

5.3 Country case study: Great Britain

Authors

David Guest, Professor, David.guest@kcl.ac.uk; Alexandra Budjanovanin, Researcher, Alexandra.budjanovcanin@kcl.ac.uk; Patricia Oakley, Teaching and Research Fellow, Pat.oakley@kcl.ac.uk; Department of Management, King's College, London, United Kingdom.

Summary

The demand for pharmacy services in Great Britain is steadily increasing. To determine the ability to meet this demand, a pharmacy workforce model was developed. This case study reports some key findings placing particular emphasis on supply side issues. Findings indicate that the British pharmacy workforce appears to be fairly stable and fulfilled, and there seems to be a reasonable “fit” between pharmacists’ aspirations and what their organisations have delivered. However there are risks in the following areas:

- Risks to pharmacists’ well-being
- Risks to supply
- Risks to retention
- Risks to patient safety and service quality

Collectively, these risks have serious implications for workforce planning.

5.3.1 Background

Pharmacy is changing rapidly and so too are the demands on the profession, arising from for instance, the growing proportion of elderly patients, the use of robotics in the supply process, and the changing legal and regulatory requirements placed on pharmacists. The pharmacy workforce is also changing with a growing number of female pharmacists and the increasing importance pharmacists are placing on achieving a work-life balance. Developing workforce planning in this dynamic context is not straightforward; strategic planning for the healthcare professions has been a serious problem for over twenty years.

Great Britain is composed of England, which is organised into ten health regions; and Wales and Scotland, both of which have devolved administrations. Planners have traditionally made projections about future needs by looking at past supply trends. This approach may be adequate when there is a stable environment, but in the current, rapidly-changing work setting, it gives potentially erroneous results.

Following a number of high profile problems in planning the healthcare workforce, including pharmacists, the British government is addressing how it prepares its workforce projections in England by strengthening:

- the underlying workforce research and statistics;
- workforce planning methodology;
- model-building for both supply and demand sides;
- forecasting techniques; and
- the employer engagement process.[1-5]

The more rigorous workforce planning approach described here is based on a detailed study of the pharmacy workforce undertaken at King's College, London. A prototype pharmacy workforce model was built in 2004-05 based on research into British pharmacists' attitudes and commitment to their careers, their organisations and the profession.[6] See Figure 1 for the pharmacy workforce careers model and Figure 2 for the supply-side metrics and flows model.

