A report to review the key workforce risks and opportunities within the pharmacy workforce.

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1. INTRODUCTION

The Workforce Risks and Opportunities project sets out the major risks and opportunities facing the health and social care workforce in 2011 and beyond. The purpose of this project is to provide an assessment of current workforce issues and potential opportunities for improvement. For each professional group within health and social care, existing analysis and data has been reviewed and updated. This grouping is based on the Department of Health Professional Advisory Boards (PABs). A suite of reports have been produced for each group outlining the main opportunities and risks facing the workforce. The purpose of the Pharmacy Workforce Risks and Opportunities report is to present the Centre for Workforce Intelligence’s (CfWI) initial findings around key workforce risks and opportunities within pharmacy, to be reviewed and discussed with appropriate stakeholders.

When assessing the key risks and opportunities of the pharmacy workforce it is important to be aware that pharmacists work in a variety of settings and across a variety of sectors, including community pharmacies, primary care, hospitals, prisons, the pharmaceutical industry and academia. There are also opportunities for pharmacists to work in research and teaching, as well as in administrative and managerial roles. A significant number of pharmacists are self employed and work as community pharmacy contractors, locums, or advisers. Therefore, market forces need to be carefully considered when assessing the pharmacy workforce.

Also, there are medical specialties, namely pharmaceutical medicine and clinical pharmacology and therapeutics, that have strong ties with pharmacy, and there may be opportunities for skill mix development within the related groups. These specialties will be covered within the production of Centre for Workforce Intelligence (CfWI) medical fact sheets.
2. OVERALL CONTEXT

When reviewing workforce risks and opportunities, it is important to consider the wider environment in which activity is taking place. The following section provides an overview of the external factors that may impact on workforce, in particular the current changes that are taking place within the system landscape.

2.1 Finance

The NHS is facing a period of sustained and significant financial constraint. Following the Comprehensive Spending Review, health spending is set to increase from £104 billion in 2010-11 to £114 billion in 2014/15, a total increase of 0.4 per cent in real terms, or an annual real terms increase over inflation of around 0.1 per cent. Since its inception, the NHS budget has grown by an average of over 4% each year in real terms. In order for the NHS to meet shifting demand resulting from demographic change and new treatments and technologies, significant savings will need to be achieved. To address these challenges, the Department of Health (DH) is aiming to improve efficiency and productivity while maintaining quality of care and health outcomes through the Quality Innovation Productivity and Prevention (QIPP) agenda, setting a savings target of £20 billion by 2014. These savings will be reinvested to support quality and outcomes. The CfWI is supporting strategic health authorities (SHAs) in developing and enhancing their workforce QIPP returns on a quarterly basis.

As medicines are the most frequently and widely used NHS treatment and account for approximately 12 per cent of total NHS expenditure in England (Department of Health, 2009), it is unsurprising that one of the 12 QIPP workstreams is wholly dedicated to this topic. The success of this workstream is wholly dependent on pharmacists and thus requires the necessary infrastructure to support this substantial investment.

2.2 Workforce and productivity

Around 70 percent of NHS provider expenditure relates to staffing (House of Commons Health Committee, 2007). As NHS organisations seek to balance their budgets and achieve savings, future workforce activity should be fully considered to reduce the risk of incurring increased long-term costs. Large cuts to administrative and managerial staffing costs can make a modest contribution to savings, but the most significant savings can be achieved by increasing the productivity and efficiency of existing resources. For example, savings can be made by adjusting skill-mix. The healthcare workforce has historically been
characterised by rigid role definitions across different professional groups and grades. *NHS Workforce Planning: Limitations and Possibilities* (Imison, Buchan and Xavier, 2009) recommends placing increased focus on further developing the skills of staff already involved in delivering services. It suggests that a more flexible approach can be more productive and improve the quality of services via role enhancement (a person taking on new skills), role substitution (working across professional divides), delegation (moving a task up or down grades with a profession) or innovation (creating new roles to fill competency gaps). Staffing resources can be allocated within service delivery as efficiently as possible, with care pathways designed to avoid hospital admissions. Where clinically appropriate, care can also be brought closer to the community. Research by the King’s Fund suggests that there are potential productivity improvements of £4.5 billion from reducing variation in clinical practice in hospitals alone (Appleby et al, 2010).

2.3 Liberating the NHS: Developing the Healthcare Workforce

*Equity and excellence: Liberating the NHS* (Department of Health, 2010a) outlines radical plans to restructure the NHS. This was followed by proposals for planning and developing the NHS workforce, outlined in *Liberating the NHS: Developing the Healthcare Workforce* (Department of Health, 2010b). In April 2011, the Government took the decision to “pause, listen, reflect on and improve our plans”, and established an NHS Future Forum to listen to patients, professionals and members of the public and report.

