

Assessing Risk Associated With Contemporary Pharmacy Practice in Northern Ireland

Final Report

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Executive Summary

Background

As with other healthcare regulators in the United Kingdom, the PSNI intends to develop a risk-based revalidation scheme for its registrants. In order for such a scheme to be proportionate to risks posed by pharmacy practice, there is a need to understand the nature of these risks and how they can be assessed and managed. Previous studies suggest that a range of contributory factors – person-specific, task-related and organisational – serve to increase or reduce the risk of individual practitioners. There remains, though, a need to measure the prevalence of the identified risk factors across the pharmacy profession. In addition, one risk factor that has not been explored in any great depth is pharmacists who return to practice following a career break or make a change of sector. There is anecdotal evidence to suggest that these processes might embody risk, but it is not clear what that risk is or how it should be managed. Finally, there is a need to understand how risk-based revalidation in general can be delivered by the PSNI.

Aims and objectives

The aim of the study was to provide the PSNI with guidance to support its development of risk-based revalidation. Specific objectives were to:

- i. map the risks associated with different areas of pharmacy practice
- ii. investigate the risks associated with return-to-practice and consider how these can be minimised;
- iii. apply existing knowledge on risk in pharmacy practice to the PSNI's needs, particularly with regard to developing models for risk-based revalidation;

Survey of practice risk factors

A population-level survey of PSNI registrants was conducted. This survey included measures of several practice risk factors – safety climate, job characteristics, psychological health and risk behaviour. From a sample of 543 respondents, the survey provided an indication of the extent of these risk factors amongst Northern Irish pharmacists. The risk factors were, for the most part, similar across the pharmacy profession, and were comparable to pharmacists and other healthcare professionals in

Britain. However, they do indicate issues of concern from a risk management point of view, and some areas of increased risk relative to others emerged from the data:

- pharmacists in patient-facing roles;
- pharmacists returning to practice following a career break.

In addition, many pharmacists reported working in environments that imposed a high workload with low support (such as staffing and breaks), and required them to work for long hours. Such settings are also likely to carry a high risk, and so may require attention outside of any practitioner revalidation scheme proposed here.

Registrants' changes in practice

An interview study was carried out, involving 18 Northern Irish pharmacists who had either returned to practice following a career break, moved from one sector of practice to the other, or been involved in the management of a pharmacist who had undertaken one of these processes. This study found that changes in practice occurred under a variety of circumstances, which have an impact on the level of preparation an individual will have for the new role. Also, there is considerable variation in both the level of support that individuals receive, and the understanding of who is responsible for ensuring that individual returners or transferees are fit to practice. The risk associated with returning to practice or changing sector of practice can be reduced by the provision of guidance and support to registrants going through either of these processes.

Key issues and models for risk-based revalidation

A workshop was held with stakeholder representatives from the Northern Irish pharmacy profession. During this workshop, a number of issues were raised with respect to risk-based revalidation. Generally, it was considered to have potential as a means of managing risk in pharmacy practice. It would achieve these aims by assessing competency against defined standards of practice, and it would acknowledge that risk is a characteristic of the work environment as well as individuals, and is broader than dispensing errors. Specific issues raised were: the use of CPD as part of the process; roles and responsibilities (especially in the management of pharmacists' return to practice and changing sector); and cost implications.

Two exemplar models are presented to illustrate ways in which risk-based revalidation can be carried out. One model is based largely on CPD, while the other combines CPD with competency-based assessments. Either of these schemes, or elements from both, could be used to formulate a revalidation programme. In addition, it was suggested that the CPD process should be aligned to explicit performance criteria and additional support provided to those registrants who are required to submit portfolios.

Recommendations

The authors recommend that the PSNI:

- Develops explicit standards of safe practice. These standards can be derived from existing standards (in pharmacy and in other healthcare sectors), from analysis of previous critical incidents and disciplinary hearings, and from consultation with pharmacy stakeholders;
- Considers developing the existing CPD scheme by aligning it to the standards of practice, and provide additional support for registrants in the compilation of CPD portfolios;
- Considers the use of either a CPD-only scheme, a CPD-plus-assessment scheme, or elements from either scheme, in the design of a risk-based revalidation process;
- Considers the prioritisation of registrants in patient-facing roles and those returning from a career break in risk-based revalidation and the provision of support measures;
- Considers developing guidelines, and training and development resources, for registrants returning to practice or changing sectors and for their employers.

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1. General Introduction

1.1 Terms of reference

The University of Manchester's School of Pharmacy and Pharmaceutical Sciences was requested to conduct a study for the Pharmaceutical Society of Northern Ireland (PSNI). This study intended to investigate the nature, sources and assessment of risk in pharmacy practice, in support of the PSNI's efforts to develop risk-based revalidation of its professional members.

1.2 Background

1.2.1 Risk-based regulation in healthcare

Healthcare regulation is undergoing a period of reform, which has been driven largely by an aspiration to improve standards of public protection and patient safety (Walshe, 2009; Noyce, 2006). A major theme within the proposals for reform is the greater use of revalidation – that is, a periodic re-evaluation of fitness to practice against role-relevant competencies – rather than the traditional approach of a 'one-off' initial registration with no further assessment of the practitioner's competence (DoH, 2009). The Department of Health White Paper, "The Regulation of the Non-Medical Healthcare Professions" (DoH, 2006) proposes that all statutorily regulated health care professions have arrangements in place for the revalidation of their members' fitness to practice. Amongst the principles that are suggested in the paper is the need for a revalidation system to be proportionate to the practice risks that it addresses and the benefit it brings.

However, while many would agree that the intensity of a revalidation scheme should be balanced against the level of risk posed by those it seeks to revalidate, it is unclear exactly how risk should be defined and assessed for such a purpose (Phipps, Noyce, Walshe, Parker & Ashcroft, 2010a). It is apparent from the literature on risk management, both in medical and non-medical domains, that there is a range of views about what constitutes risk and how to distinguish "high

risk” from “low risk” practice (Phipps, Noyce, Walshe, Parker & Ashcroft, 2010b).

Some of the issues that need to be considered include:

- *What is the risk to be managed?* Is it a risk of adverse events, of harm to the practitioner, of bringing the profession into disrepute, or all of these?
- *Who creates the risk and who is subject to it?* Pharmacy staff, service users, other healthcare professionals, managers and policy makers, or the general public?
- *Who defines and controls the risk?* Are they stakeholders in the pharmacy process? How much awareness do they have of the process? What perspective(s) and assumption(s) do they bring to the assessment?

The Department of Health (DoH, 2006) has suggested that risk could be assessed by the rating of risk factors, and suggests some candidate factors, for example: role and responsibility; location; level of experience; previous performance appraisals; inherent risk of the task; practitioner status. However, these factors are suggested speculatively – their relative influence on risk, if they are of any influence at all, needs to be determined through further study.

1.2.2 The pharmacy context

In its proposal for a revalidation model in pharmacy, the PSNI has alluded to the principle of proportionality in the regulation of pharmacy practice; its draft model notes the need to consider the level of risk posed by individual areas of practice (Pharmaceutical Society of Northern Ireland, 2009). Some potential sources of risk in pharmacy are indicated in the existing literature on adverse incidents. These suggest a range of contributory factors occurring at the individual (for example, training, and motivation), work system (for example, workload and packaging design) and organisational levels of analysis (for example, staffing, organisational climate and system design) (DoH, 2004a; Dean, Schachter, Vincent & Barber, 2002; Fogarty & McKeon, 2006; Lane, Stanton & Harrison, 2006). Much of the research has been carried out in secondary care settings; however, evidence is accumulating of similar issues in primary care dispensing

(Ashcroft, Quinlan & Blenkinsopp, 2005; Witte & Dundes, 2007; Peterson, Wu & Bergin, 1999; James et al., 2009). While research has indicated some factors associated with risk in pharmacy practice, it is as yet unclear how these factors might be used to systematically assess the risk of a given practice or compare different practitioners. The Department of Health (DoH, 2009) aspires to have revalidation systems that sustain the confidence of both the public and the professions themselves, and this may involve taking into account a range of views on what constitutes risk. Hence, in assessing risk for the purposes of revalidation, there is a need to strike a balance between the applicability of the risk assessment and integration of the perspectives held by different stakeholders.

1.2.3 What are the key issues for risk-based revalidation in pharmacy?

The authors have recently completed a research project for the Royal Pharmaceutical Society of Great Britain (RPSGB) on the use of risk assessment to inform pharmacist revalidation (Phipps et al., 2010b). As part of the study, a literature review was conducted of current practice in risk management in healthcare. In addition, the authors examined a subset of the RPSGB's disciplinary records and interviewed stakeholders in pharmacy practice. The general findings of this study were:

- There are a number of ways in which risk in pharmacy can be understood. While it is possible to view risk in purely technical terms, the authors favour a sociotechnical view, in which risk is seen to have social and technical characteristics (Phipps, Noyce, Parker & Ashcroft, 2009; Phipps, Noyce, Walshe, Parker & Ashcroft, 2011). Risk in pharmacy was defined by the researchers as “the potential for harm to occur to the pharmacy workforce, its organisations or the recipients of its services, as a result of pharmacists’ activities”;
- There is a range of factors that can be attributed to risk, which can be broadly categorised into personal characteristics, task characteristics and organisational characteristics. For example, across the healthcare

- professions, characteristics such as gender, age, and country of training have been found to predict the risk of being sanctioned by a professional regulator. Meanwhile, retrospective analyses of patient safety incidents point to the role of task and organisational characteristics such as workload and safety climate. However, while it would appear that these factors are also related to pharmacist risk, the evidence for this relationship is limited (Phipps et al., 2009; Phipps, Noyce, Walshe, Parker & Ashcroft, in press). Nevertheless, some factors have been proposed as potential indicators of risk;
- Several models and approaches are available for risk-based revalidation. A model was proposed, in which CPD and competency-based skills were assessed as part of an assessment cycle, with risk factors being used to decide on the frequency and intensity of this cycle. There are a number of issues to consider when implementing a revalidation scheme of any kind; essentially, these concern the applicability of the scheme in a fair and accessible manner across the profession.

The report summarised existing knowledge about how to identify and manage risk as part of a regulatory process. It also outlined an agenda for future research to improve this knowledge. Such research includes the social, economic and cultural context of pharmacy practice, as well as evaluation of risk-based assessment schemes. One key issue for research identified by the authors is further work to identify pharmacist risk factors and assess their extent across the profession.