Figure 1. The pharmacy workforce careers model

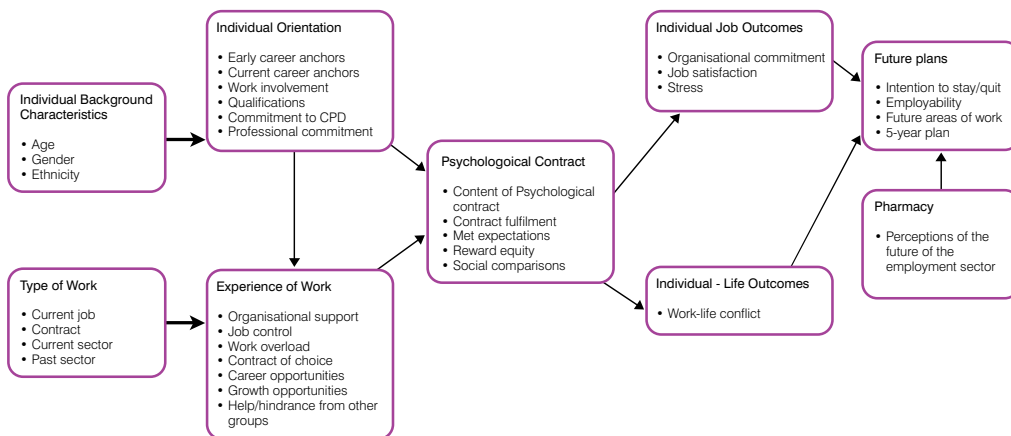
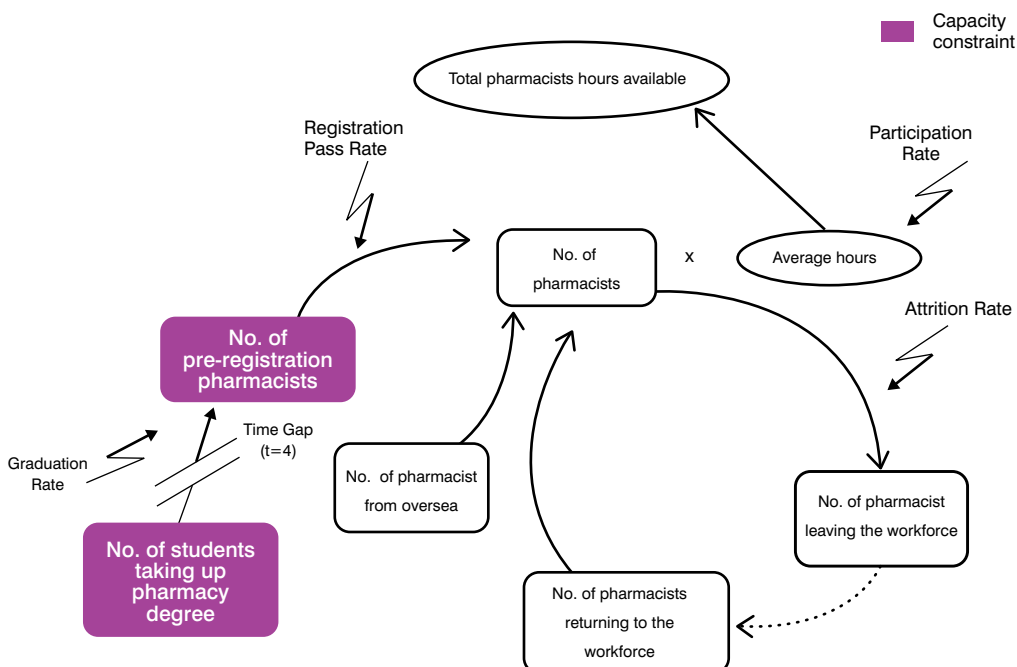