In its response to the Forum’s report on ‘Developing the healthcare workforce’ (Department of Health, 2011a), the Government confirmed that it would:

- ensure a safe and robust transition for the education and training system, taking action to put Health Education England in place quickly to provide national leadership and strong accountability while moving towards provider-led networks in a phased way;

- ensure that, during the transition, deaneries will continue to oversee the training of junior doctors and dentists, and give them a clear home within the NHS family;

- improve the quality of management and leadership, for example by retaining the best talent from PCTs and SHAs and through the ongoing training and development of managers;

- further consider how best to ensure funding for education and training is protected and distributed fairly and transparently, and publish more detail in the autumn. (Department of Health, 2011a)

The Browne review, published in October 2010, sets out changes on how higher education will be funded by students and the government. The full implications of the review on health and social care training will need careful consideration.

2.5 The Operating Framework for the NHS in England 2011/12

The NHS operating framework sets out the national priorities for 2011/12, including maintaining tight financial control, performance on key waiting times, continuing to reduce healthcare associated infections and reducing emergency readmission rates. Changes need to be effected in order to meet the specific targets for individual healthcare groups outlined in the framework.

The operating framework highlights the importance of continued development of pharmaceutical services, including local enhanced services to meet pharmaceutical needs. Key areas of focus are identified such as the optimisation of medicines use for people with newly diagnosed long term conditions, and targeted Medicines Use Reviews (MURs). The operating framework also states that separate allocations will be made to PCTs, outside of their recurrent allocations, in order to support the pharmaceutical services global sum¹.

2.6 Modernising Pharmacy Careers

The Modernising Pharmacy Careers (MPC) programme was launched in February 2009 as one of the four sub committees of Medical Education England (MEE). The programme was established to ensure that the pharmacy workforce in England has the knowledge, skills and capabilities to deliver the services of the future for patients and public health. The scope of the programme includes career pathways for pharmacists, pharmacy technicians, pharmacy assistants and dispensing assistants, and it explores how these arrangements support and contribute to improvements in quality of care, public health and pharmacy workforce planning.

Within the MPC programme there are three significant work areas:

- Education and Training (Pre-Qualification)

¹ The centrally held budget that funds many of the payments to community pharmacies, and all payments to appliance contractors.
Workforce Risks and Opportunities - Pharmacy

- Developing Pharmacy Careers (Post-Qualification)
- Cross cutting projects such as workforce planning, new ways of working, and the use of new technologies

Source: Medical Education England (n.d.a)

The first significant project for MPC is a review of current pharmacy undergraduate education and pre-registration training to assess its content and continuing relevance and to identify options for change.

2.7 Social care

The Operating Framework sets out the redistribution of funding allocations from health to social care, in line with the current government priority of strengthening social care services. The implications of this shift, as well as the personalisation agenda, should be considered as drivers of workforce change.

2.8 Management of risk

Reorganisation raises a number of challenges for successful workforce planning. There is a risk that the impending organisational changes of the next two years will distract from the QIPP agenda. This risk will benefit from careful management, if the NHS is to continue delivering high quality services. GP consortia and healthcare providers taking on functions from SHAs and PCTs should consider how to capture the knowledge and expertise of staff currently managing those functions. It is vital that security of workforce supply is maintained during the transitional period: PCTs and SHAs will be working with GP practices over the next two years to help prepare for the new arrangements. As the number of foundation trusts increases and commissioning is further decentralised, commissioners should carefully manage the risk of fragmentation of decision making and a potential lack of alignment of decisions on workforce supply.
3. RESEARCH BY THE UNIVERSITY OF MANCHESTER

The University of Manchester is an academic partner of CfWI. In this capacity, it has drawn on research in a number of focus areas to support the WRO project and has produced papers to complement the WRO reports. These include two generic papers on the economic context and options for future ways of working, as well as a suite of papers relating to workforce issues within specific professional groups. The following section details the research papers that are relevant for pharmacy. The background context papers will be of interest to a broad audience, including workforce planners, and those specifically related to the field will provide a more detailed insight into certain workforce risks and opportunities for those with a particular interest in the pharmacy workforce. All papers can be accessed in full from the CfWI website at www.cfwi.org.uk.

3.1 Generic context papers


This briefing synthesises findings on the changing labour market within the NHS and identifies the key implications for workforce planners and human resources. Focus areas include:

- Increased unemployment and fewer opportunities in the wider labour market potentially alleviating shortages in NHS labour supply.

- The development of strategies to attract EEA migrant labour.

- Increased opportunities for women, partly as a result of past changes to the welfare and benefit system.

The paper also highlights the need to continue to monitor the situation regarding:

- the changing labour market
- further welfare reform which may shift financial incentives
- the impact of immigration policy developments on labour market needs by occupations, professional groups, service pathways and region.
• **Labour Substitution and Efficiency in Healthcare Delivery: General Principles and Key Messages** (Sibbald, McBride, and Birch, 2011)

The substitution of one kind of worker with another is one strategy for improving the effectiveness and efficiency of health care provision. This briefing paper aims to inform managers and workforce planners about the likely consequences of such changes. It draws on economic principles and studies across a number of occupational work groups in the healthcare sector. Findings indicate that labour substitution:

- Is a plausible strategy for addressing workforce shortages
- Can reduce (wage) costs - under certain conditions which can be challenging to meet
- Can improve efficiency - under certain conditions which can be challenging to meet

The paper emphasises the need for healthcare planners and managers to give careful consideration to the economics of labour substitution, in order to ensure it does not lead to an increase in costs and reduced efficiency. It also describes other factors which affect the feasibility of labour substitution, including training and regulation requirements.