1.2.4 An unexplored issue: change in practice

One risk factor that appears to be tacitly recognised by healthcare professionals and regulators, but that has had little empirical investigation, is a break or change in professional practice. In its consultation documents for the General Pharmaceutical Council's (GPhC) regulatory standards, the Council for Healthcare Regulatory Excellence (CHRE, 2009) suggested a "return to practice

policy". This would require a pharmacist who changed sector or scope of practice, or a pharmacist who took a career break with the intention of returning to work, to present evidence of appropriate continuing professional development (CPD). Pharmacists who are out of practice for two years or more would be required to undertake a period of formal training before returning to practice, the time and content of which varies according to the length and circumstances of the break from practice. Similar policies are already operated by healthcare regulators in the UK (HPC, 2008) and in Australasia (PCNZ, 2007; PBA, 2010). However, while it would seem intuitive to suggest that changing or returning to practice is a risk factor, it is not clear from the information currently available what the nature of that risk is. For example, what happens when a pharmacist changes role of sector, or takes a career break? What can go wrong during a change in practice? What needs to be done to minimise the risk? There is a need to examine pharmacists' return-to-practice and change-of-sector in order to identify factors for consideration in relation to risk-based revalidation.

1.3 Aims and objectives

The aim of the study was to provide the PSNI with guidance to support its development of risk-based revalidation. Specific objectives were to:

- i. map the risks associated with different areas of pharmacy practice;
- ii. investigate the risks associated with return-to-practice and consider how these can be minimised;
- iii. apply existing knowledge on risk in pharmacy practice to the PSNI's needs, particularly with regard to developing models for risk-based revalidation.

The remainder of this report is structured as follows:

- *Section 2* describes a survey of PSNI registrants based in Northern Ireland, measuring practice risk factors;
- *Section 3* discusses the issues surrounding registrants returning to practice from a career break or changing sector of practice;

- *Section 4* describes a stakeholder workshop and proposes models for risk-based revalidation;
- *Section 5* provides some recommendations for the development of risk-based revalidation.

2. A survey of practice risk factors

2.1 Background

Earlier research conducted for the RPSGB (Phipps et al., 2010b; in press) involved relatively small samples of pharmacists, and focused on a detailed qualitative exploration rather than attempting to find generalities across the pharmacy workforce as a whole. It identified several individual, work system and organisational characteristics that were thought to be likely to influence the risk of a given registrant. These include:

- i. *Length of practice.* Analysis of the RPSGB's disciplinary database indicated a very small but statistically non-significant trend for older registrants to be at greater risk of being disciplined;
- ii. *Overseas training.* There was a non-significant trend in the RPSGB's database for overseas-trained pharmacists to be at risk of being disciplined. The interview data suggested two specific ways in which overseas-trained pharmacists might be higher risk – a linguistic or cultural barrier, and differences in working systems between the two countries;
- iii. *Patient contact.* Pharmacists in patient-facing roles (i.e. hospital and community pharmacy) were found to be at greater risk of being disciplined; hence there appears to be a general risk factor of the pharmacist having patient contact as opposed to pharmacists in non-patient facing roles;
- iv. *Previous sanctions.* While it was not possible to detect whether or not a direct link existed between previous sanctions and future sanctions in the RPSGB data, 20% of the pharmacists who had been the subject of disciplinary action had been sanctioned on a previous occasion;
- v. *Employment history.* Insufficient data was available from the RPSGB database about pharmacists' employment backgrounds. However, participants in the interview study suggested that the more experience the pharmacist had of a particular work system, the less risk that pharmacist was perceived to be. Hence, career breaks and changes of sector were

considered to increase the risk of pharmacists to the extent that this led to unfamiliarity with the work system in which the pharmacist ultimately found him- or herself;

- vi. *Sole pharmacist on duty.* Solo working is a common feature of community pharmacy, and was commonly cited by interviewees as a potential risk factor;
- vii. *Engagement with Continuing Professional Development.* In the RPSGB study, this was identified as a behavioural marker of a pharmacist being up-to-date with current practice, which in turn was suggested to be a risk factor;
- viii. *Health problems.* Health problems in themselves can cause a pharmacist to go before the professional regulator. In addition, though, stress or ill health can predispose a pharmacist to make poor decisions generally, or to resort to self-medication through easy access to medicines. In the qualitative work undertaken for the RPSGB, health issues were commonly cited as a risk factor;
- ix. *Workload and staffing.* These were also commonly cited in the interviews as contributing to risk in pharmacies. They fall outside the scope of individual revalidation, as they are characteristics of pharmacies rather than pharmacists. Nevertheless, they are considered to be important risk factors;
- x. *Organisational culture.* Like workload and staffing, this is a characteristic of the work context rather than the pharmacist him- or herself, but was mentioned in the interviews as a contributor to risk.

While some evidence for these risk indicators was provided in the RPSGB study, it is unclear how they are distributed across the pharmacy profession (in particular, the Northern Irish pharmacy workforce); for example, are the indicators more prevalent in certain parts of the workforce than in others? Therefore, the researchers undertook a population-level study of Northern Irish pharmacists, which aimed to measure risk factors within the workforce.

2.2 Method

2.2.1 Design

The study used a cross-sectional survey design. By using a survey, data can be obtained from a larger sample of pharmacists than was possible using the record review and interview methods of the RPSGB study; also, a standardised assessment of risk factors can be used with all participants.

2.2.2 Participants

The sampling frame consisted of all PSNI members living in Northern Ireland as of December 2010.

2.2.3 Measures

The researchers identified relevant survey material by conducting a review of the literature on psychometric measures in the health and social sciences. This review identified fifteen questionnaires, each of which could be used to measure one or more of the risk factors listed in Section 2.1. The researchers evaluated each questionnaire against the following criteria:

- *Face validity.* Would it appear acceptable and relevant to a PSNI registrant who was asked to complete it? This included the wording of questions and contribution to the overall length of the survey.
- *Content validity.* Is the subject matter of the questionnaire consistent with the risk factor for which it has been selected?
- *Criterion validity.* Is there any evidence that the questionnaire predicts other factors that are pertinent to the concept of risk in pharmacy practice?

On the basis of this evaluation, a shortlist of six questionnaires was selected for inclusion in a draft version of the survey. This draft was administered to a convenience sample of ten pharmacists at the University of Manchester and ten PSNI registrants, who completed the survey and commented on the face validity, ease of completion and completion time. On the basis of the comments received by the sample, the researchers made modifications to the presentation and

content of the survey, resulting in a final version to be distributed to the study sample.

The questionnaires included in the final version of the survey (shown in Appendix A) were as follows:

- *Pharmacy Safety Climate Questionnaire (PSCQ)* (Ashcroft & Parker, 2009). This was used to measure the organisational culture of the registrant's work setting, particularly with regard to safety. Only respondents working in a pharmacy were required to complete the PSCQ;
- *Perceived work characteristics in health care* (Haynes, Wall, Bolden, Stride & Rick, 1999). This was used to measure the perceived level of autonomy and work demand imposed on the respondent;
- *Work Design Questionnaire (WDQ)* (Morgeson & Humphrey, 2006). This was used to measure the perceived amount of task-related feedback available from other members of staff, as a proxy marker of solo practice;
- *Well-being at work* (Warr, 1990). This was used to measure the effect of stress on the respondent's work;
- *General Health Questionnaire (GHQ)*. The GHQ (Goldberg & Williams, 1988) is a widely used measure of general psychological well-being, and was included here to give an indication of the respondent's level of health, as well as to provide the basis for a comparison between PSNI registrants and the general population of Northern Ireland (O'Reilly & Browne, 2001);
- *Measure of pharmacist risk behaviours*. This is a bespoke questionnaire that has been developed for use in this survey. It is based on the interview data collected as part of the researchers' previous work (Phipps et al., 2010b) and asks respondents to rate the frequency with which they engage in a set of risk-increasing or risk-reducing behaviours.

In addition to these questionnaires, the form also included a space in which to write any thoughts that respondents wished to share about risk management in

pharmacy. Hence, some qualitative data was obtained to complement the questionnaire ratings.

2.2.4 Procedure

Contact details were obtained from the PSNI for all members of the sampling frame. These were each sent a copy of the survey, with a covering letter and a Freepost envelope to return them directly to the researchers. While respondents were asked to provide details about their employment (year of registration; employment status; sector; type of pharmacy; whether a career break or change of sector has recently occurred), no information was requested that would allow specific individuals to be identified. Instead, a unique ID number was assigned to each questionnaire to allow the researchers to identify non-responders. After one month, the latter received one reminder mailing from the researchers, accompanied by an email from the PSNI to all members. Informed consent was obtained by virtue of the respondent completing and returning the survey instrument. Ethical approval for the study was obtained from the University of Manchester's Senate Ethics Committee.

2.3 Results

2.3.1 Sample composition

Of 1978 eligible participants, 543 returned completed questionnaires, equating to a response rate of 27%. Demographic characteristics of this sample are shown in Table 2.1. In addition to the data shown in this table is the time elapsed since first registration, the mean of which was 14.9 years (s.d. = 10.6 years, range 1 to 64 years). Due to the study using a cross-sectional rather than a longitudinal design, the researchers analysed only those questionnaires received from respondents currently working in pharmacy, in order to provide a contemporaneous measurement of pharmacy work characteristics. Therefore, the sample used in the subsequent analysis contained 504 completed questionnaires. The data from these questionnaires was entered into SPSS Version 15, and checked for accuracy by examining the distribution of question

responses across the sample and reviewing a random selection of questionnaires.

Table 2.1a Characteristics of the sample

| | N | Percentage |
|---|-----|------------|
| <i>Employment status</i> | | |
| Working as a pharmacist | 497 | 91.5 |
| Working but not as a pharmacist | 7 | 1.3 |
| Not working: Maternity leave | 21 | 3.9 |
| Illness | 2 | 0.4 |
| Retirement | 9 | 1.7 |
| Career break | 2 | 0.4 |
| Other reason | 4 | 0.7 |
| Not answered | 1 | 0.2 |
| <i>Patient-facing role?</i> | | |
| Yes | 383 | 70.5 |
| No | 107 | 19.7 |
| No answer | 53 | 9.8 |
| <i>Returned from a career break in the past year?</i> | | |
| Yes | 33 | 6.1 |
| No | 466 | 85.8 |
| No answer | 44 | 8.1 |
| <i>Changed sector in the past year?</i> | | |
| Yes | 25 | 4.6 |
| No | 467 | 86.0 |
| No answer | 51 | 9.4 |
| <i>Type of pharmacy (community pharmacists only, total N = 381)</i> | | |
| Independent | 91 | 23.9 |
| Small chain (2-4 branches) | 43 | 11.3 |
| Medium chain (5-25 branches) | 32 | 8.4 |
| Large chain (over 25 branches) | 157 | 41.2 |
| Supermarket-based chain | 2 | 0.5 |
| More than one type | 24 | 6.3 |
| No answer | 32 | 8.4 |

Table 2.1b Job roles in the sample

| | | <u>Primary</u> | | <u>Second</u> | | <u>Third</u> | |
|------------------------------------|-----------------|----------------|------|---------------|------|--------------|------|
| | | N | % | N | % | N | % |
| <i>Job role</i> | | | | | | | |
| Community: | Owner | 51 | 9.4 | 1 | 0.2 | | |
| | Manager | 119 | 21.9 | 9 | 1.7 | | |
| | Locum | 53 | 9.8 | 27 | 5.0 | 3 | 0.6 |
| | Relief | 46 | 8.5 | 14 | 2.6 | 2 | 0.4 |
| | Second | 36 | 6.6 | 2 | 0.4 | 1 | 0.2 |
| | Non store-based | 8 | 1.5 | 4 | 0.7 | | |
| | Other | 12 | 2.2 | 4 | 0.7 | 1 | 0.2 |
| Hospital: | Locum | None | | 1 | 0.2 | | |
| | Band 6 | 25 | 4.6 | | | | |
| | Band 7 | 46 | 8.5 | 1 | 0.2 | | |
| | Band 8a | 28 | 5.2 | | | | |
| | Band 8b | 11 | 2.0 | | | | |
| | Band 8c | 4 | 0.7 | | | | |
| | Band 8d | 3 | 0.6 | | | | |
| | Band 9 | 1 | 0.2 | | | | |
| Health board / Primary care | | 25 | 4.6 | 12 | 2.2 | 1 | 0.2 |
| Pharmaceutical industry | | 9 | 1.7 | 1 | 0.2 | | |
| Academia | | 17 | 3.1 | 7 | 1.3 | | |
| Other pharmaceutical | | 10 | 1.8 | 5 | 0.9 | 3 | 0.6 |
| Other non-pharmacy | | 4 | 0.7 | 2 | 0.4 | 1 | 0.2 |
| Not working | | 30 | 5.5 | | | | |
| No answer / no second or third job | | 5 | 0.9 | 422 | 77.7 | 500 | 92.1 |

2.3.2 Questionnaire scores from the sample

The responses to individual questions were used to calculate the measures listed in Table 2.2.

