly higher educational standards than pharmacy technicians in the UK - especially as seen within the community pharmacy setting. Furthermore, these groups enjoyed salaries that were commensurate with the higher levels of responsibility. All of these factors not only allowed for these staff groups to operate 'unsupervised', but resulted in a degree of professionalisation. Indeed, the notion of supervision did not receive the same, if any, attention by pharmacists in the three comparator countries.

Whilst it is not within the scope of this report to explore every nuance and detail of pharmacy practice in other countries, it is apposite to further explore some of the key differences between these comparator countries which have led to different models of practice.

4.3 The community pharmacy model in Denmark in 2017

In Denmark, pharmacy ownership is restricted to pharmacists as sole proprietors. A pharmacist can own a maximum of eight pharmacies, another key difference to the UK. [160] In England, 62% of community pharmacies are owned by multiple contractors who operate chains of six or more pharmacies, and 49.2% in Great Britain are in large multiple chains with 100 or more pharmacies. [161] [162] Many have non-pharmacist owners; there

is no restriction on pharmacy ownership in the UK in this regard. Non-pharmacist ownership of pharmacies has been identified as a risk to public health by the European Court of Justice. [163] [164]

Pharmacies in Denmark can only sell products which are naturally and appropriately related to pharmacy. The sale of goods such as perfume, and cosmetics such as make-up and mascara, is expressly prohibited. [165] Pharmacy owners (pharmacists) are held to account by the Lægemiddelstyrelsen ('the Danish Medicines Agency') for the operation of their pharmacies. [166] For each three pharmacies and/or pharmacy branches, there should be at least one pharmacist present and he/she must be contactable by phone from the other branches. [165]

'Farmakonomer' (pharmacoconomists) are the group most comparable to pharmacy technicians. Training lasts for three years, including 23 weeks at the Danish College of Pharmacy Practice with exams after the 1st, 2nd and 3rd years alongside work in community pharmacy. In addition, 90 study days are organised during the practical training period. [167] The entry requirement is 12 years of primary and secondary schooling, which is completed at 18 years of age. [160] Other than pharmacists and pharmacoconomists, there are no other pharmacy roles involved in the dispensing and supply of prescriptions.

Pharmacoconomists are legally required to answer patient medical inquiries and are liable for any dispensing errors they make and the information they provide. The National Agency for Patients' Rights and Complaints has punitive authority in this regard. [160]

A report from the International Pharmaceutical Federation indicates that in 2015/16, there were 367 pharmacies, including supplementary units and branch pharmacies, employing 867 pharmacists (including owners) and 2,825 pharmacoconomists. This equates to an average of 2.4 pharmacists and 7.7 pharmacoconomists per pharmacy. [160] A different reference source indicates that in 2015 there were 368 pharmacies, with 720 full-time equivalent (FTE) pharmacists (including owners, 1.95 FTEs per pharmacy) and 2,400 FTE pharmacoconomists (6.5 FTEs per pharmacy). [168]

4.4 The community pharmacy model in the Netherlands in 2017

The equivalent to a UK pharmacy technician in the Netherlands – the Apothekersassistent or ‘pharmacist’s assistant’ – spends two to three years training to diploma level, which is a level four education in the Dutch education system. This is the highest level of MBO – “middelbaar beroepsonderwijs” or senior secondary vocational education - designed for vocations with higher levels of responsibility. [169] [170] It involves a combination of practical training in a pharmacy and invariably an academic component at a regional education centre of at least one day or evening per week (though up to 80% of the training may be completed at the centre, depending on the style of the course chosen). [171] The starting salary of a qualified pharmacist’s assistant in 2017 is € 27,351.04 (£24,133 based on a March 2018 currency conversion). [172]

Pharmacists’ training in the Netherlands takes six years to complete. For those who wish to pursue a career in hospital pharmacy, a further four-year period of training is required. [173] [174] [175] Those in community pharmacy may undertake an additional two-year clinical and practice-based qualification to gain the legally recognised title of ‘openbaar apotheker-specialist’ or ‘community pharmacy specialist’ with annotation in the Beroepen in de Individuele Gezondheidszorg (BIG) register (the public register for healthcare professionals). [176] [177] [178]

Beyond the role of the ‘pharmacist’s assistant’ is the Farmaceutisch Consulent or ‘pharmacy consultant’ – a University bachelor’s degree level six qualification, which takes a further three years of training to achieve for qualified pharmacist’s assistants who are working at least 16 hours in either community or hospital pharmacy, or four years for others with a level four diploma. [179] [180] The role is intermediate between pharmacists and pharmacist’s assistants – working in community, hospital, primary care, industry or public service. It specialises in pharmaceutical care and medication safety. Farmaceutisch Consulents are involved in developing, implementing and evaluating pharmacy policy, projects and research. [181]

Those with a level four diploma can alternatively study a bachelor's degree level programme to become a Farmakunde or 'pharmaceutical scientist' (a level six qualification). A farmakunde is not a healthcare professional, but works in organizations where medication and disease are central to their functions, such as hospital pharmacies, chain pharmacies (in head office roles), the pharmaceutical industry, pharmaceutical wholesaling, insurance companies, patient organisations, government and practice research.