3.2 **Field-related research papers**

• **Identifying the Risks and Opportunities Associated with Skill Mix Changes and Labour Substitution in Pharmacy** (Willis, Seston, and Hassell, 2011)

This briefing paper considers the evidence for using skill mix and labour substitution in pharmacy, to address a number of outcomes such as making efficiency savings. Evidence related to two forms of labour substitution is reviewed:

- Substitution consisting of inter-professional role-substitution (such as pharmacists taking on the roles of doctors).
- Substitution involving intraprofessional role-substitution (such as reconsidering the roles within the pharmacy team whereby technicians perform tasks previously performed by pharmacists).

The findings indicate that:
- Pharmacists and technicians can undertake enhanced roles in an effective and safe way.
- Substitution is acceptable both to users and providers of healthcare.
- Training to provide enhanced roles may have resource implications.
- There is very little evidence that labour substitution is cost effective.
- The evidence that exists is based on small-scale, descriptive studies where the research design prevents generalisation to other settings.

The paper also highlights the potential barriers to implementation, which relate to professional boundaries. These exist both between pharmacists and other members of the healthcare team, as well as between pharmacists and technicians, and need to be considered in decision making by workforce planners.

- **What is the evidence that workload is affecting hospital pharmacists’ performance and patient safety? (Willis, Elvey, and Hassell, 2011)**

This paper reviews and then synthesises the published evidence on workload in the hospital pharmacy setting in the United Kingdom (UK). Evidence is reviewed in relation to three questions:

1. Has hospital pharmacy workload changed (increased)?
2. Does workload influence workforce behaviours and attitudes to work?
3. Does workload affect pharmacists’ performance?

Findings suggest that:

1. There is limited evidence to show that workload has increased
2. Pharmacists’ physical and mental well-being are being affected by their workload, in particular workload is perceived as causing job stress and job dissatisfaction
3. High workload is associated with an increase in medication errors
4. OVERVIEW OF THE PHARMACY WORKFORCE

4.1 Pharmacists

Pharmacists are experts in medicine and their use, and are responsible for the safe and effective purchase, distribution, supply and dispensing of medicines. They also advise medical, nursing, and Allied Health Professional (AHP) staff on the selection and appropriate use of medicines. Pharmacists provide information to patients on how to manage their medication to ensure optimal treatment and are now able to undertake additional training in order to allow them to prescribe medications independently, or as part of supplementary prescribing arrangements.

Pharmacists work within a wide range of sectors, including community, hospital, primary care, industry, and academia. There are also various opportunities for pharmacists to build administrative or management careers. There is evidence that a number of pharmacists work on a self employed basis, either as community pharmacy contractors, locums or advisors.

In order to qualify as a pharmacist, individuals are currently required to undertake a 4 year Masters level undergraduate degree, which is predominantly funded by the Higher Education Funding Council for England (HEFCE). This is followed by pre-registration training, which is a one year vocational training course, for which the curriculum and assessment is now the responsibility of the General Pharmaceutical Council (GPhC). Pre-registration trainee pharmacist places are funded through the multi-professional education and training (MPET) levy for hospital training. Within community pharmacy, places are funded via the General Pharmaceutical Services (GPhS) contract for community pharmacy training.

In 2010 there were 50,664 pharmacists on the Register of Pharmacists with 43,780 (86 per cent) registered as practising pharmacists (Seston and Hasssell, 2011).

4.2 Modernising Pharmacy Careers (MPC) proposals for reform of pharmacist education and training

In response to the changing roles of pharmacists, the current arrangements for pharmacist education and training are under review. A discussion paper by Smith and Darracott for Modernising Education England (MEE) was published in January 2011, outlining the proposals for reform of pharmacist undergraduate
education and pre-registration training, which will be the focus of a series of meetings between MPC and pharmacy organisations in 2011.

Key proposals include the establishment of formal partnerships between universities and employers, and the delivery of an integrated five year masters course, which would include two major clinical placements, lasting six months each. It is proposed that universities and employers would be jointly responsible for the delivery of this programme, including joint sign off, on completion of training.

It is not yet clear what the impact of these changes will be on the workforce, however, following discussions over the coming months, recommendations for change will then be considered by key stakeholders, and a formal public consultation and impact assessment will be required prior to the implementation of any organisational or funding changes.

### 4.3 Pharmacy technicians

Pharmacists are supported by pharmacy technicians, who typically work in either hospital or community pharmacy, and work under the supervision of a pharmacist. Technicians are able to support pharmacists in a number of ways, for instance by taking a lead in medicine supply functions.

In order to become a pharmacy technician, it is necessary to undertake vocational training. Within hospital pharmacy this is partially funded via MPET, and mainly by employers in community pharmacy. More recently some NHS and other employers are accessing funding via the Skills Funding Agency (predominantly for apprenticeships).

