UNITED KINGDOM

Liz Breen – Senior Lecturer in Operations Management, Bradford University School of Management
Rachel Urban - Research and Evaluation Manager, Community Pharmacy West Yorkshire
Hadar Zaman – Lecturer in Pharmacy Practice, Bradford University School of Pharmacy

Section I Brief overview of the health supply chain in the country

The health supply chain within the United Kingdom follows a traditional model adopted by many countries globally. This is typically the sourcing of products from manufacturer to pharmacy (hospital and community) via wholesaler or direct. New models of delivery are being piloted and evaluated to improve supply chain efficiency and effectiveness (See Challenges, section V).

Figure 1 below summarises the health supply chain stakeholder influence within England (UK). The type of influence is denoted by line type and depth by the contact point of arrow e.g. the General Pharmaceutical Council (GPhC) has a regulatory influence over 3 tiers of the supply chain, whereas the Royal Pharmaceutical Society (RPS) has advisory influence over the inner 2 tiers of the supply chain. National variations can be found in Scotland, Wales and Northern Ireland but these are customisation of regional and local associations as opposed to regulatory governance.

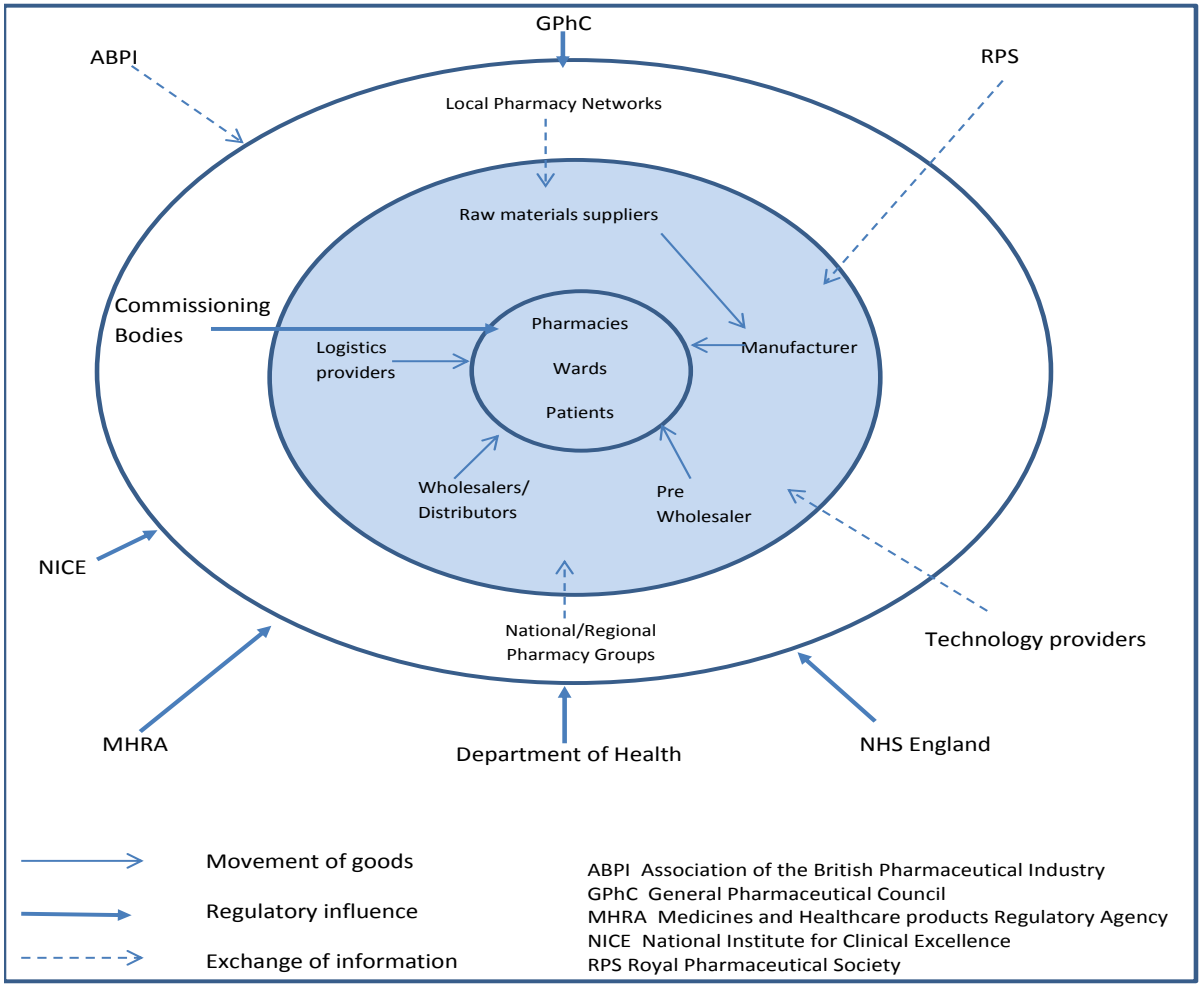


Figure 1 Stakeholder analysis of the Health Supply Chain (England) (Authors' Own).