- Safety climate measures:
 - *Organisational learning* (the pharmacy’s willingness to engage in proactive and collaborative safety improvement);
 - *Blame culture* (the tendency to assign blame to individuals);
 - *Working conditions* (the extent to which the work environment is conducive to safe working);
 - *Safety focus* (the extent to which safety is seen as a priority);
- Job characteristics measures:
 - *Autonomy* (the degree of control the respondent has over his or her own work);
 - *Demand* (the amount of workload imposed on the respondent);
 - *Feedback* (the amount of information the respondent gets about his or her performance);
- Measures of individual well-being and behaviour:
 - *Competence* (the respondent’s perception of his or her ability to carry out work tasks);
 - *GHQ* (the presence of psychological ill-health in the respondent. Both “GHQ” and “Likert” scoring methods were used (Goldberg & Williams, 1988); unless specifically indicated, the Likert scores are reported);
 - *Risk behaviour* (the respondent’s engagement in activities related to practice risk).

Analysis of missing data indicated that, out of 40320 data points in the dataset, 1462 (4.0%) were missing. A higher amount of missing data (approximately 10%) was found in the PSCQ data because respondents who did not work in a dispensary were asked to omit this questionnaire. However, the overall

proportion of missing data was within the limits considered to be appropriate to allow multivariate analysis (Tabachnick & Fidell, 2001). Mean and standard deviation scores, and scale reliabilities, are shown in Table 2.2. The reliability values indicate that each of the measurements has an acceptable level of consistency.

Table 2.2 Range, mean, standard deviation and Cronbach's alpha reliability values for the questionnaire scores

| Measure | N | Range | | Mean | s.d. | Alpha |
|--------------------|-----|--------|----------|-------|------|-------|
| | | Scale | Sample | | | |
| Org. learning | 448 | 1 – 53 | 2 – 53 | 34.07 | 7.81 | 0.89 |
| Blame culture* | 451 | 1 – 20 | 1 – 17 | 7.12 | 3.32 | 0.83 |
| Working conditions | 448 | 1 – 17 | 1 – 17 | 9.87 | 3.34 | 0.74 |
| Safety focus | 449 | 1 – 13 | 2 – 13 | 9.02 | 2.26 | 0.73 |
| Autonomy | 499 | 1 – 5 | 1 – 5 | 3.50 | 0.92 | 0.87 |
| Demand* | 498 | 1 – 5 | 1 – 5 | 3.01 | 1.01 | 0.90 |
| Feedback | 503 | 1 – 5 | 1 – 5 | 2.70 | 0.89 | 0.86 |
| Competence | 502 | 1 – 5 | 1.67 – 5 | 3.53 | 0.57 | 0.72 |
| GHQ* | 504 | 0 – 36 | 2 – 36 | 12.02 | 5.57 | 0.90 |
| Risk behaviour* | 490 | 15–75 | 16 – 55 | 32.71 | 6.83 | 0.78 |

Note: for measures marked with an asterisk, high scores are *less* favourable than low ones (i.e. they indicate high blame culture, high demand, high number of health symptoms and high number of risk behaviours respectively).

The mean scores can be interpreted by comparison to previous studies in which these questionnaire have been used, as follows:

- On the PSCQ, a sample of British community pharmacists (Phipps & Ashcroft, in press) reported lower scores for organisational learning ($\bar{x} = 33.10$, s.d. = 8.68), blame culture ($\bar{x} = 6.94$, s.d. = 3.57) and safety focus ($\bar{x} = 8.97$, s.d. = 2.38), and a higher score for working conditions ($\bar{x} = 10.07$, s.d. = 3.61). However, the standard errors of difference (SE_{diff}) between the two samples indicates that the differences are not statistically significant at the $p < 0.05$

level, and hence the two samples can be considered comparable in terms of their perceived safety climates;

- Autonomy and demand scores obtained from a sample of English nurses, doctors and professionals allied to medicine in secondary care were 3.58 (s.d. = 0.93) and 2.98 (s.d. = 1.05) respectively (Haynes et al., 1999). Again, the differences between the two samples are not statistically significant at the $p < 0.05$ level;
- The feedback score is lower than that found in an American sample of workers in a range of professions (3.54, s.d. = 0.72) (Morgeson & Humphrey, 2006). This difference is significant at the $p < 0.05$ level but not the $p < 0.01$ level. Hence, Northern Irish pharmacists appear to have less feedback from others about their jobs than do the general working population;
- The competence score is lower than that obtained from a sample of full-time employees in a range of professions in the UK (3.88, s.d. = 0.54) (Warr, 1990). However, the difference is not statistically significant;
- The GHQ score is higher than that in a sample of staff in general practice in South-East England (11.60, s.d. = 5.30) (Calnan et al., 2000). However, the difference is not statistically significant. When the GHQ score is expressed using the GHQ format, 32.9% of the sample had a score of 3 or more and 26% of the sample had a score of 4 or more. This compares unfavourably with the values obtained from a previous survey of the Northern Irish general population, which were 27.6% and 21.3% respectively (O'Reilly & Browne, 2001).

To understand the questionnaire responses in more detail, the distribution of responses to each question was examined. Table 2.3 shows the responses to the questions comprising the safety climate measures. In general, many of the responses are consistent with a climate that is conducive to safe working. However, a relatively large percentage of responses indicate agreement with the statement that staff work in “crisis mode”, trying to do too much (37.1% agree or strongly agree) and the statement that, in the case of an incident being reported,

the person is under scrutiny rather than the problem (37.4%). Also, 46.3% of respondents disagreed or strongly disagreed with the statement that there are enough staff to handle the workload.

Table 2.3 Responses to the safety climate measure

| Question | Percentage of sample who responded: | | | | | |
|---|-------------------------------------|----------|---------|-------|----------------|-------------|
| | Strongly disagree | Disagree | Neither | Agree | Strongly agree | No response |
| 1. Staff assess risks and looking for improvements | 1.0 | 17.3 | 18.8 | 45.2 | 7.3 | 10.3 |
| 2. Staff work in “crisis mode” trying to do too much | 4.0 | 32.7 | 15.9 | 32.3 | 4.8 | 10.3 |
| 3. The person is reported, rather than the problem | 5.2 | 34.3 | 12.3 | 30.8 | 6.9 | 10.5 |
| 4. Management considers staff suggestions | 2.4 | 9.9 | 12.9 | 47.2 | 17.1 | 10.5 |
| 5. It’s just luck that serious mistakes don’t happen | 19.2 | 43.1 | 10.5 | 13.3 | 3.4 | 10.5 |
| 6. All staff have education and training in safety | 1.4 | 12.5 | 10.9 | 48.0 | 16.7 | 10.5 |
| 7. Staff speak up if they see something affecting safety | 1.2 | 9.5 | 10.3 | 56.0 | 12.5 | 10.5 |
| 8. There is a blame culture, so reluctant to report incidents | 14.9 | 41.7 | 14.7 | 16.5 | 1.8 | 10.5 |
| 9. Pharmacy learns and shares information about safety | 3.0 | 19.6 | 11.7 | 46.8 | 8.3 | 10.5 |
| 10. Staff work longer hours than is sensible for patient care | 12.3 | 41.7 | 15.9 | 14.1 | 5.2 | 10.9 |
| 11. The culture is one of continuous improvement | 0.8 | 7.5 | 21.6 | 52.0 | 7.3 | 10.7 |
| 12. Staff feel that their mistakes are held against them | 10.9 | 44.4 | 16.5 | 16.3 | 1.4 | 10.5 |
| 13. Staff routinely discuss ways to prevent incidents | 2.0 | 19.2 | 20.0 | 42.3 | 6.0 | 10.5 |
| 14. “Lip service” is paid to safety until an incident occurs | 12.3 | 41.9 | 20.2 | 13.1 | 1.6 | 10.9 |
| 15. Staff are seen as not needing further training | 15.5 | 52.6 | 7.3 | 12.9 | 1.2 | 10.5 |
| 16. The effectiveness of changes is evaluated | 3.0 | 25.2 | 20.8 | 37.3 | 3.2 | 10.5 |
| 17. Investigations aim to learn from incidents | 1.0 | 12.3 | 16.5 | 52.6 | 7.1 | 10.5 |
| 18. There are enough staff to handle the workload | 15.9 | 30.4 | 10.7 | 27.2 | 5.2 | 10.7 |
| 19. Investigations aim to assign blame to individuals | 19.4 | 42.1 | 17.3 | 9.7 | 1.0 | 10.5 |
| 20. The team has a shared understanding about safety | 1.4 | 16.1 | 20.4 | 44.6 | 6.7 | 10.7 |
| 21. Staff are routinely informed about incidents | 2.0 | 12.9 | 8.7 | 55.0 | 10.9 | 10.5 |
| 22. Following an incident, there is commitment to change | 1.0 | 12.1 | 19.8 | 47.2 | 9.3 | 10.5 |
| 23. Training in safety has a low priority | 15.9 | 41.5 | 21.4 | 10.3 | 0.4 | 10.5 |
| 24. Investigations are seen as learning opportunities | 0.8 | 13.5 | 19.2 | 47.6 | 8.1 | 10.7 |

Note: N = 504. The full wording for each question is shown in Appendix A

Table 2.4 shows the responses to the autonomy and demand questions. On the autonomy questions, the responses tend towards an indication of having “quite a lot” or “a great deal” of autonomy, although approximately 11% of the sample report having no choice at all over when to take a break, and a further 20% have “just a little” choice. On the demand questions, a large proportion of the sample experience problems meeting their work objectives in the time allocated “quite a lot” or “a great deal”. Table 2.5 shows the responses to the feedback and competence questions. On the feedback questions, there is a trend towards the “disagree” end of the scale; in other words, responses to the effect of not receiving information from others about one’s performance have a majority. The competence questions also show a trend, this time towards the endorsement of responses that indicate confidence in one’s ability to do the job. However, a large proportion of the responses are in the central category (“neither”), and the responses to the question “I find my job quite difficult” appear to be spread in a symmetrical fashion across the response scale – as many respondents agree as disagree, and the majority are in the central category.