On the 1st July 2011, compulsory registration of pharmacy technicians by the GPhC became mandatory. Pharmacy technicians previously registered on the Royal Pharmaceutical Society’s Register of Pharmacy Technicians were automatically transferred over to the GPhC’s register when they took over responsibility in September 2010. In order to register and practice as a pharmacy technician within Great Britain, individuals must now hold the following GPhC approved qualifications:

- Pharmacy services NVQ/SVQ level 3 competency based qualification

- An approved competency based qualification (such as the Edexcel BTEC National Certificate in Pharmacy Services, or the City and Guilds Level 3 Certificate in Pharmacy Services)
Evidence of completing at least two years relevant work-based experience in the UK, under supervision of a pharmacist to whom the individual has been directly accountable for no less than 14 hours per week. During these two years, at least 1260 hours of work experience must have been completed.

Recently, there has been a rise in the development of courses to support extended roles within the pharmacy technician workforce. There is a need for further investigation into the competency gaps between basic qualifications and more extended roles in order to inform post NVQ development for pharmacy technicians.

4.4 Pharmacy assistants and dispensing assistants

Pharmacy assistants and dispensing assistants work alongside pharmacy technicians, under the supervision of a registered pharmacist. Typically they work in hospital and community settings.

Pharmacy assistants and dispensing assistants have a wide range of roles and responsibilities and consequently, a number of job titles apply. For instance in the community sector this will include: dispenser, dispensing assistants, pharmacy assistants and healthcare assistants. Within the hospital sector hospital assistant and assistant technical officer are more commonly used.

According to the GPhC, in order to qualify as a pharmacy assistant, individuals need to undertake a level 2 certificate in Pharmacy Service Skills (NVQ) (QCF).

4.5 Apprenticeships and Advanced Apprenticeships

There may also be opportunities for improving skill mix through increased numbers of apprenticeship placements. The DH response to the report of the National Apprenticeship Advisory Committee (Department of Health, 2010d) states that they will invest £10m in the apprenticeship programme for 2010/11 to support increased numbers of apprentices, training and employment costs and additional administration/infrastructure. Apprentices/Foundation Apprentices can work as dispensing and pharmacy assistants and undertake a variety of supervised tasks within a pharmacy. Advanced Apprenticeships/Modern Apprenticeships can support pharmacy technicians who will have the opportunity to dispense medicine and products, provide information and advice and control stocks of pharmaceutical materials.
4.6 Formation of the General Pharmaceutical Council & Royal Pharmaceutical Society

Within the white paper: *Trust, Assurance and Safety: The Regulation of Healthcare Professionals in the 21st Century* (2007), the Royal Pharmaceutical Society of Great Britain (RPSGB) was given specific mention, as it was felt that its dual role of providing both leadership and independent regulation were in conflict with each other, especially in light of recent changes to the pharmacy role, with pharmacists receiving increasing levels of autonomous prescription rights. Consequently, it was recommended that the RPSGB split its regulatory system from professional and clinical leadership, allowing each function to focus on their core roles and enable the process of revalidation (see section 5.3).

On the 27th September 2010, the General Pharmaceutical Council (GPhC) and the Royal Pharmaceutical Society (RPS) were formed. The GPhC was given responsibility for the regulation of pharmacist, pharmacy technicians and pharmacy premises in England, Scotland and Wales; and the Royal Pharmaceutical Society assumed responsibility for professional leadership and development.
5. KEY WORKFORCE RISKS

The following section of this report identifies key workforce risks within the pharmacy workforce. Qualitative and quantitative data has been gathered from a number of sources in order to establish both the workforce risk and opportunities within this document, including the review of key policy documents, papers and reports. Quantitative data has largely been gathered from the following sources:

- **National NHS Pharmacy Staffing Establishment and Vacancy Survey (2010a):** This survey is performed by the NHS Pharmacy Education and Development Committee and provides data on staffing levels amongst NHS pharmacy staff. The survey asks chief/lead pharmacists in NHS organisations for point prevalence data on 31 May 2010 and this year achieved 100% response rate.

- **Royal Pharmaceutical Society of Great Britain (RPSGB) Workforce Census (2008):** The latest pharmacy workforce survey was carried out in 2008 across a sample population of 43,845 pharmacists, of whom 30,517 responded, giving a response rate of 69.6%. Despite the high response rate overall, it should be noted that this sample does not necessarily reflect the entire population precisely. For instance, younger pharmacists were far less likely to return their questionnaires than older pharmacists, and women had a higher response rate than men.

- **Pharmacy Register:** Anyone wanting to work in England, Scotland and Wales as a pharmacist must register with the General Pharmaceutical Council (GPhC), which is the regulatory body for both pharmacists and pharmacy technicians. The pharmacy register is a useful source of intelligence to inform our understanding of key workforce issues, typically from secondary sources.