A large proportion of activity within the healthcare supply chain is undertaken by pharmaceutical wholesalers. According to the Healthcare Distribution Association changes within this supply chain has encouraged these suppliers to develop into 'integrated health care service providers' (HDA, 2016). *The distribution industry has to change, with wholesalers taking more of a role in central dispensing, informatics and big data, as well as reacting to continued consolidation, online pharmacies and new picking and delivery mechanisms (1).* Current wholesalers in this supply chain are: AAH Pharmaceuticals; Alliance Healthcare; Lexon UK Ltd; Sangers Ltd.; Mawdsleys; UnitedDrug Sangers and Phoenix Healthcare Distribution Ltd. (1). Wholesaler operations can have bespoke sub operations for both community and hospital operations e.g. AAH Pharmaceuticals distribute to community (Enterprise) and hospital (AAH Hospital Service). AAH is the largest pharmaceutical wholesaler in the UK, with 3,800 employees and 20 locations across the UK (2). Key activities of a typical UK wholesaler are; selection, licensing, procurement, importation, and repacking of pharmaceutical preparations as well as the provision of competitively priced generics (3).

Section II An overview of the current legislation (if any) that guides the role of cadres working within that health supply chain.

The supply of medicines within the UK is underpinned by extensive legislation and associated statutory instruments. The Human Medicines Regulation Act 2012 (4) and Misuse of Drugs Act (MDA) 1971 provide the legal framework for the manufacture, licensing, prescribing, supply and administration of medicines plus the regulation of controlled drugs (CDs) to prevent misuse (5, 6). The healthcare professionals who may legally possess and supply CDs are identified within this legislation and the controls around prescribing, administration, safe custody, dispensing, record keeping and destruction or disposal are established. More recently publication of the Human Medicines Regulations 2012 has brought previous legislation in line with EU legislation and provides a range of exemptions to the restrictions on the sale, supply and administration of medicines (7).

The mechanisms through which medication can be supplied may vary based on its legal classification and the practitioner who is supplying or administering it. Various regulators and authorities oversee health care within the UK. Most relevant to the supply chain is Medicines and Healthcare products Regulatory Agency (MHRA) and National Institute for Health and Care Excellence (NICE). Before a medicine can be widely used in the UK, it must be granted a licence (or marketing authorisation). This is sanctioned by the MHRA; a government agency which ensures that medicines and medical devices work, and are acceptably safe and wholesaler/distribution site compliance (8).

To ensure fair practice by the pharmaceutical industry, the Prescription Medicines Code of Practice Authority (PMCPA) was established. They are responsible for administering the Association of the British Pharmaceutical Industry Code of Practice for the pharmaceutical industry. The code regulates the advertising of medicines for prescription to health professionals and administrative staff. It also covers information about prescription only medicines made available to the general public (9).

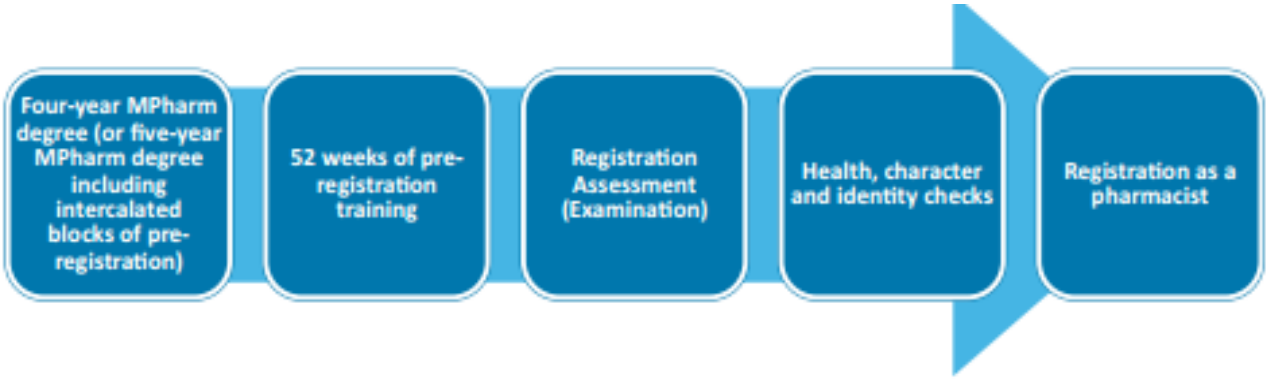
Section III What role do pharmacists play in the health supply chain.