Figure 2. Pharmacist workforce planning model – supply side flows

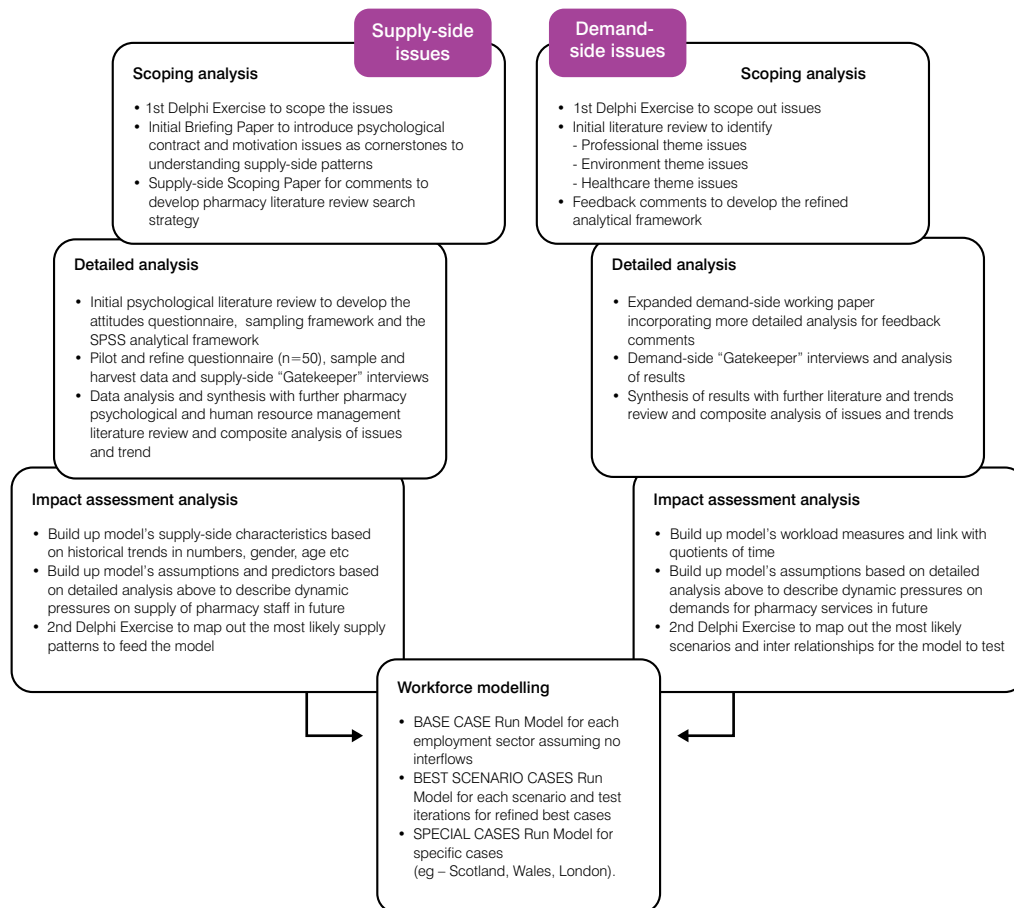


A complementary demand-side model was built to examine the underlying trends for pharmacy work in the five major employment sectors:

- Community pharmacy ranging from the big High Street corporate chains and major supermarkets to the small local business groups and single-handed pharmacy businesses;
- Hospital pharmacy including acute, mental health and child care services;
- Primary care pharmacy which provides some specialist community-based services facilitating the hospital and community care transition;
- Industrial pharmacy which includes drug research and development and their registration and sales and marketing; and
- Academic pharmacy which provides the underpinning education and training of the professional workforce.

A summary of the research programme's main work streams to build the pharmacy workforce model and modelling parameters is given in Figure 3.

Figure 3. The analytical roadmap to build the workforce planning model



The research findings and details of the model and modelling are set out in the report Future Pharmacy Workforce Requirements: Workforce Modelling and Policy Recommendations [6] and a series of articles highlighting some of the key strategic workforce issues for pharmacy are published in The Pharmaceutical Journal.[7-12]

This case study presents a synopsis of these publications and focuses on the key issues and challenges affecting the pharmacy workforce for the future.

5.3.2 Key issues and challenges affecting the pharmacy workforce

A core source of information for building the supply side model was a survey of a stratified random sample of a large cross-section of the pharmacy workforce.[6] The survey was a 16 page postal questionnaire. It was developed following a pilot study which was used to validate existing scales in this context and also to develop new scales. Two thousand and eighteen responses (56% response rate) were achieved. There was oversampling of the academic and industry sectors due to their relatively small numbers. This was complemented by a parallel survey of 605 (45% response rate) pharmacy technicians.

Pharmacists' career aspirations

Building on research on other occupations, three core aspirations or "career anchors" were identified for pharmacists. In order of importance these were: being part of a helping profession, the importance of achieving a work-life balance and having a sense of control.

Regression analysis reveals women gave greater priority to being part of a helping profession and men give greater priority to having control. Ethnic minority pharmacists gave greater priority than white pharmacists to being part of a helping profession and also to having control. Regression analysis also revealed that younger pharmacists gave higher priority than older workers to being part of a helping profession and much higher priority to achieving work-life balance.

Pharmacists' perceptions of psychological contract fulfilment

The psychological contract, a two-way exchange of perceived promises and obligations between organisation and employee, is an important concept in explaining employee behaviour. Analysis of pharmacists' perceptions of how well their employers kept the promises, made as part of their psychological contract, showed that employers provided a safe working environment and a reasonably secure and challenging job. The promises least likely to be kept were:

flexibility in matching demands of non-work roles with work; improving future employment prospects; and help in dealing with problems encountered outside work. Fulfilment of the psychological contract matters because it is associated with greater job satisfaction, lower stress and lower work-life conflict, as well as with higher commitment to the organisation and less likelihood of leaving it.[13]

Pharmacists, control and work overload

Most pharmacists feel in control but overloaded; analysis showed that some bring the workload upon themselves, possibly as a result of their high involvement in their jobs. The sector of employment is important: those working in large retail chains reported much lower levels of control while those working in hospitals also reported lower control than most other sectors. Women reported more overload than men and those from ethnic minorities reported less. Those working in hospitals were particularly likely to report high levels of overload.