- **Pharmacy Workforce Model (2003/04):** In 2003/04 a team from the Department of Management at King’s College were commissioned by the Pharmacy Workforce Planning and Policy Advisory Group (PWPPAG) to undertake research, under guidance from an Pharmacy Advisory Group (PAG), into the key issues within the pharmacy workforce. A major output from this research was the development of a workforce model based on a set of agreed assumptions about key indicators of supply and demand for pharmacists. This model has been commented on within this document as it is the latest model available. A review and update is currently in progress.
5.1 Pharmacy Workforce Modelling (2003/04)

Research conducted by the Pharmacy Workforce Planning and Policy Advisory Group (PWPPAG) in 2003 indicated that the number of pharmacists available across all sectors is forecast to rise from 31,703 full time equivalent (FTE) pharmacists in 2003 to 45,592 (FTE) in 2013. According to Seston and Hassell (2011), there were 50,664 pharmacists (43,780 practicing) on the RPSGB register. However, according to this supply modelling, there will be a substantial gap between the anticipated demand for pharmacists, 62,344 full time equivalents (FTEs) by 2013, and the forecast available supply. This is supported by the fact that all pharmacists were accepted onto the last Migration Advisory Committee (MAC) national shortage occupation list, as members of a skilled profession that is facing significant shortages.

Consequently, unless action is taken to alter supply and/or the utilisation of pharmacists, demand for pharmacists’ services is likely to remain greater than supply. However, it should be noted that the estimated number of pharmacists required by 2013 was derived from a 2003 workforce model. In light of the various changes the health system is facing and the current economic climate, pharmacy supply and demand modelling is currently being revisited and updated.

5.2 Pre-registration trainee placements

In order to support growth within the pharmacy workforce, the number of pre-registration trainee pharmacist placements needs to be aligned with the expansion of undergraduate places. While provision of pre-registration trainee pharmacist placements has kept pace with demand so far, there are concerns this may not be possible in the longer term. In order to mitigate this risk, SHAs or equivalent organisations need to work with employers in the NHS and

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Demand was considered across 5 sectors: community pharmacy, NHS hospital pharmacy, NHS primary care pharmacy, industrial pharmacy, academic pharmacy. A number of demand drivers were considered, some of the most significant include: government policies to increase the NHS’s capacity and expand the NHS non-dispensing advisory services, the impact of new technology and skill mix changes, shifts in government policy regarding capital investment procedures, deregulation, and market entry to aspects of prescription dispensing and quality control services, new clinical governance and risk management requirements, the market driven introduction of new schools and increased demands for CPD in the community sectors.
community to maintain the amount of one year pre-registration trainee pharmacist clinical placements.

There is evidence to suggest that NHS pre-registration trainee pharmacists move to community pharmacy upon qualification, potentially because starting wages are on average higher. In their longitudinal study of pharmacy careers, Willis, Seston and Hassell (2010) found that 50.5% of hospital pharmacist respondents earned under £25,000, while amongst those employed in the community sector only 5% earned under £25,000. Other evidence indicates that upon completing pre-registration pharmacist training, a number of staff are moving into non NHS sectors, indicating that the NHS may be losing staff to other more highly paid sectors after training provision (NHS Pharmacy Education and Development Committee, 2010b). Public sector pay restraints may mean that recruitment into Band 6 posts continues to be challenging.

CfWI recommends that recruitment and retention mechanisms are researched and established in order to retain a greater number of band 6 staff. This is supported by the findings of the national NHS Pharmacy Staffing Establishment and Vacancy survey (2010), which highlighted significant vacancy rates at Bands 6 and 7.

5.3 Revalidation of pharmacy workforce

In 2007, a government white paper: Trust, Assurance and Safety: The Regulation of Healthcare Professionals in the 21st Century introduced the concept of revalidation of both medical and non medical health professionals. This is a process which will periodically ensure that all qualified clinicians remain up to date and continue to be competent and fit to practice. The paper specifically states that revalidation will be necessary for all health professionals, but the intensity and frequency of assessment will be proportionate to the work the practitioner is involved in. The paper further states that the regulatory body for non-medical professions will be responsible for approving standards that registrants will need to meet in order to maintain their registration on a regular basis.

This was followed in November 2008 by a Department of Health paper Principles for revalidation – Report of the Working Group for non-Medical Revalidation. This report established 12 key principles for revalidation, including the establishment of professional standards by regulatory bodies, use of continued professional development (CPD) to ensure registrants keep their skills and knowledge up to date, and ensuring patient and public involvement.
Under the General Pharmaceutical Council (GPhC) revalidation will apply to pharmacists, pharmacy technicians, and the registration of pharmacy premises. In October 2007 The Royal Pharmaceutical Society of Great Britain (RPSGB) established an advisory group to develop proposals for revalidation in pharmacy. A major output of this group was a report submitted to DH in February 2009, setting out 10 principles against which the success of a future revalidation process can be established: the process should be effective and cost effective, be standards based, be proportional, be evidence based, be quality assured, involve stakeholders, be equal and diverse, be remedial, be consistent across Great Britain, and be implemented incrementally (Boak, Mitchell and Moore, 2011). The Royal Pharmaceutical Society (RPS) has commissioned four work-streams to look at different aspects of revalidation and inform the next stage of policy development.