Registration with the leadership body is voluntary for pharmacist's assistants and pharmacy consultants, but in June 2017, 9,464 out of a total of 15,697 pharmacist's assistants (60%) were registered. [182] [183]

Pharmacist's assistants work with responsibility for advising patients and dispensing prescriptions, but under the overarching responsibility of the pharmacist. Individual transactions are not directly supervised by a pharmacist, but supervision takes place through a monitoring and review process.

Another significant factor which enables this model of skill mix is that community pharmacies in the Netherlands commonly have two pharmacists on duty at the same time and they are supported by 5-10 'pharmacist's assistants' (with three years' diploma training at level four educational standard). In 2013, an average community pharmacy employed 1.5 pharmacists, 8.2 pharmacist's assistants (5.5 FTEs), and 3.9 other support staff (2.1 FTEs including general support staff, delivery drivers, cleaners and administrators) and dispensed 2,200 prescription items per week. [184] The figures for the number of FTEs remained the same in 2016. [185] This is a very different position than is found currently in the UK community pharmacy setting, where there is often only one pharmacist on duty, supported by possibly only one pharmacy technician - if at all. In the Netherlands, 'pharmacist's assistants' are often the first and the last ones to speak to the patient. They enter the prescription onto the computer, review interactions and contraindications, refer these to the pharmacist and make contact with the doctor if necessary. Pharmacists deal with the more complicated issues around medicines, discuss local medicines guidelines with doctors, handle issues with health insurers and run the pharmacy.

4.5 The community pharmacy model in Sweden in 2017

Swedish receptarie or 'prescriptionists' undertake a 3-year full-time University bachelor's degree course, including periods of practical training in the pharmacy during the course.

[186] The first three years of the course at the University of Umeå is the same as that undertaken by masters-level pharmacists, who undertake a 5-year course. [187] At the Universities of Gothenburg and Uppsala, the courses are separate from those taken by pharmacists. [188] [189] Students commence University courses from 18 years of age onwards.

A pharmacy must be supervised by either a masters-level pharmacist or a prescriptionist. The starting salary for a prescriptionist is 25,500 kronor per month – £26,772 per year in the UK, based on a currency conversion in March 2018. [190]

There is a separate role in Sweden of Apotekstekniker or 'pharmacy technician', which involves 18 months of full-time study at a polytechnic before practice. Lectures, group work and practical training may be delivered remotely. [191] Apotekstekniker in Sweden are not allowed to supervise the dispensing process, but can generate labels for prescriptions, pick stock and apply labels to the stock, under a pharmacist's supervision.

Läkemedelsansvarig or 'local quality managers' are also appointed to all pharmacies in Sweden. [192] [193] These are masters-level pharmacists (or exceptionally, prescriptionists) who have undergone additional training and cover between 1 and 3 pharmacies each. They can work hands-on in pharmacies and the principal function of their role is to advise on safety, quality and governance and ensure pharmacies meet regulatory requirements. They are required to report problems with processes in pharmacy to the Medicines Product Agency and they support with improving competence and providing training in giving advice to patients. [194]

The Swedish pharmacy sector now faces challenges. All pharmacies in Sweden were state-owned until 2009. [195] Since that time, pharmacies have been sold to corporate organisations and over-the-counter medicines made available for sale from retail stores,

resulting in pharmacies increasingly selling items other than medicines. There has been a debate in the press about how pharmacy staff are perceived as less knowledgeable by customers and pharmacists have expressed concerns from a professional perspective over the commercialisation of community pharmacy. [196]

A national inquiry, commissioned by the Swedish government in 2015 and published in March 2017, has made the recommendation that only a pharmacist or a prescriptionist can perform all the required steps in the process of dispensing a prescription medicine, with a view to improving the quality of the supply process. The special investigator appointed to lead the inquiry stated that prescription medicines were often not being used in an appropriate manner following collection at the pharmacy and that all parts of the dispensing and supply process require pharmaceutical competence. The recommendations were subject to consultation as at June 2017. [194]

4.6 Conclusions

1. Whilst it may appear attractive to base the policy around community pharmacy skill mix and the use of the pharmacy technicians in the UK upon the successful skill mix models of those in comparable roles working in other countries in Europe and beyond, it is not possible to do so unless the wider healthcare, political, regulatory, pharmacy ownership and commercial context is also taken into consideration. The different training, qualifications, skills and experience of pharmacy technicians and those in comparable roles in other European countries, in the context of the environmental conditions, has consequences for patient care, safety and the quality of service provided.
2. In some European countries, those in roles comparable to those of pharmacy technicians are trained to graduate level and the role is much more advanced than that in UK community pharmacy practice, involving significantly more responsibility and a commensurate remuneration structure.