Table 2.6 shows the responses to the risk behaviour questionnaire. They suggest that, for the most part, behaviours indicative of risk do not occur very often. However, it is interesting to note that 42.8% of the sample reported quite often or frequently working for longer hours than they felt they should, and 34.5% gave the same response to working alone on a task that required support from someone else. In addition, 20.2% quite often or frequently ignored concerns about their own health, and 24.5% quite often or frequently took on more work than they felt capable of. These actions, therefore, may be of particular concern due to their prevalence across the pharmacy workforce.

Taking all of the questionnaire responses together indicates a commonality to them. In general, most of the respondents indicate a relatively positive working environment. However, on questions that are related to workload and staffing, many respondents indicate that they have specific problems in this regard.

Table 2.4 Responses to the autonomy and demand measures

| Question | Percentage of sample who responded: | | | | | |
|---|-------------------------------------|---------------|-------------------|-------------|--------------|-------------|
| | Not at all | Just a little | A moderate amount | Quite a lot | A great deal | No response |
| <i>Autonomy: To what extent do you...</i> | | | | | | |
| ...determine the methods and procedures used? | 4.8 | 18.3 | 21.2 | 30.2 | 25.4 | 0.2 |
| ...choose what work you will carry out? | 6.5 | 16.7 | 23.4 | 32.9 | 20.4 | - |
| ...decide when to take a break? | 11.3 | 20.0 | 18.3 | 27.0 | 23.4 | - |
| ...vary how to do your work? | 11.1 | 27.6 | 30.0 | 17.5 | 13.5 | 0.4 |
| ...plan your own work? | 3.6 | 14.5 | 21.2 | 28.6 | 31.7 | 0.4 |
| ...carry out your work in the way you think best? | 1.8 | 7.1 | 14.3 | 34.7 | 41.9 | 0.2 |
| <i>Demand: How often do you find yourself meeting the following problems?</i> | | | | | | |
| I do not have enough time to carry out my work | 2.4 | 17.9 | 24.6 | 32.7 | 22.4 | - |
| I cannot meet all the conflicting demands made on my time | 6.0 | 21.6 | 25.8 | 28.0 | 18.5 | 0.2 |
| I never finish work feeling I have completed everything | 7.3 | 31.5 | 19.4 | 22.4 | 18.7 | 0.6 |
| I am asked to do work without adequate resources | 25.8 | 28.2 | 20.0 | 14.1 | 11.7 | 0.2 |
| I cannot follow best practice in the time available | 23.2 | 34.7 | 17.7 | 14.7 | 9.5 | 0.2 |
| Have to do basic tasks preventing more important ones | 11.7 | 28.8 | 23.6 | 20.4 | 15.5 | - |

Note: N = 504. Full wording for each question is shown in Appendix A

Table 2.5 Responses to the feedback and competence measures

| Question | Percentage of sample who responded: | | | | | |
|--|-------------------------------------|----------|---------|-------|----------------|-------------|
| | Strongly disagree | Disagree | Neither | Agree | Strongly agree | No response |
| <i>Feedback</i> | | | | | | |
| I receive information from others about my performance | 15.5 | 42.1 | 27.8 | 13.5 | 1.2 | - |
| Other people provide information about my performance | 9.9 | 32.7 | 27.4 | 28.4 | 1.6 | - |
| I receive feedback about my performance from others | 9.7 | 32.1 | 22.8 | 32.1 | 3.0 | 0.2 |
| <i>Competence</i> | | | | | | |
| I can do my job well | 1.0 | 2.6 | 9.1 | 67.3 | 20.0 | - |
| I sometimes think I am not very competent at my job | 19.4 | 41.1 | 18.8 | 19.2 | 1.2 | 0.2 |
| I can deal with just about any problem in my job | 1.6 | 15.5 | 24.8 | 47.8 | 10.3 | - |
| I find my job quite difficult | 5.8 | 26.4 | 36.1 | 28.0 | 3.6 | 0.2 |
| I feel I am better than most people at tackling difficulties | 0.6 | 10.5 | 49.2 | 35.9 | 3.8 | - |
| In my job I often have trouble coping | 16.9 | 51.2 | 20.8 | 9.7 | 1.4 | - |

Note: N = 504. Full wording for each question is shown in Appendix A

Table 2.6 Responses to the risk behaviour measure

| Question | Percentage of sample who responded: | | | | | |
|---|-------------------------------------|----------------|--------------|----------------|------------|-------------|
| | Never ever | Hardly ever | Occasionally | Quite often | Frequently | No response |
| <i>Over the past six months, how often have you...</i> | | | | | | |
| ...checked that your knowledge is up to date? | - | 4.4 | 32.5 | 43.5 | 19.4 | 0.2 |
| ...allowed a safety incident to go unreported? | 38.9 | 36.1 | 21.0 | 3.2 | 0.6 | 0.6 |
| ...deviated from standard operating procedures or organisational policies? | 12.3 | 44.0 | 33.7 | 8.5 | 0.8 | 0.6 |
| ...knowingly worked outside your boundaries of expertise? | 41.1 | 40.5 | 15.1 | 2.6 | 0.2 | 0.6 |
| ...worked for longer hours than you should have? | 11.5 | 16.7 | 28.8 | 21.4 | 21.4 | 0.2 |
| ...ensured that your workplace is well organised? | 0.4 | 6.3 | 15.3 | 43.1 | 34.7 | 0.2 |
| ...worked alone on a task when you should have had support from someone else? | 6.7 | 22.8 | 35.7 | 23.0 | 11.5 | 0.2 |
| ...been "caught out" by something going wrong that you should have anticipated? | 10.7 | 48.8 | 37.5 | 1.4 | 1.0 | 0.6 |
| ...ignored concerns about your own health? | 22.0 | 27.6 | 30.0 | 13.5 | 6.7 | 0.2 |
| ...continued to work while feeling unfit for work? | 22.4 | 25.4 | 37.9 | 9.5 | 4.6 | 0.2 |
| ...failed to report someone who you suspected of committing an offence? | 83.9 | 12.5 | 2.4 | 0.4 | - | 0.8 |
| ...taken no action when someone voiced concerns about your performance? | 83.3 | 12.9 | 2.2 | 0.2 | 0.2 | 1.2 |
| ...taken on more work than you feel capable of? | 11.3 | 27.2 | 36.7 | 18.5 | 6.0 | 0.4 |
| ...worked somewhere that you felt was unsafe? | 46.2 | 26.6 | 19.0 | 6.7 | 1.2 | 0.2 |
| ...spoken to somebody in a manner that he or she thought was inappropriate? | 53.0 | 35.7 | 9.7 | 1.0 | 0.4 | 0.2 |

Note: N = 504. Full wording for each question is shown in Appendix A

2.3.3 How do the scores differ across the workforce?

Following the production of general scores for the entire sample, the researchers sought to examine whether there were any differences across the sample, given that it represented a range of pharmacy roles and sectors. In order to identify any such patterns, multivariate analyses of variance (MANOVAs) were carried out, with employment characteristics as the between subjects independent variables (IVs) and the questionnaire scores as the dependent variables (DVs).

Table 2.7 shows the mean scores for the different primary roles, which have been categorised generally as community, hospital and other (primary care, industry, academia and other pharmaceutical). A one-way MANOVA with primary role as the IV found a statistically significant main effect [$F(20,818) = 6.06$, $p < 0.001$, Wilks' $\lambda = 0.76$] – in other words, at an aggregated level there is a reliable difference according to the roles.¹ The univariate tests and post-hoc comparisons shown in Table 2.7, which look at the individual measures in turn, indicate that the pattern of responses is different across them. On some measures (working conditions; feedback; demand), community pharmacy attracts more favourable scores than hospital pharmacy. On other measures (autonomy), hospital pharmacy is rated better than community pharmacy. In yet others (organisational learning; blame culture), the other roles have the least favourable ratings of all.

¹ A difference between scores is “statistically significant” when it is likely to be found again if the study was repeated with different participants. In ANOVA and MANOVA, the “F ratio” (prefixed by the letter “F”) describes the difference between scores on a standardised scale; it is this that is tested for statistical significance, which is designated by the “p value” that follows. A p value of less than 0.05 is the commonly used criterion to indicate significance, with smaller p values indicating greater significance. In MANOVA, the Wilks' lambda (λ) value indicates the “strength” of the result on a scale of 0 to 1, with *lower* values indicating *greater* strength. The terms “multivariate” and “univariate” refer to a test of the aggregated measures and tests of individual measures respectively.

Table 2.7 Mean scores by primary role, with standard deviations in brackets

| Measure | Community [N = 296] | Hospital [N=100] | Other [N=25] | p |
|---------------------|------------------------|---------------------|---------------------|-------|
| Org. learning* | 34.51 (7.50) | 33.49 (8.51) | 30.36 (7.32) | 0.03 |
| Blame culture* | 7.21 (3.44) | 6.64 (3.04) | 8.76 (3.26) | 0.02 |
| Working conditions* | <i>10.16 (3.51)</i> | <i>9.34 (2.64)</i> | 8.88 (3.47) | 0.03 |
| Safety focus | 9.07 (2.27) | 8.98 (2.20) | 8.64 (2.63) | 0.65 |
| Autonomy** | 3.32 (0.89) | 3.61 (0.89) | 4.05 (0.91) | <0.01 |
| Demand** | 2.98 (1.01) | 3.35 (0.92) | 2.84 (1.02) | <0.01 |
| Feedback** | 2.74 (0.86) | 2.40 (0.92) | 3.17 (0.78) | <0.01 |
| Competence | 3.55 (0.59) | 3.42 (0.51) | 3.53 (0.56) | 0.13 |
| GHQ | 12.17 (5.60) | 12.56 (5.44) | 11.88 (6.31) | 0.79 |
| Risk behaviour | 32.95 (7.01) | 33.21 (5.81) | 33.48 (7.25) | 0.90 |

Note: * indicates a significant univariate effect at the $p < 0.05$ level, ** indicates $p < 0.01$. Values in bold indicate the smallest post-hoc comparison that is significant at the $p < 0.05$ level following Bonferroni correction. Italicised values are significantly different at the $p < 0.05$ level when no correction is applied.