Revalidation is a significant change in the regulation of the pharmacy workforce and while likely to lead to major long term improvements and a consistent high quality provision of care, there are short to medium term concerns to consider. For example, while there is clearly a need for revalidation of the pharmacy workforce in light of their increasing responsibilities, such as the ability to prescribe a wider range of pharmaceuticals, careful consideration needs to be given to the frequency of assessment as this may place unnecessary strain on organisations. Revalidation may also encourage some pharmacists not to continue with their registration, and pharmacy technicians not to register under the new requirements.

### 5.4 Vacancy rates

Data from a survey by the NHS Pharmacy Education and Development Committee (NHSPEDC) in 2010 suggested that there was a vacancy rate of 11.2% for NHS hospital pharmacists in England, Wales, Scotland and Northern Ireland. Equivalent vacancy data for NHS hospital pharmacy technicians was 8.1% and for NHS hospital pharmacy assistants 7.5%. This indicates a supply shortage across the NHS pharmacy workforce. Vacancy rates for hospital pharmacists at Band 6 and 7 are of particular concern at 16.2% and 17.6% respectively.

However, the 2009/2010 Department of Health Pharmacists Task and Finish Group on NHS Pharmacist numbers made recommendations to the Modernising Pharmacy Careers Programme Board, the Department of Health's People Matters Executive Group (PMEG) and the Workforce Availability Policy and Programme Implementation Group (WAPPIG) about the required level of increase of NHS pre-registration trainee pharmacist placements, and outlined...
recruitment and retention initiatives for Band 6 and 7 pharmacists, which could help to improve the situation.

The NHSPEDC National Pharmacy Staffing Establishment and Vacancy Survey (2010) also highlights that there is a reasonable amount of variation between vacancy rates, both within England, and throughout the United Kingdom as a whole. An analysis of qualified pharmacists reveals that within England the vacancy rate ranges from 9.8% to 14.6% between SHAs, with an average of 12.1%.

*Figure 1: Vacancy rates for all qualified pharmacists in NHS Trusts, PCTs/LHBs (England – May 2010)*

More widely, the range between countries is as follows: England (11.9%), Scotland (10%), Northern Ireland (7.1%), Wales (7.1%).

The NHSPEDC National Pharmacy Staffing Establishment and Vacancy Survey (2010) also highlights vacancy rate variations between regions for qualified pharmacy technicians, ranging from 6.6% for the South East Coast SHA, to 12.2% for London SHA. Between the four countries, the vacancy rate varies significantly for pharmacy technicians: Northern Ireland (11.7%), England (8.7%), Scotland (5.0%), and Wales (1.6%).
Figure 2: Vacancy rates for all qualified pharmacy technicians in NHS Trusts, PCTs/LHBs (England – May 2010)

Source: NHS Pharmacy Education and Development Committee (2010a) National NHS Pharmacy Staffing Establishment and Vacancy Survey 2010

*Vacancy rates are defined as the percentage of unoccupied posts at May 2010, regardless of the length of vacancy

5.5 Age profile

The current pharmacist age profile may also present a potential risk. Based on analysis performed by Seston and Hassell (2011), 10.6% of registered pharmacists are aged 60 or over, with a number of pharmacists working well into their 60s and 70s.
When analysing the age profile by gender, a greater concern is highlighted. Within the male workforce approximately 17.2% of registered pharmacists are aged 60 and over. Coupled with the increasing feminisation of the pharmacy workforce, and high levels of part time and portfolio working, this may present a potential risk to workforce supply. Furthermore, based on data from the 2010 pharmacy register, 55.9% of registered female pharmacists are 39 years old or younger. This presents a potential risk as women of this age will be more likely to take maternity breaks and consider part time/portfolio working.

5.6 Part-time working and feminisation

Women have outnumbered men on the register for the last decade, but the gap widens year on year. In 2010 58.1% of all registered pharmacists were female, with women outnumbering men by over 8000. Among newly qualified pharmacists who joined the register for the first time in 2010, 63.7% were female, indicating the feminisation trend is set to continue. The Centre for Pharmacy Workforce Studies (CPWS) also reports that there is a trend for part time, flexible, and portfolio working: data from the 2008 census shows that 32% of pharmacists are working part time, 17% hold more than one job, and a large number reported working as locums (community pharmacy locums constituted 26.2% of all actively employed pharmacists and 36.9% of all community
pharmacists. A small number reported working as hospital pharmacists. The proportion of women working part-time is higher, at 41%. While the proportion working part-time is not insubstantial, participation rates have remained relatively stable since 2002 when data was first collected on work patterns. However, a future change in participation rates would have an effect on a number of sectors where part time and portfolio working are common. For example, the 2008 census shows that 32.3% of respondents are working less than 33 hours per week, with part time working trends remaining high in sectors such as primary care (39.5%), community (33.0%), and hospital pharmacy (28.2%).

Figure 4: Percentage of actively employed pharmacists working part time by sector (2008)

There is also evidence that a significant number of relatively new registrants begin part time working early in their careers. This may be linked to ethnic differences in career planning, which would therefore have a differential impact on different sectors (Hassell et al 2006). CfWI recommends this issue is investigated further.