Pharmacists and future prospects

Future prospects included career and growth opportunities and employability. A high proportion of pharmacists said their jobs provide opportunities for growth and help them to feel confident that they are employable and could easily find another job.

Younger and female pharmacists perceived better career opportunities as well as those with higher commitment to the profession. Those with longer tenure and locums tended to perceive fewer career opportunities. Growth opportunities were rated as better by pharmacists in the academic sector and in primary care as well as those with more than one job. In contrast, pharmacists from non-white ethnic groups and those working in community sector chain organisations were more likely to report fewer opportunities for growth. Older pharmacists and those with longer job tenure tended to feel somewhat less employable compared with pharmacists who work in independents and chains.

Pharmacists and met expectations

Many pharmacists reported some disappointment with pharmacy work and this in part reflects unmet expectations. However the survey evidence suggests there is some "fit" between career priorities and current work; for example, those

who value control are more likely to be working as independent community pharmacists and those who value work-life balance are more likely to be working fewer hours. Those who feel in control in their jobs and who see good future opportunities are more likely to say their expectations have been met. However, the regression analysis suggests that most young pharmacists, the future core of the profession, believed that the profession did not meet the expectations they held at the start of their careers. So too do those who reported overload in their jobs and longer work hours.

Pharmacists' job satisfaction

Most pharmacists (70%) were satisfied with their jobs. Regression analysis revealed that older pharmacists were generally more satisfied than their younger counterparts even after taking into account differences in salary, status etc. Analysis showed that those who gave particular priority to being part of a helping profession were more satisfied and those who gave priority to achieving a work-life balance tend to be less satisfied. Not surprisingly, those reporting higher control, good career and growth opportunities, strong professional commitment and those whose psychological contract had been met reported high job satisfaction.

Job demands, stress and work-life conflict

Stress and work-life conflict are important issues for pharmacists. Sixty-two percent of pharmacists agreed that their job was stressful. Most high stress can be attributed to the demands of the job. Therefore stress is much greater among those who report high levels of work overload, those who work long hours and those who feel that the job has not met their expectations. It is also higher among those who feel less employable and those who give priority to being part of a helping profession. One reason for this last finding is that individuals highly committed to helping people through their job may be more likely to accept too much work and to work long hours. The demands in the job are also the main source of work-life conflict. Other factors affecting work-life conflict include breach of the psychological contract, unmet expectations in the job and not being on employment contract of choice. We might conclude therefore it is not who you are as a pharmacist but what you do as a pharmacist that is most important in determining satisfaction, stress and work-life conflict.

Pharmacists' commitment

Commitment to the organisation is associated with lower labour turnover.[14] Pharmacists reported quite high levels of commitment to their organisation, though this is significantly influenced by sectors with academic pharmacists more committed to their employer than those working in other sectors. In addition to sector, a fulfilled psychological contract, met expectations and being on an employment contract of choice were all important in fostering organisation commitment.

Professional commitment is also important with a large proportion (80%) strongly committed to the values and ideals of the profession. Seventy-one percent said that being a pharmacist was an important part of who they are. Eighty-six percent had participated in some form of continuing professional development, typically attending conferences and workshops in the previous year.

Pharmacists and career choice regret

Pharmacy was the first career choice for 78% of pharmacists but only 52% would still choose pharmacy given their time again. Broadly, we classified the pharmacists into four groups:

- 1) The content pharmacists. Pharmacy was their first choice and with hindsight they would not change that choice. (43%)
- 2) The converted pharmacists. For them pharmacy was not their first choice but they would choose it again. (9%)
- 3) The disillusioned pharmacists. Pharmacy was their first choice but would not choose it again (36%).
- 4) The discontented pharmacists. Pharmacy was not their first choice and they would not choose pharmacy again. (12%)

Our analysis showed that the youngest group of pharmacists – the under 30s – fall disproportionately into the “content” group. This result may relate to lack of experience. The proportion of contented pharmacists dropped slightly among pharmacists in their 30s and 40s. A higher proportion of ethnic minority pharmacists fell into the “disillusioned” and “discontented” categories; the same applies to men as opposed to women. These results indicate where the workforce risks may arise.