The role of pharmacists within the UK health supply chain varies throughout the profession. Pharmacists by their very nature dispense and supply medicines to patients but also fulfil many other critical roles such as: advise on medicines procurement and primary and secondary care formularies contribute to advisory groups/consultations for key issues e.g. critical shortages (10); attend specialist interest groups e.g. Guild of Healthcare Pharmacists, Procurement and Distribution Interest Group and work in national and regional operational groups or purchasing hubs to inform the shape and direction of the pharmaceutical supply chain within the UK (See Challenges, section

V). Pharmacists and pharmacy technicians can also have senior supply chain roles within national advisory or regulatory bodies e.g. MHRA, ABPI, and NICE. Community pharmacy teams are directly impacted upon and can influence the supply chain due to their management of direct pharmacy inbound logistics. This requires a comprehensive operational/management skill set to complement their clinical skills to run what is effectively a Small to Medium Size Enterprise (SME) (11). The role of pharmacy technicians (working with pharmacists) in both primary and secondary care has developed significantly over the last few years becoming involved in activities such as: anticoagulation clinics, medicines information, discharge planning teams and specialised prescribing roles (12).

Section IV Education within the profession

To practise in Great Britain, pharmacists and pharmacy technicians must be registered with and have met the educational requirements of the GPhC (13). Pharmacists and pharmacy technicians must renew their registration every year, which involves completing a declaration stating that they meet all our professional, fitness to practise and ethical standards. *Standards for initial education and*



training for pharmacists sets out the criteria against which schools of pharmacy must deliver their undergraduate education and training for student pharmacists and pre-registration trainee pharmacists (14) (see Figure 2).

Figure 2 Education and registration process for pharmacists (14)

Pharmacy technicians must have completed both a competency qualification and a knowledge-based qualification and meet the qualifying period of work experience before being eligible for registration. A medicines counter assistant who is involved in the sale of over-the-counter medicine, is trained to offer advice on common ailments and works under the supervision of a pharmacist. The GPhC requires that a medicines counter assistant has completed their training in a maximum of three years (15). Dispensing assistants (pharmacy assistants) who are involved in the dispensing process must complete relevant modules of the Level 2 NVQ (QCF) Certificate in Pharmacy Service Skills or Level 2 NVQ (QCF) Certificate in Pharmaceutical Science (or equivalent in Scotland) whether they work in community or hospital practice (15).

There are currently no formal standard training programmes for pharmacy staff employed as delivery drivers, pharmacy porters or who work within pharmacy stores (e.g. picking orders, providing top up of ward stock). As described in Figure 2, in order for pharmacists to practice in Great Britain they must obtain a Master of Pharmacy degree (MPharm). In Great Britain the four-year MPharm degree is separate from the 52-week pre-registration training with one exception: a five-year MPharm degree with two intercalated periods of pre-registration training. The GPhC is in discussions with higher education institutes and other stakeholders pursuing the design of an integrated degree combining academic study and pre-registration training (see Challenges, section V).

Section V Current challenges and trends evident within the health supply chain

- The pharmacy profession is in a state of transition from new clinical opportunities for the pharmacy team (see below) to significant changes in remuneration that pharmacy contractors will receive. The government has announced over £170 million in cuts to the community pharmacy contract which could lead to the closure of up to 3000 pharmacies (16).
- The Department of Health and MHRA in 2016 consulted with pharmacists on changes to legislation which will allow all community pharmacies to adopt centralised dispensing 'hub and spoke' systems - which will assemble, dispense and label medicines and distribute to pharmacies for patient collection.
- Pharmacy education and training is at a crossroad. The GPhC has asked stakeholders' opinion on the education and training of "tomorrow's pharmacy team" (17). The aim being to design a more professionally integrated and comprehensive curriculum for future pharmacist skills development (clinical and managerial).
- Summary Care Records in primary care provide healthcare professionals such as pharmacists with faster access to key clinical information to treat patients (to be completed by 2017) (18).
- The roles of the pharmacist within primary care in the UK are changing rapidly. A pharmacist can be a critical addition to a General Practice team, using their medicines expertise to better address pharmaceutical care, reduce medicines waste and support GP clinical activity.
- Both the primary and secondary care sectors have been profoundly affected by regular medicines shortages within the medicines supply chain negatively effecting patient care (10).

Section VI References

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