5.7 Locum workforce

According to the 2008 pharmacy workforce census 37% of community pharmacists work as locums. The high level of locum pharmacists may be in part due to lifestyle choice (i.e. a desire for flexible working hours), but heavy workload and work conditions may also help to explain why pharmacist leave permanent positions as employees. There is no clear conclusion whether the
long term use of the locum workforce is a sustainable model. For instance, according to the Centre for Pharmacy Workforce Studies (University of Manchester), small scale qualitative case studies have revealed that in some cases locums are prepared to deliver enhanced and advanced services such as smoking and cessation clinics and medicines use reviews, while some evidence also exists to the contrary, with the locum workforce being viewed as a largely inflexible resource (East and South East England Specialist Pharmacy Services, London Pharmacy Education and Training, Skills for Health and NHS Workforce Review Team, 2009).

There are also issues around the continuity and quality of care provided by locums. There is evidence that in some cases locums are more isolated than directly employed pharmacists in terms of support and training opportunities for Continuing Professional Development (CPD). The evidence suggests that unless locums are proactive in seeking out training opportunities, locums would not maintain the same level of CPD as directly employed pharmacists. A number of locums choose not to work in socially deprived areas. Subsequently, those areas may then suffer from under-provision of care. Consequently, if locum pharmacists are not completely up to date with training, regulation and CPD, the quality of care to patients could be effected, particularly in busy community pharmacies where a locum is unfamiliar with the set up of a store (Shann & Hassell, 2006).

Specifically within community pharmacy, the downturn in future healthcare funding may mean that employers which generate a large proportion of their income from providing NHS services may need to find ways of containing their costs. This may make the locum workforce financially unsustainable.

### 5.8 Academic workforce

Demand for teaching pharmacists is likely to rise due to the expansion in the number of schools (there are currently 26 undergraduate schools of pharmacy within the UK, 10 of which have opened since 2003/043). The rise in the number of schools has been market driven. This increased demand may be further compounded by the redesign of the core curriculum to reflect increasing needs of clinical practice development and a greater emphasis on practice-based multidisciplinary teaching methods and as such the additional need for further practice-based clinical placements and supervisors.

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3 According to the Centre for Workforce Intelligence Workforce Summary – Pharmacy Workforce Pharmacists and Pharmacy Technicians (October 2010), and updated based on the General Pharmaceutical Council’s accredited course list.
Furthermore, the academic workforce is a small workforce (2.8% of actively employed pharmacists within the 2008 census) and is typically difficult to recruit to. In order to enable the academic workforce to resource the expanding number of schools, clinical academic pathways should be developed by schools of pharmacy and NHS providers need to address capacity issues and provide infrastructure in clinical practice.

5.9 Wellbeing of pharmacists

Factors such as an increasing workload, over time working and work intensification could well be having an adverse effect on the wellbeing of pharmacists. This poses a considerable risk as it has the potential to increase the trend towards part time and portfolio working, or even cause individuals to leave the pharmacy profession all together. More immediately, if such pressures are being placed on pharmacists, this poses a potential risk around the safe delivery of pharmaceutical services, in particular the safe dispensing of medication/prescriptions, due to fatigue and individuals being over-stretched. The CfWI proposes that this issue should be further investigated.

5.10 Retention of pharmacy as a career

A further potential risk to the pharmacy workforce is that, according to the pharmacy workforce census (2008), approximately 10.9% of actively employed respondents thought it likely that they would leave the profession altogether within two years. However, previous research by Seston et al (2009) indicated that within 2005 census 8.7% of pharmacists indicated that they would leave the profession within 2 years. However, follow up analysis in 2007 revealed that of those who had expressed a high likelihood of leaving the profession within 2 years only 7.1% we no longer on the RPSGB register, 7.1% were on the non practising register, and 0.1% remained on the practicing register, but were not working in Great Britain. This indicates that only a small number of those who indicated they would leave the profession actually did so.
6. KEY WORKFORCE OPPORTUNITIES

The following section aims to highlight key workforce opportunities within the pharmacy workforce. Workforce opportunities can be broadly defined as innovative solutions for ensuring a high level of quality in the delivery of care, through ensuring the optimum use of the existing workforce.

6.1  Skill mix developments

A significant opportunity for the pharmacy workforce is that pharmacy practice has extended significantly in recent years through the addition of roles, such as pharmacist prescribers, pharmacists with a special interest (in the community sector) and consultant pharmacists in hospitals. This has been underpinned by the development of pharmacy support staff roles, such as accredited pharmacy checking technicians who can undertake the final check of prescriptions thereby freeing up the time of pharmacists to deliver clinical services.

There may be opportunities to further develop the pharmacy workforce (especially in community) to enable options around skills mix and, in some cases, role substitution to be implemented. Recent research by Willis, Seston and Hassell (2011) on behalf of the CfWI, concluded that there is evidence that skill mix changes and extended scope of practice in pharmacy provides an opportunity for alleviating demand on the workforce, and can lead to positive patients outcomes and satisfaction. However, no clear evidence was found to suggest skill mix changes were cost effective. The CfWI recommends a review of the evidence on skill mix developments in pharmacy and an examination of the barriers for its implementation.