Pharmacists' intentions to stay or go

A section of the survey addressed the intended mobility of pharmacists and through these questions we were able to assess whether there is likely to be an exodus of dissatisfied and regretful pharmacists in the future. We found:

- 1) Those who said they were most likely to stay in the same job were older, highly committed to their present organisation and on their contract of choice; so too were those who reported high work overload, possibly due to their high involvement. Those who can see good career prospects are more likely to move.
- 2) Those who said they were likely to stay with their current organisation worked more often in community pharmacy corporate chains, in hospitals and in academia as compared with 'other' sectors. There is a tendency for men and for ethnic minority pharmacists to be somewhat more likely to move.
- 3) Relatively few pharmacists said they expect to change sector in the next five years, especially if pharmacy was their first career choice or they were highly committed to their current organisation. Interestingly, those who report high levels of work overload also did not want to change sector, possibly because of high job involvement or high commitment to their organisation.
- 4) Pharmacists most likely to want to leave the profession altogether were those for whom pharmacy was not their first career choice. There was some suggestion that those reporting high levels of work-life conflict were also likely to want to leave pharmacy. However, those reporting high levels of work overload are less likely to want to leave the profession, suggesting it is something other than overload that is contributing to issues around work-life conflict. In addition, as part of the survey, we asked pharmacists to identify from a list of business and professional practice development factors those that might encourage them to stay within or leave pharmacy. We identified as the top two positive forces for staying in pharmacy the enhancement of the role of the pharmacist including pharmacist prescribing and the use of electronic patient records. The top two negative forces reducing pharmacists' willingness to stay in the profession were the widening of access to pharmacy services and medicines through alternative mechanisms for the distribution of drugs through mail order and e-pharmacy and the relaxation of control of entry regulations for the large supermarkets.

These findings suggest that while there is likely to be plenty of job change and some movement across organisations, there is no likelihood of a major move out of pharmacy as a whole.

Pharmacists' working hours

As an alternative to movement out of the profession or between jobs, pharmacists might seek to minimise their involvement by reducing their working hours. The survey results confirmed that many pharmacists work significantly more than their contracted hours and expressed a desire in the future to work shorter hours, to move to part-time and to have career breaks. Specifically looking at the next five years, 45% hope to work fewer hours while only 15% intend to increase their hours; 68% of women and 38% of men indicated they hope to work part-time and 28% of women and 18% of men hoped to have a career break in the next five years.

5.3.3 Developing the pharmacy workforce model

The original research was conducted in 2003-2004 and the model built in 2004-2005. The projections are therefore nearly five years old. The Royal Pharmaceutical Society of Great Britain has commissioned an update and, thus far, a new survey has been conducted which will be analysed and reported on in the late summer of 2009. The pharmacy workforce model and modelling parameters are also being updated and revised projections will be reported on at the same time. This work will include a review of the accuracy of the original projections with a view to understanding how to improve the methodology for building workforce models, modelling parameters, and identifying strategic workforce risks.

Amongst the pharmacists surveyed, there is clearly some career disappointment and concern about work overload and work-life conflict which, coupled with an inclination towards reducing hours, will be exacerbated by the increasing percentage of women entering the profession.[1] Whilst the likelihood of movement out of the profession altogether is low, there is evidence of reduced input. Unless it is addressed, this reduction signals increasing work overload and stress among pharmacists with potential risks to patient safety.[15]

A close examination of the demands for pharmacy services also reported in “Future Pharmacy Workforce Requirements; Workforce Modelling and Policy Recommendations” in 2005 shows that in 2002-03, pharmacists were employed in the following areas:

- Community pharmacy – approximately 66% of registered pharmacists were deployed in 12,206 registered pharmacies, of which about 46% were independently owned and small chain businesses (<5 outlets) and 54% were small/medium/large chain and supermarket businesses (>5 outlets);
- NHS hospital and primary care pharmacy – approximately 24% of registered pharmacists of which about 18% were employed in NHS hospitals and 6% in primary care organisations;
- Pharmaceutical Industry and its supplier and support agencies – approximately 5.5% of registered pharmacists;
- Schools of Pharmacy – approximately 2.2% of registered pharmacists.