To investigate this pattern in more detail, respondents in community and hospital pharmacy (N = 396) were further divided into managerial levels (community owners and managers, and Band 8 and 9 hospital staff), non-managerial levels (second, relief, non-store based and other community pharmacists, and Band 6 and 7 hospital staff) and locums. A two-way MANOVA was carried out, with sector and level as the independent variables – effectively, this tests whether the two characteristics have separate effects on the measures. This analysis found that, not only did sector and level have statistically significant individual effects on the measures [sector $F(10,382) = 5.91$, $p < 0.001$, Wilks' $\lambda = 0.87$; level $F(20,764) = 7.13$, $p < 0.001$, Wilks' $\lambda = 0.71$] but they also had a combined effect [$F(10,382) = 2.44$, $p < 0.01$, Wilks' $\lambda = 0.94$]. In other words, both the sector (community or hospital) and the level of seniority (managerial, non-managerial or locum) need to be taken into account when considering how the role affects perceived risk. Table 2.8 lists the scores obtained for each sector and level of

seniority. The univariate tests indicated that managers obtained the most favourable scores on organisational learning, blame culture, safety focus, autonomy, and risk behaviours.

Table 2.9 shows the mean scores according to whether the respondent works in a patient-facing role. A MANOVA with patient-facing role as the IV found a significant main effect [$F(10,391) = 4.08, p < 0.001, \text{Wilks' } \lambda = 0.91$], indicating that there is an overall difference in the scores. The univariate tests in Table 2.9 indicate that, more specifically, patient-facing roles attract less favourable ratings on working conditions and autonomy.

Table 2.10 shows the mean scores according to whether the respondent has returned from a career break during the previous year. A MANOVA with return to practice as the IV found a significant main effect [$F(10,402) = 2.16, p < 0.05, \text{Wilks' } \lambda = 0.95$], indicating that returners have different scores overall. Table 2.10 indicates that, specifically, returners experience less autonomy, greater work demand and less belief in their competence.

Table 2.8 Mean scores by primary role, with standard deviations in brackets

| Measure | Community managerial [N = 167] | Hospital managerial [N = 47] | Community non-managerial [N = 100] | Hospital non-managerial [N = 71] | Community locum [N = 53] |
|-------------------------|--------------------------------------|------------------------------------|--|--|--------------------------------|
| Organisational learning | 35.97 (7.20) | 36.17 (7.40) | 32.95 (7.60) | 31.63 (8.78) | 32.92 (7.43) |
| Blame culture | 6.70 (3.38) | 6.00 (3.38) | 7.33 (3.36) | 7.08 (2.72) | 8.60 (3.43) |
| Working conditions | 10.75 (3.34) | 9.32 (2.73) | 9.51 (3.53) | 9.36 (2.59) | 9.56 (3.74) |
| Safety focus | 9.35 (2.24) | 9.63 (1.93) | 8.91 (2.28) | 8.53 (2.27) | 8.46 (2.28) |
| Autonomy | 3.60 (0.83) | 4.18 (0.61) | 3.14 (0.83) | 3.22 (0.84) | 2.79 (0.85) |
| Demand | 3.11 (1.00) | 3.47 (0.82) | 2.88 (1.04) | 3.26 (0.98) | 2.75 (0.98) |
| Feedback | 2.88 (0.83) | 2.39 (0.95) | 2.62 (0.85) | 2.41 (0.91) | 2.56 (0.88) |
| Competence | 3.60 (0.62) | 3.50 (0.56) | 3.54 (0.55) | 3.36 (0.47) | 3.42 (0.59) |
| GHQ | 12.73 (5.66) | 13.20 (6.18) | 11.56 (5.03) | 12.12 (4.87) | 11.54 (6.36) |
| Risk behaviour | 34.16 (7.25) | 33.56 (5.87) | 31.99 (6.50) | 32.97 (5.81) | 30.98 (6.58) |

Note: for ease of presentation, univariate tests of significance are not shown in this table.

Table 2.9 Mean scores according to whether the respondent is in a patient-facing role, with standard deviation in brackets

| Measure | In patient-facing role [N = 345] | Not in patient-facing role [N = 57] | p |
|-------------------------|-------------------------------------|--|-------|
| Organisational learning | 34.02 (7.83) | 33.63 (7.52) | 0.73 |
| Blame culture | 7.22 (3.35) | 6.86 (3.57) | 0.45 |
| Working conditions* | 9.99 (3.41) | 8.98 (2.95) | 0.04 |
| Safety focus | 8.98 (2.33) | 9.39 (1.90) | 0.21 |
| Autonomy** | 3.37 (0.90) | 3.81 (0.92) | <0.01 |
| Demand | 3.08 (1.00) | 3.01 (1.11) | 0.67 |
| Feedback | 2.65 (0.87) | 2.89 (0.95) | 0.06 |
| Competence | 3.51 (0.59) | 3.54 (0.51) | 0.80 |
| GHQ | 12.21 (5.58) | 12.32 (5.59) | 0.90 |
| Risk behaviour | 33.12 (6.71) | 32.91 (7.07) | 0.83 |

Note: * indicates a significant univariate effect at the $p < 0.05$ level, ** indicates $p < 0.01$.

Table 2.10 Mean scores according to whether the respondent has returned from a career break in past year, with standard deviations in brackets

| Measure | Returned [N = 30] | Not returned [N = 383] | p |
|-------------------------|----------------------|---------------------------|------|
| Organisational learning | 32.43 (9.71) | 34.08 (7.53) | 0.26 |
| Blame culture | 7.90 (3.86) | 7.15 (3.31) | 0.24 |
| Working conditions | 9.07 (3.01) | 9.90 (3.34) | 0.18 |
| Safety focus | 8.93 (2.56) | 8.99 (2.27) | 0.89 |
| Autonomy* | 3.03 (0.92) | 3.45 (0.90) | 0.01 |
| Demand* | 3.49 (0.91) | 3.04 (1.01) | 0.02 |
| Feedback | 2.86 (0.86) | 2.68 (0.88) | 0.31 |
| Competence* | 3.28 (0.57) | 3.53 (0.57) | 0.02 |
| GHQ | 13.27 (6.77) | 12.15 (5.46) | 0.29 |
| Risk behaviour | 33.47 (5.66) | 33.02 (6.84) | 0.73 |

Note: * indicates a significant univariate effect at the $p < 0.05$ level.

Table 2.11 shows the mean scores according to the type of pharmacy that community pharmacists worked in. A MANOVA found a significant main effect of pharmacy type [$F(40,1139.42) = 2.31, p < 0.01, \text{Wilks' } \lambda = 0.74$], indicating that the type of pharmacy has an overall effect. Table 2.11 indicates a general trend for smaller organisations to attract more favourable ratings than larger ones. Interestingly, respondents who worked in more than one type of pharmacy provided the least favourable ratings for organisational learning and safety focus.

Table 2.11 Mean scores by type of community pharmacy, with standard deviations in brackets

| Measure | Independent [N = 80] | Small chain [N=42] | Medium chain [N=25] | Large chain or supermarket [N = 142] | More than one type [N = 21] | p |
|---------------------------|-------------------------|-----------------------|------------------------|---|--------------------------------|-------|
| Organisational learning** | 36.15 (6.69) | 35.10 (8.71) | 34.17 (8.05) | 33.80 (7.10) | 29.48 (8.50) | <0.01 |
| Blame culture | 6.73 (3.36) | 7.48 (3.78) | 6.69 (3.38) | 7.51 (3.29) | 8.90 (3.70) | 0.08 |
| Working conditions** | 11.59 (2.94) | 10.71 (3.13) | 10.14 (4.12) | 9.17 (3.42) | 8.86 (3.92) | <0.01 |
| Safety focus* | 9.61 (2.12) | 8.69 (2.54) | 8.97 (2.47) | 8.99 (2.09) | 7.86 (3.15) | 0.02 |
| Autonomy** | 3.75 (0.83) | 3.59 (0.76) | 3.42 (1.06) | 3.10 (0.82) | 2.94 (1.02) | <0.01 |
| Demand | 2.70 (0.93) | 3.10 (1.09) | 3.00 (1.08) | 3.07 (1.00) | 2.91 (0.90) | 0.09 |
| Feedback | 2.73 (0.78) | 2.64 (0.91) | 2.95 (0.80) | 2.83 (0.89) | 2.63 (0.88) | 0.47 |
| Competence | 3.61 (0.61) | 3.50 (0.55) | 3.59 (0.72) | 3.51 (0.54) | 3.47 (0.74) | 0.69 |
| GHQ | 11.80 (6.16) | 12.69 (5.65) | 11.66 (4.26) | 12.01 (5.19) | 12.52 (6.51) | 0.90 |
| Risk behaviour | 32.37 (6.36) | 33.69 (8.09) | 33.97 (7.99) | 32.97 (7.00) | 32.00 (6.36) | 0.74 |

Note: * indicates a significant univariate effect at the $p < 0.05$ level, ** indicates $p < 0.01$. Values in bold indicate the smallest post-hoc comparison that is significant at the $p < 0.05$ level following Bonferroni correction. Respondents working in more than one community pharmacy provided ratings for the pharmacy in which they worked most often.

Finally, the relationship between length of practice and the risk measures was assessed. This was done in two ways: one was to analyse the correlation between each measure and time elapsed since first registration; the second was to divide the sample into those respondents with less than 25 years since first registration and those with 25 years or more, and carry out a MANOVA to test for any differences between these two groups only. The latter criterion was chosen in accordance with the suggestion made in previous research (Phipps et al., 2010b) that pharmacists with 25 years of experience or more could be higher risk.

The results of these analyses are shown in Table 2.12. The MANOVA found a significant main effect of time since first registration [$F(10,393) = 2.01, p < 0.05, \text{Wilks' } \lambda = 0.95$], suggesting that age did have an effect on some of the measures. Interestingly, respondents with 25 or more years actually had more positive ratings for organisational learning, working conditions, safety focus, autonomy, demand and competence. The correlation values in Table 2.13 also indicate that more years since first registration are associated with more positive scores for organisational learning, blame culture, working conditions, safety focus, autonomy and competence. This presents a different perspective on the relationship between time in practice and risk to that presented by a Canadian study of pharmacy practitioners (Austin, Croteau, Marini & Violato, 2003), which found that practitioners with more than 25 years of experience performed less well on competency-based tests. However, aside from the study population, the two studies also differ in terms of the outcome measure; the current study is based on the respondent's perception of risk factors (which, as was seen earlier, is coincidentally influenced by the level of seniority), while Austin et al.'s study uses an externally assessed measure of competence in technical skills. Hence, it is likely that the discrepancy is due to the different measures used.