6.2  Compulsory registration of pharmacy technicians

As of the 1st July 2011, it became compulsory for pharmacy technicians to register with the General Pharmaceutical Council (GPhC), in order to practice within the UK, and they must hold a number of GPhC approved qualifications. This presents an opportunity for the pharmacy workforce as it will ensure a consistent standard of training and quality of care for pharmacy technicians across all industries and settings. However, it also needs to be noted that in the short term there is a possible risk to workforce supply as restrictions on eligibility to work may result in existing pharmacy technicians choosing not to register. Evidence suggests that of the estimated 15,000 pharmacy technicians in Great
Britain, currently less than half (approximately 7000) are registered for practice in England⁴. (Willis, Seston and Hassell, 2011)

6.3 Healthy Lives, Healthy People: Our Strategy for Public Health in England (November 2010)

In November 2010 the white paper: *Healthy Lives, Healthy People: Our strategy for public health in England* was published, proposing a new approach to public health and preventative care that will be:

- Responsive- owned by communities and shaped by their needs
- Resourced - with ring fenced funding and incentives to improve
- Rigorous- professionally led, focused on evidence, efficient and effective
- Resilient- strengthening protection against current and future threats to health.

Public health will be part of the NHS Commissioning Board’s (NHSCB) mandate, with public health support for NHS commissioning nationally and locally. There will also be stronger incentives established for GPs so that they play an active role in public health.

Within the white paper, pharmacists are explicitly referenced as a providing a critical role in public health, which is most likely a consequence of their patient facing role allowing them to promote and deliver public health initiatives such as smoking cessation services, the provision of NHS health checks, sexual health services such as hormonal contraception and Chlamydia screening, weight management, and the establishment of healthy living pharmacies.

The new public health and preventative care strategy provides a real opportunity for the pharmacy workforce to strengthen its role through the provision of additional services and improve the health outcomes of the population. Public Health England will influence the development of the community pharmacy contractual framework through the NHSCB, and local authorities will have responsibility for producing pharmaceutical needs assessments, which will inform the commissioning of community pharmacy services by the NHSCB and, in addition to identifying strategic health needs through Joint Strategic Needs Assessments (JSNAs), local public health commissioning decisions. However, while the new public health strategy represents an opportunity for community pharmacy, there is also a potential risk

⁴ Draft research received in January 2011
that the provision of additional services will place additional demand on the workforce, which needs to be carefully considered in commissioning decisions.

6.4 Technological advancements

Technological advancements will also provide various opportunities for pharmacy. For instance, the introduction of e-prescription services has the potential to create a more convenient service for patients, as paper prescriptions can be sent directly to patients and prescriptions prepared in advance. E-prescription services also have the potential to generate efficiencies for pharmacists and GPs through the removal of the outdated paper-based prescription system. For example, pharmacy staff would no longer need to re-key prescription information into pharmacy systems.

There are a number of examples of successful e-prescription projects, such as the Heart of England NHS Foundation Trust and Winchester and Eastleigh Healthcare NHS trust, who have both implemented extensive e-prescription systems that also include an array of auditing and reporting tools to help staff monitor prescribing patterns and infection control protocols quickly and effectively (JAC Medicines Management, 2010). However, the overall implications of such technological advancements have not yet been quantified and further research is required in this area.
7. SUMMARY SECTION

The pharmacy workforce is currently undergoing significant change as a result of the demerger of the RPSGB, the MPC proposals for changes in undergraduate education and pre registration placements, the growing roles and responsibilities of pharmacists, and the registration of pharmacy technicians.

While there are a number of opportunities for the pharmacy workforce as a result of policies such as Healthy Lives, Healthy People: Our Strategy for Public Health in England (2010) and Equality and Excellence, Liberating the NHS (2010), which are likely to result in pharmacists providing greater public health initiatives, delivering medicines optimisation, and supporting patients with long term conditions; there are also a number of workforce risks to be considered.

**Key workforce risks:**

- Research conducted by PWPPAG in 2003 indicated that demand for pharmacists’ services will continue to outstrip increases in the supply of pharmacists for the foreseeable future unless action is taken to change the supply, the demand and/or the utilisation of pharmacists.

- In order to support growth, the number of pre-registration trainee pharmacist placements needs to keep pace with the expansion of undergraduate places. In addition, SHAs need to work with employers to increase the amount of one year pre-registration trainee pharmacist clinical placements.

- Analysis has shown the pharmacy workforce is a highly feminised workforce, with a trend towards part time, flexible and portfolio working. While participation rates have remained relatively stable since 2002, a future change in participation would have a significant impact on a number of sectors.

- Locum working is common within the pharmacy workforce, according to the 2008 pharmacy workforce census 37% of community pharmacist’s work as locums. As of yet, there is no clear conclusion as to whether the long term use of locums is a sustainable model.
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