3. A structured career framework for pharmacy technicians, which links remuneration to greater levels of training, competency and responsibility, would act as a positive incentive to drive standards and enable skill mix with pharmacists to operate successfully.
4. In European countries where additional roles and responsibilities are assumed by those in comparable pharmacy technician roles in community pharmacy, those individuals are supported by much higher standards of clinical governance. For example, they may be able to rely upon original pack dispensing and bar code checking to assist with dispensing accuracy. The transfer of prescriptions from surgery to pharmacy in some countries is accompanied by additional clinical information such as the indication of the medicine. Furthermore, not only is there a higher standard of staff training, but the staffing levels of both pharmacists and trained staff in individual pharmacies are much higher than typically seen in the UK.
5. In mainland Europe, the majority of pharmacies are owned by pharmacists. Consequently, there is much less focus upon and influence from corporate profit objectives and a greater emphasis on professional considerations than in the UK, where the majority of pharmacies are owned by large corporate multiples. The situation in the UK brings added risks and frequently results in commercialism clashing with professionalism.
6. In many respects, whilst the UK clearly has an ambitious programme for what it expects pharmacy to deliver, it is hampered by deficient environmental standards relative to its European counterparts in community pharmacy. The training of pharmacy technicians in the UK is at a much lower level than for those in comparable roles in many other European countries. Pharmacy staffing levels in the UK appear considerably lower than in other European countries and have resulted in significant workload having to be endured by what is often the sole pharmacist and a much smaller, often unqualified, staff complement.

Barcode checking during dispensing was advocated by the National Patient Safety Agency in 2007 as a means to reduce errors. In 2016, the NPSA's functions transferred to NHS improvement, however its recommendations remain live on NHS websites in 2017. [197] Whilst barcode checking is used in the UK for retail sales purposes, it is rarely ever used as a safety tool in a UK community pharmacy. Barcode scanning of medicines may be introduced in the UK in 2019, as a result of the EU Falsified Medicines Directive (though the UK's exit from the European Union may affect the precise implementation of the legislation). If it is implemented as it currently stands, the additional dispensing tasks will require additional staffing levels to support. Due to deficiencies in the UK system in pharmacy, the changes may simply result in even greater pressure on staff and consequently greater risk to the public. However, with appropriate environmental conditions, there would exist an opportunity not only to identify the authenticity of the product leaving the pharmacy, but to incorporate additional safety checks to ensure the product matched the item on the prescription and on the patient's pharmacy record, during dispensing and at handout.

Access to the full NHS patient record does not occur in the UK community pharmacy setting (there may be isolated local exceptions to this). Even though partial access to Summary Care Records (SCRs) on a read-only basis has recently emerged, workloads and low staffing levels hinder the proper use of this valuable facility. Further, the SCR does not even include as standard the medical condition(s) from which the patient is suffering. [198]

7. Consequently, basing policies regarding skill mix and the use of pharmacy technicians upon the successful models in operation in mainland Europe or beyond, without seriously considering the whole system differences and deficiencies of the UK community pharmacy environment in comparison, creates a significant risk of damaging the integrity of the current standard of the service and a risk to public safety.

4.7 Recommendations

1. The successful community pharmacy skill mix models of countries in Europe and beyond could only be used as a realistic template for the UK, when whole-system improvement to the community pharmacy operation in the UK is also undertaken.

This would include:

- a. Increasing the educational standard of UK pharmacy technicians (it was previously recommended that it becomes a level 4 educational standard (sub degree level) in section 3)
- b. Introducing a clinical career framework for community pharmacists and pharmacy technicians, and subsequently increasing the salaries of pharmacy technicians
- c. Ensuring that pharmacies are better staffed, with more than one pharmacist and a complement of trained, registered pharmacy technicians
- d. Improving the clinical governance arrangements within the community pharmacy setting, enabling pharmacists to rely on clinical indications, barcode checking, original pack dispensing and access to the full electronic patient records on a read and write basis
- e. The ability for pharmacists to work with professional autonomy even in pharmacies that are owned by large corporate multiples.

If patient safety and role development of pharmacists and pharmacy technicians is to be a serious proposition in the UK, then such measures should be introduced as soon as possible. Such improved clinical governance and wider system enhancements would provide a much more robust springboard to enhance the roles of pharmacists and pharmacy technicians. Without this, the development of skill mix in the community pharmacy setting can only be very limited.

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