Table 2.12 Mean scores by time since first registration, with standard deviations in brackets and Pearson's correlations in rightmost column

| Measure | Less than 25 years [N = 337] | 25 or more years [N = 67] | p | Pearson's r with time |
|--------------------------|---------------------------------|------------------------------|-------|--------------------------|
| Organisational learning* | 33.53 (7.85) | 35.79 (7.33) | 0.03 | 0.15** |
| Blame culture | 7.35 (3.42) | 6.54 (3.03) | 0.07 | -0.13** |
| Working conditions* | 9.69 (3.31) | 10.66 (3.43) | 0.03 | 0.10* |
| Safety focus* | 8.86 (2.28) | 9.63 (2.10) | 0.01 | 0.19** |
| Autonomy* | 3.37 (0.91) | 3.64 (0.86) | 0.03 | 0.23** |
| Demand** | 3.16 (1.00) | 2.73 (0.96) | <0.01 | -0.06 |
| Feedback | 2.67 (0.91) | 2.82 (0.78) | 0.23 | 0.03 |
| Competence** | 3.48 (0.57) | 3.70 (0.56) | <0.01 | 0.17** |
| GHQ | 12.43 (5.75) | 11.21 (5.11) | 0.11 | -0.03 |
| Risk behaviour | 33.27 (6.73) | 32.01 (7.01) | 0.17 | -0.02 |

Note: * indicates a significant univariate effect at the $p < 0.05$ level, ** indicates $p < 0.01$

As the previous paragraphs have shown, job characteristics and safety climate vary across the pharmacy workforce, but in a relatively complex manner. The key differences could be summarised as follows:

- Roles that do not involve direct patient contact attract more favourable ratings on safety climate and the autonomy provided;
- Community pharmacists generally gave more favourable ratings for job characteristics than hospital pharmacists, with the exception of the autonomy afforded by the job;
- Pharmacists returning from a career break experienced greater demand, and felt less well equipped to deal with it, than pharmacists who had not taken a career break;
- Within community pharmacy, smaller organisations (independents and small chains) attracted more favourable ratings for safety climate than larger chains. Community pharmacists working in more than one type of pharmacy had less favourable perceptions of safety climate;
- Risk behaviour and psychological well-being appear to be relatively consistent across the workforce.

2.3.4 Survey respondents' observations about pharmacy risk

As mentioned in Section 2.2.3, respondents were given an opportunity to make comments about risk management. Some general themes from this data are described in the following paragraphs.

Differences between pharmacy settings. The quantitative data, as described earlier, suggested the presence of differences between pharmacy settings in terms of risk factors. This is borne out in the respondents' comments, which also serve to illustrate the various ways in which different settings can be compared. For example, respondent 5, who moved from community pharmacy to hospital pharmacy, compares the two sectors:

I feel lucky to have a job in hospital as although on occasions I feel stressed at work, the benefit of having other pharmacist colleagues to turn to for help and advice during my work has been so helpful. I cannot stress also how having (mostly) uninterrupted tea breaks and lunch breaks made my working day so much easier. [...] I know that I felt and others continue to feel that being an employee community pharmacist, they don't get a lot of support from their contractor employers who are solely focused on making money! [Respondent 5]

While differences are perceived between sectors, some respondents also alluded to differences within each sector. Respondents 6 and 32 discuss how the safety climate differs between organisations within the community and hospital sectors respectively.

I worked/managed a community pharmacy for 15 years. It was part of about 40-50 shops. Alliance pharmacy bought this chain and very soon saw fit to give me a second pharmacist 1 day per week and then later increased this to 2 days per week. This was so we could provide a great service, [...] promote professional services and [...] cover the hefty workload of a growing script business. Now Boots own us and I believe they do want to provide this great service too but [...] someone in HQ has decided we are overstaffed so the second pharmacist cover was cut to one day per week and just now it's been removed altogether. [...] Understaffing leads to higher risk of error, increased stress, increased pressure on pharmacist. [...] We can only work at this rate through being very organised but I feel it is not a great place to work. Who can stop big companies treating pharmacists like this? [Respondent 6]

The culture in the pharmacy department where I work is one of investigating system failure when incidents occur, however if other healthcare professionals such as nurses are involved in the incident it becomes a culture of blame and a need to point the finger instigated by senior management in the hospital, especially senior nursing managers. This leads to pharmacists being reluctant to report incidents involving other professionals. [Respondent 32]

The survey noted that community pharmacists working in more than one type of pharmacy had a poor perception of safety climate. Comments from locum pharmacist respondents illustrate their experiences of risk management in different pharmacies.

I work in several different pharmacy environments and find that most of them are understaffed and seem to lack systems. I also work in supermarket pharmacy where no breaks and long days are normal and just expected to be worked - Elizabeth Lee has made no difference! [...] Being the responsible pharmacist is all very well but if you complain to management re some of these issues you will not be invited back - and hence as a locum I would lose my source of income! In Northern Ireland so many Rx arrive as faxes - can none of the patients collect their Rx and bring in the original? Some shops dispense sugar free methadone when Rx says normal methadone and when I mentioned this they said all the other pharmacists do it, why not me - and the inspector does not seem to pick up that this occurs! [Respondent 128]

I only occasionally work as a locum in community pharmacy but my previous job involved working full time as a relief manager for a larger multiple. I feel that working as a community pharmacist is littered with risk. The lack of dedicated break times is ludicrous and an accident waiting to happen. Community pharmacists are under so much pressure to meet targets for dispensing figures, takings, medication reviews etc means patient safety is sliding down the list of community pharmacy priorities. [Respondent 433]

Time pressure. There are a number of risk factors that occur regardless of the sector of practice. One of these is time pressure.

Any errors I've made in the past during dispensing have been due to times under pressure when pharmacists asked to take call/check prescriptions/talk to patient/cover staff levels - all at once! [Respondent 73]

As an independent community pharmacist owning and running a pharmacy business, it is difficult to find time to assess risk in the workplace. Increasing paperwork, drug shortages,

prescribing charges, patient demand for extended services puts huge pressure on time and priorities. [Respondent 414]

Staffing. Many respondents also pointed to difficulties in managing workload due to there being insufficient staff, or an inability of staff that are there to contribute to tasks.

I [...] find the more experienced pharmacists are always willing to share their knowledge and point you in the right directions with regards to protocols etc. so you never really feel out of your depth. It is particularly busy [...] at the minute, mainly because over one quarter of our work force are off [...] on maternity leave and with budget constraints these posts are not being temporarily filled - this puts added pressure and workload on the remaining staff. [Respondent 290]

In a few shops the staff take no responsibility (or are not given it) and I repeatedly get the statement "the pharmacist deals with that". This can make it difficult for me to make informed decisions. The most stressful situation is to go into a shop which is understaffed. A busy shop with no dispenser is a disaster waiting to happen. Everyone has to have holidays of course but management decisions about "holiday years" can impact badly at certain times of year when "use it or lose it" comes into play. [Respondent 391]

Lack of breaks. A common problem for pharmacists appears to be a lack of breaks during the working day.

It should be a rule that pharmacists get a lunch break without disturbance – no-one should have to work all day without a break – it's not healthy. [Respondent 157]

We work in a profession where we are expected to be on call to all customers within minutes, without any regard to our own breaks or lunch. The implementation of responsible pharmacist legislation made it clear that time out of the pharmacy could not be for lunch. No other profession with direct impact on patient contact and safety would effectively make it illegal to take a break, in violation of all working time directives. I often work from 0845 to 1930 without any breaks whatsoever. It is actually surprising that more incidents do not occur. [Respondent 286]

Work systems. Some pharmacists suggested that sub-optimal work systems contributed to risk.

In my 25 years of pharmacy, I have found it almost impossible to come up with a foolproof [MDU dispensing] system. [...] So many other parties are involved in MDUs, but pharmacy is quite literally the end of the line. [...] They are an accident waiting to happen. Furthermore, if a drug is removed from its original packaging to be put in an MDU tray, is the pharmacist now responsible for the safety of the drug? In essence the pharmacist is taking on product liability – something most pharmacists don't realise when embarking on MDUs. [Respondent 8]

The safety culture in pharmacy has improved substantially in the last 10 to 15 years and is now well established within the pharmacy department. However, the pressures in the health service, e.g. bed pressures, mean that safety on the ward in hospitals is often compromised by staff failing to follow SOPs and taking shortcuts which can put patients at risk. Also reductions in admin and clerical staff spending hours processing audit data and other clinical data. This for me is one of the major stresses I have to deal with at present. Instead of using my pharmaceutical knowledge for patient benefit large percentage of my time is now spent on inputting audit data to give assurance re meeting targets. [Respondent 472]

Conflicting priorities. Connected to the above concerns is one that pharmacists can be faced with a conflict between meeting productivity targets and maintaining safety. Furthermore, a number of pharmacists do not feel that they are supported by managers or by their professional leaders in managing these conflicts.

Operating a profit-making [pharmacy] has been difficult during the recent recession. [...] Many pharmacies have had to reduce staff and other expenses [such as training] during the last two years or so, and this inevitably has an impact on safety. [...] The introduction of responsible pharmacist legislation [...] was a misguided attempt to improve the situation. It has only succeeded in heaping more responsibility onto employee pharmacists who, almost without exception, have no more authority from their employer to impose their will or gain the resources they need to discharge their responsibility. Responsibility without authority is a recipe for stress and strain. To suggest, as the PSNI have, that pharmacists can refuse to sign in and close a pharmacy if they believe safety is compromised shows that policy makers don't live in the real world where there is an excess supply of pharmacists looking for work who would be keen on any opportunity to work. The PSNI should be focusing on the denial of proper rest breaks for pharmacists, which is widespread (and illegal) and is a significant risk to patient safety. [Respondent 219]

I work for a large chain. All of my pharmacy manager colleagues struggle with lack of provision for adequate break times. In my view this is a massive risk to patient safety. Often I

work 8.5 hours without stopping. Though feedback channels exist to convey these issues to senior management the response is usually along the lines of "adequate leadership by the pharmacy manager should allow break times to be created". The reality is that if the company opens over lunchtime then patients expect to be seen promptly. Solution: provide adequate dispenser / pharmacist cover or close over lunch. In my view, lack of adequate break times is a huge risk to patient safety. [Respondent 269]

Lack of personal support. Finally, some pharmacists noted a lack of support for dealing with personal stressors, which can contribute to risk. In addition, there also appears to be a lack of support for professional development.

Support for pharmacists in NI is very poor. Very stressful profession and as time goes by self-esteem to perform job and self confidence deteriorate. No counselling provided for pharmacists at difficult stages in their career and the problems then progress into family life. I currently find it difficult to work in pharmacy, continuously doubting my ability to carry out all my duties due to understaffing etc. [...] There is nowhere to turn for support and talk to fellow professionals in the same situation. [Respondent 125]

I believe a system of appraisal should be intended to help highlight to practitioners areas for development and areas for improvement. [...] Pharmacy is a very risky business – not enough is done to offer support in terms of counselling etc to help practitioners overcome issues of confidence, competency and avoidance of compromising patient safety / welfare through practice issues. [Respondent 136]

2.4 Discussion

This section has examined the findings of a survey on risk factors across the Northern Irish pharmacy profession. On measures of perceived safety climate and job characteristics, the respondents to the survey are comparable with healthcare professionals in Britain, reflecting concerns about workload and staffing in contemporary pharmacy practice. The pattern of GHQ scores suggests that, within Northern Ireland, there is a greater prevalence of psychological health concerns amongst pharmacists than amongst the general population. However, it is unclear to what extent that difference is due to changes in the socio-economic climate since the earlier study.