Research reveals that there are broadly three complementary themes which have driven, and are driving, an increase in the demand for pharmacy services, pharmacists' time, and ultimately for the number of pharmacists (Box 1). This analysis allowed us to build the pharmacy demand-side model which, when taken together with the supply-side analysis outlined above, allowed us to make projections about whether there would be a shortage of pharmacists in the next ten years.

Box 1. Demand side drivers for pharmacy services and pharmacists

- 1) The “Healthcare Expansion” theme consisting of the growing underlying demands for more services that are required to support an ageing population; government funding policies for the NHS and universities; and the development of gene technology and novel treatments and delivery systems to treat previously untreatable or low prognostic conditions.
- 2) The “Organisation of Pharmacy Provision” theme consisting of the changing working and technological environment e.g. the range of services available and the opening hours in the retail sector; and the expectations for safer and novel treatments that can be brought to the market more quickly than in the past.
- 3) The “Professional Quality Assurance” theme consisting of extending the legal and regulatory imperatives to improve patient safety; and extending the role of pharmacists through the new contracts.

Based on our analysis of likely developments (Table 1) we can anticipate a shortage of pharmacists for the community pharmacy workforce in the big commercial chains and supermarket businesses and in the academic workforce. In NHS hospitals the balance has been influenced in particular by a modest shift from primary care and investments in technology that will help to meet the higher demand.

Table 1. Ten-year projections of pharmacist supply and demand

Sector	Projected supply* (WTE)	Projected demand (WTE)	Projected 10 year shortage/excess
Community			
Big chains/multiples (5>)	14,411	33,670	-57%
Independents/small chains (<5)	16,812	14,974	+12%
NHS Hospitals	8,935	8,975	In balance
Primary Care Organisations	3,410	3,132	+9%
Pharmaceutical Industry	1,636	1,068	+53%
Schools of Pharmacy	388	525	-26%
Total	45,592	62,344	-27%

Note: The model's base year is set on 2003 data so the 10 year projections give estimates to 2013.

*Based on average contracted hours of 33 hours per week. WTE = whole time equivalent.

5.3.4 Summary of the key risks in the pharmacy workforce

The pharmacy workforce at the time of this research appears to be reasonably stable and fulfilled, and there appears to be a reasonable "fit" between pharmacists' aspirations and what their organisations have delivered. Looking to the future, the potential risks in the pharmacy workforce are in the following areas:

1) *Risks to retention*

There is some indication that among pharmacists that intention to quit the profession is often not translated into actually leaving. Nevertheless there will be a steady stream of retirements and a risk of loss among younger pharmacists disillusioned or discontented with their careers.

2) *Risks to pharmacists' well-being*

Many pharmacists report a heavy workload, long hours and stress plus a strong desire to reduce hours. Set against this, recent changes in work organisation and quality assurance are increasing demands on time. This risks increasing stress, reducing job satisfaction and commitment, and enhancing pressure to reduce hours.

3) *Risks to supply*

Pressure for shorter hours among existing pharmacists reduced supply. New Schools of Pharmacy are increasing throughput but this risks constraint by a shortage of academics since younger pharmacists are rarely interested in pursuing an academic career and it is more difficult for mature pharmacists to enter academic careers. The main implication of this is a lack of teachers in the Schools of Pharmacy to train the future cohorts of pharmacists, damaging future supply.

4) *Risks to patient safety and service quality*

The excessive work overload and stress faced by pharmacists combined with an extension of roles through the new pharmacy contract and a desire to reduce working hours create pressures that increase the risk to patient safety and service quality

Therefore, the risks within the pharmacy workforce are that the two key sectors which require more pharmacists in the future will not be able to satisfy their needs. This will compromise the government's ability to deliver effective medicines management and patient care. Current action to address these gaps includes opening a number of new Schools of Pharmacy across Great Britain as well as scholarships to encourage young pharmacists into the academic sector.

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