Some differences were also found within the sample. In general, pharmacists who are not in patient facing roles have lower scores on the risk factors measured, while pharmacists who have recently returned from a career break had elevated scores on some of the risk factors. Community pharmacy tended to attract better scores than hospital pharmacy; within community pharmacy, independent pharmacies and smaller chains had better scores than large chains.

In interpreting these results, one limitation should be borne in mind; that is, the response rate to the survey. A large proportion of the population did not respond. However, the response rate obtained is not dissimilar to that obtained in previous surveys of this population (e.g. McCann, Hughes, Adair & Cardwell, 2009, who had a response rate of 39%). The demographic data for the sample suggest that it represented the range of pharmacy roles in Northern Ireland.

These findings can be compared with a previous study of work-related stress in Northern Irish pharmacists. The survey by McCann, Hughes, et al. (2009) found that the most stressful job situations for community and hospital pharmacists were dealing with interruptions, excessive workload, and understaffing. A further examination of qualitative data (McCann, Hughes et al., 2009; McCann, Adair, & Hughes, 2009) suggested that amongst the stressors for pharmacists were perceived poor working conditions (such as productivity demand and a lack of breaks), low confidence in other pharmacy staff, isolation from peers during day-to-day work and a lack of professional leadership. These sentiments are echoed in the current study, in which the same themes have arisen (a further source of stress cited by McCann et al. – continuing professional development amongst community pharmacists – will be discussed in the next chapter). Not only can workplace stressors contribute to the risk of individual practitioners, but they can also have a detrimental effect on overall safety climate (Phipps & Ashcroft, in press). Hence, McCann et al.'s findings are of relevance to the current discussion. There are, however, some inconsistencies between the current study's findings and McCann et al.'s: the latter found that, in general, higher stress ratings are reported by community pharmacists than hospital pharmacists, and that managers report lower stress levels than non-managers. The qualitative data from the current study also suggest that particular workplace stressors, such as a lack of breaks, are more prevalent in community pharmacy, while the authors' previous study (Phipps et al., 2010b) suggested that community pharmacy might

present a higher risk because of the increased isolation and less robust risk management systems (which, though, should be contrasted with the lower clinical complexity of much community pharmacy work). However, the quantitative ratings from the current study suggested that, on some measures, hospital pharmacy was a greater risk than community pharmacy. In addition, some risk factors were higher for managers than non-managers. The prima facie interpretation of these findings is that it might be difficult to make any gross generalisations about the difference in risk between community and hospital sectors; in simple terms, each has its own risks. Indeed, the generally low effect sizes in all of the comparisons (as indicated by the high Wilks' values on the MANOVA tests) suggests that the differences in ratings are, while statistically significant, rather subtle; hence, the level of risk on these measures is similar across the workforce, albeit with some noticeable patterns for particular employment characteristics.

The implications of this survey, then, are in its identification of specific areas of risk in pharmacy practice. Pharmacists in patient-facing roles and returners to practice may require particular attention, both in revalidation and in the provision of resources for personal support and development. Also, pharmacists who work in environments with high workload and low support (that is, provisions such as staffing, supervision, and breaks) are likely to be at high risk. While the latter appear to be most prevalent in large community chains, they can occur in all types of pharmacy setting. Furthermore, there is a need to monitor the presence of specific risk-related behaviours, most notably working excessive hours, and consider measures to reduce their occurrence.

3. Registrants' changes in practice

3.1 Introduction

While little is known about risks associated with changing practice in pharmacy settings, there has been a considerable amount of research in nursing and midwifery, and a smaller amount of work in other healthcare professions. This possibly reflects the respective political and economic contexts; for a number of years, return-to-practice initiatives in nursing and midwifery have been promoted by the Department of Health (DoH, 1999), and remain pertinent given a shortfall in workforce capacity (DoH, 2007; Payne, 2010). The NHS Plan (Secretary of State for Health, 2000) suggests that return-to-practice initiatives would be of value to all healthcare professions, although it only makes reference to schemes in nursing and midwifery. However, the dentistry profession also has a long-established return-to-practice scheme, mainly in response to an increase in the proportion of the workforce that are women (McEwen & Seward, 1989; Heath, 2001; Seward, 2001; DoH, 2004b). These two main factors – the labour market and workforce demographics – have also been cited as drivers for return to practice schemes in medicine (Baker, Williams & Petchey, 1997; Baker, Batstone & Kisely, 1998; Carroll, Pengiran Tengah, Lawthom & Venables, 2007).

A number of themes can be drawn from existing research. Firstly, there are a variety of circumstances surrounding healthcare professionals' returning to practice or changing sector – the motivation for doing so, and the level of preparation, varies between individuals (Barriball et al., 2007; Grace, Korinek, Weitzel & Wentz, 2010). There was also variation in the resources available, with several practitioners reporting the lack of a clear pathway or framework to guide their return to practice (Gould, 2005; Sheppard et al., 2010). There are a small number of established return to practice programmes in different professions, ranging from mentoring schemes to formal courses (Muller, 2002; Firmstone, Bullock, Bedward & Frame, 2007; Amin, Martin, Turney, Gregory & O'Donnell, 2010). Studies of nursing returners suggest that, whether or not they have access to these programmes, the likelihood of their making a successful return depends on their being able to meet the requirements of the role, which in turn can depend on the level of support they have from peers or employers (Gould, 2005; Barriball et al., 2007; Asselin, Osterman & Cullen, 2006).

Drawing from these general themes, this section describes an investigation of return-to-practice and change of sector in pharmacy practice. The focus of the investigation is on the typical experiences of pharmacists preparing for and undergoing these processes, the issues that they encounter, and the implications for pharmacist risk management.

3.2 Method

The researchers sought to identify a purposive sample of pharmacists who were based in Northern Ireland and have experience of changes in practice. “Change in practice” was deliberately defined broadly; it includes any circumstances under which the pharmacist took a break from practice (for example, career breaks and maternity leave) as well as pharmacists changing from one sector of practice to another. The sampling frame comprised pharmacists who had themselves changed their practice, those who had supervised another pharmacist who had changed his or her practice, or those who have been involved in the preparation of pharmacists for a change in practice. Initially, specific individuals within this frame were identified through personal contacts of the project team and by consulting the PSNI register for recent re-registrants. Snowball sampling was then used to identify further individuals who matched the sampling frame. The composition of the sample is shown in Table 3.1.

Table 3.1 Interview participants

| <i>Participant</i> | <i>Details</i> |
|--------------------|---|
| 1 | Store manager, community pharmacy chain. Returned to dispensary work following a period in senior management. |
| 2 | Medicines management pharmacist, HSC Board. Managed a pharmacist who had returned from maternity leave. |
| 3 | Head office pharmacist, community pharmacy chain 2. Managed two pharmacists who had returned from career breaks. |
| 4 | Head office pharmacist, community pharmacy chain. Took a career break overseas. |
| 5 | Primary care pharmacist, HSC Board. Previously taken periods of maternity leave. |
| 6 | Prescribing advisor, HSC Board. Previously transferred from hospital pharmacy, and also taken maternity leave. |
| 7 | Staff member, PSNI. Involved in the registration of PSNI members. |
| 8 | Head of Pharmacy, HSC Trust. Supervised pharmacists who had transferred from community pharmacy or taken a career break. |
| 9 | Provider of training for pharmacists returning to practice. |
| 10 | Hospital pharmacist. Took a short career break before returning to practice. |
| 11 | Teacher practitioner in community pharmacy. Previously taken periods of maternity leave. |
| 12 | Director of pharmacy, HSC Board. Supervised pharmacists transferring into or out of primary care pharmacy. |
| 13 | Primary care pharmacist, HSC Board. Previously worked in community pharmacy. |
| 14 | Primary care pharmacist, HSC Board. Previously worked in hospital pharmacy. |
| 15 | Medicines management advisor, HSC Board. Previously worked in a different role for the same organisation before taking maternity leave. |
| 16 | Locum community pharmacist. Took a career break overseas immediately after first registration. |
| 17 | Research practitioner, hospital pharmacy. Took maternity leave, a career break and changed sector of practice |
| 18 | Primary care pharmacist, HSC Board. Previously worked in hospital and community pharmacy and taken a career break |

Each participant was invited to take part in a telephone-based interview, which covered the topics shown in Table 3.2. Each interview was recorded and transcribed for

subsequent analysis. Ethical permission for the interviews was granted by the National Research Ethics Service.

Table 3.2 *Topic guide*

-
1. What was your experience of returning to practice / changing sector?
 2. How long were you out of practice?
 3. How much experience had you had of the sector to which you moved?
 4. Did you do any preparation for returning to practice / changing sector? If so, what did you do?
 5. Did you access any support? If so, what type of support and how useful was it?
 6. What makes returning to practice / changing sector easy?
 7. What makes returning to practice / changing sector difficult?
 8. What issues did you have in managing a pharmacist who had returned to practice / changed sector?
 9. What would you like to see in place to support a pharmacist returning to practice / changing sector? What training needs do you think there are for pharmacists in this position?
-

The interview transcripts were analysed using template analysis (King, 1998). Template analysis is an inductive process, in which the analyst initially reads through the data and creates a hierarchical “template” of the themes that emerge from this reading. The analyst then uses this template to guide successive readings of the data, on the basis of which the template is modified until it provides a sufficiently inclusive account of the data. For this study, the interview topic guide (Table 3.2) was used as the basis for the initial template. The lead researcher (DLP) developed the template using the interview data. The final version of the template was reviewed by other members of the research team, and is summarised in Table 3.3.

Table 3.3 Summary of results

| <u>Theme</u> | <u>Subthemes</u> |
|---------------------------------------|---|
| Circumstances of a change in practice | Changing job roles Relocation Travelling Maternity leave / parenting Illness Organisational restructuring Retirement / coming out of retirement Redirecting one's career |
| Preparation for a change in practice | Continuing professional development Job shadowing Updates / familiarisation Job preview Networking Formal versus informal arrangements Done on own initiative Time limitations |
| Facilitators of a change in practice | Flexibility Support from employer and colleagues Availability of information Familiarity with the work |
| Barriers to a change in practice | Being "thrown in at the deep end" Knowledge gaps Lack of confidence Employer attitudes |
| Training and development needs | Situation, person and role specific Continuing professional development Skills assessment Competency framework Training courses On-the-job training Mentor / facilitator Community of practice Revalidation Involvement of employers / Society |

3.3 Results

3.3.1 Circumstances of a change in practice

There are a range of situations which can culminate in a practitioner making a change to his or her practice. In some situations, the practitioner has some choice over the decision to make a change, while other situations can dictate that a change is made. They include issues arising primarily from the practitioner's work itself, such as organisational changes or a desire to redirect one's career, and ones that originate from non work-related issues, such as illness or geographical relocation.

I [...] worked as a pharmacist in [Britain] for a number of years. [...] Came back to Northern Ireland [...], and went through a number of store management roles. [...] Then went into [...] a series of non-practising roles over a good number of years. [...] Fundamentally, I was still [...] dealing with the nuts and bolts of pharmacy, albeit at arm's length. [...]. And then decided to come back out of that, and into pharmacist store management. [...] So [...] I would guess, about 14, 15 years away from the pharmacy bench. [Participant 1]

I currently work as a prescribing advisor at the Health Board. [...] Prior to that I had spent approximately 15 years as a hospital pharmacist [...]. After starting this post, [I took] maternity leave and a return to service. [Participant 6]

[I supervised] somebody who'd changed sector from community to hospital practice [following a two year career break]. [...] She'd never worked in hospital pharmacy [before], and she was actually quite a junior pharmacist, only really had been qualified two or three years when she left community to have her children. [Participant 8]

More frequently now we're seeing people who have [...] sold pharmacy businesses, gone off to play golf and top up their sun tan and then got bored because their kids have got older and [...] they don't know what to do and they think, well, do you know what? I'll go back and do that pharmacy thing [Participant 7].

I had always been hospital based, but I felt after 17 years [...] I was getting into a bit of a rut. I was doing the same thing every day, and there wasn't a lot of variation in it, and it was quite stressful because we never seemed to have enough staff [...] and it was just time for a change, really. And it was opportune because my second child was born, so that gave me a chance to redirect what I was going to do. [Participant 14]

When you have a baby you still have time to yourself because you would have maybe going to bed early but when you've older siblings [...] [it is] more difficult. You sort of do [...] things when you're off, but [...] I wouldn't have had the time to do any type of CPD [during my maternity leave]. [...] But a lot happens in [six months] and it would be useful to do [some preparation] [...] I know a lot of people who now are taking a year off for maternity leave. [Participant 5]

When you're on maternity leave [...], you're exempt from CPD or it's done on a pro rata [...] and I think that's encouraging you not to stay up to date while you're off. [...] I mean, I have a child and I [kept my CPD] up to date when I had her, so I don't think it's an excuse. Sickness is a more difficult thing to address because you could be so ill, or you could be in an accident or whatever happens to you, you're [might not be] able to keep up to date for a certain period. So [...] should you be penalised for that? But how on earth could you write all those different scenarios into legislation? So...or into requirements by the Society, it would be quite difficult. [Participant 17]

These excerpts illustrate the variety of circumstances described by the interviewees. They reflect a general trend across healthcare and non-healthcare professions; that is, a mix of career "orientations" amongst the workforce (Gerber et al., 2009). These orientations include traditional career pathways that involve long-term commitment to one role or organisation, so-called "boundaryless" and "Protean" orientations (Arthur, 1994; Hall, 1996) that involve moving between several job roles or organisations, and "disengaged" orientations that are characterised by little interest in career development. The different orientations could be associated with general demographic characteristics, or more likely, particular motivations or life events (Carroll et al., 2007; Waters, 2007; Smith-Ruig, 2008). Previous studies of healthcare practitioners returning to practice have identified several reasons why they may do so: a renewed or continued interest in the work of the profession; a change in domestic circumstances; financial need; to validate one's self-identity; or a desire for increased social interaction (Sheppard et al., 2010; Barriball et al., 2007; Asselin et al., 2006; Bram, 1995). Possibly there are also other, more implicit, benefits to be gained from resuming or changing work (e.g. Warr, 1987).

Hence, any policy to manage changes in practice needs to accommodate various motivations, levels of experience and working arrangements (Shaw, Taylor & Harris, 2000; Guest, Budjanovcanin & Oakley, 2008a). In some cases, the pharmacist will bring a good level of up-to-date and relevant knowledge to the new or resumed role. In other cases,

this knowledge may not be present, or it may be out of date. However, it may not be immediately obvious which is the case. For example, if a pharmacist resigns from the register and then reapplies following a period of working abroad as a pharmacist, to what extent has he or she actually taken a career break? How would this situation compare to one in which someone has remained on the register for a similar length of time but not actually worked as a pharmacist? Furthermore, as has been noted in nursing (e.g. Bullen, 2003; Payne, 2010), one source of difficulty for returners can be the need to juggle career and home commitments. As Participants 5 and 17 argue, the challenge is to create a system that sets adequate standards for fitness to practice but that can be applied fairly to pharmacists in a variety of circumstances.

3.3.2 Preparation for a change in practice

Not only do the circumstances of changes in practice vary, but so too do the ways in which pharmacists prepare for a change or develop competence once in post. Hence, there was no “standard” process as such. Instead, most participants referred to a combination of bespoke and informal arrangements with employers and occasional participation in formal programmes. Some returners, for example, voluntarily engaged in continuing professional development or training courses, while others made use of personal contacts to discuss recent practice developments or arrange a period of work shadowing. The choice of methods was influenced in part by the length of time that the pharmacist has been away from practice, whether he or she was returning to the same role or a different one, and the pharmacist’s perceived need to undertake some form of preparation.

I guess there was a point where [...] I was doing so much [...] I [needed to] know about needle exchange, [...] supervised administration, [...] smoking cessation, whatever. [...] Every evening, you were coming home to another [...] two or three hours of reading up on stuff. But [...] I absolutely couldn't deny that was the stuff of CPD because I needed to know it and I needed really to know it yesterday, because I was already practising it. [Participant 1]

She would have been contacting the rest of the team, just on a social basis, and then obviously getting a bit of a catch up as to [...] what was happening work wise, not [I] suppose the day to day, but [...] policy change, and developments [...] so she would haven't come back completely cold. Because [...] we're a small team, the personalities are right for that. It worked very well. In a bigger team with more formal structures it probably wouldn't have worked so well, and you wouldn't have had that sort of personal contact. [Participant 2]

She had contacted [the PSNI and the NICPLD] and [...] they'd given her some advice on things that had changed in the last few years. [...] There had been a discussion about running a return to practice day in Northern Ireland. The issue being of course, we're a very small workforce here, and they didn't know whether it would be actually financially viable for a very small number of people. But [...] they got a few people together and [...] did run a day for these folks. [...] She [then] came to work for me free of charge [...] just for the experience. [...] We put together a programme for her in the hospital [...] a bit like [the] programme that we would've had for our pre-reg's [...] in the dispensary and at ward level. [Participant 8]

There's not a hard and fast rule, certainly nobody would be allowed to come back onto the register without having done some training under a currently registered pharmacist, but they certainly don't dictate whether two weeks is enough or whether you want to do six weeks, that's entirely up to the individual. Some people obviously may feel they're ready to come back sooner than others. [Participant 3]

At the moment, the legal framework is such that if you've got the qualification, you've got the residency [...] I must put you onto the register again. What you should think about [though] is your competency and your ability to practice, so I can put you on the register. [Participant 7]

These excerpts suggest that much of the preparation is done on the initiative of the registrants themselves, either with or without external support. For example, Participant 1 was able to rely on her CPD activities to prepare her for a return to the dispensary. The situations described by Participants 2 and 8 illustrate the interplay between informal and formal arrangements, with registrants drawing resources from personal contacts, the regulator, employers, and training providers. They also illustrate a recurring theme across the interview data: the role of social and professional networking in obtaining support for the change in practice process. This is an observation that has been noted in previous research on careers (including nursing: Watson, Andrews & Manthorpe, 2004), although the exact ways in which networking contributes to career development are not yet fully understood (Arnold, 2011).

The last two responses reveal a discrepancy of views with regard to what controls are in place for pharmacists returning to practice from a career break. While the head office pharmacist (Participant 3) believes that the regulator requires re-registrants to demonstrate that they have undertaken preparation for return to practice register, the representative of the regulator (Participant 7) observes that there is no such requirement

in place. Again, this reflects a general theme across the data, and one that has been reflected in other healthcare sectors: a divergence of views about the pathway for returners and transferees, and indeed whether a pathway exists at all.

3.3.3 Facilitators of a change in practice

The interviewees referred to a number of factors that contributed to a successful change in practice. These included being kept up to date with the developments in the pharmacy profession, for example service delivery and the introduction of new drugs or treatment guidelines, and having opportunities to familiarise oneself with required technical skills whilst being supervised.

I had never done [primary care] work before. I'd worked in the hospital [...] for about 17 years, and it was sort of specialised, [...] aseptics, antibiotics and chemotherapy, so I had practically no experience of working with GP practices. [...] [The training course] did a lot about looking at [GP's] prescribing data, and that type of thing, how to analyse prescribing data and look to see where savings could be made or improvements could be made. And they also had a practice pharmacist come in and talk to us on a couple of occasions, so they gave us the practical view of it. So it was all very useful. [Participant 14]

When I started at the Health Board I got lots of opportunity to job shadow people [...]. They [...] offered to come with me when I first went out to GP practices. There was a lot of training. It was a good team to work in, they had good communication. They had a lot of team meetings that allowed you to ask questions and to just generally raise any concerns. So I found the transition very easy and very well supported. [Participant 6]

You can't have everyone sorting out your own learning for you; you have to be a bit proactive and work out what you need to know yourself anyway, so I don't necessarily know if that's really a problem. But I didn't find the transition difficult. You know, I was only away for six months so I'm sure if it was a longer period it would be harder. [Participant 10]

There hasn't been any great keenness from [...] the bigger employers, to [offer] work shadowing positions. Although there are some [who ring] me and [say] you know, there's somebody who was at college with me who I know is fab, or whatever, they want to come in and work shadow with me, is that okay? [Participant 7]

Confidence [...] seems to be the main issue that pharmacists have, I think it's the degree of isolation as well, so if they return to practice and they are unsure on that first day in practice,

[...] in many cases, they don't have anyone to turn to. [...] So, I suppose what we're doing is to try and ease people [...] back into practice via [a] protected learning environment so that when they do finally go back into practice and [...] they have complete responsibility for the pharmacy, it hasn't been their first time back in the pharmacy, they've had that, if you like, degree of mentorship to build their confidence. [Participant 9]

Participants 14 and 6 note the support provided by their employers; a job-specific training course in Participant 14's case, and mentoring for Participant 6. In the authors' previous work (Phipps et al., 2010b), a lack of self-awareness appeared to be associated with an overconfident attitude on the part of the pharmacist; that is, the ones who had an unrealistic level of belief in their ability to deal with tasks were considered to be the ones who would likely fail to recognise the limits of their knowledge. Hence, it is noteworthy that Participant 9 considers the main need for delegates on his course to be improving their confidence to practice autonomously, and that Participant 10 talks about the need to be proactive. It might be presumed that, all other things being equal, those registrants who do engage in some form of preparation for return-to-practice are less risky than those who do no preparation. This is because they have either recognised limits to their knowledge and have taken action either to address them, or arranged to be overseen by another pharmacist until they have identified and acquired the knowledge needed to resume practice.

3.3.4 Difficulties during a change in practice

Interviewees also referred to difficulties that can occur during a change in practice. These are largely the converse of the factors that facilitate the process – for example, they include a lack of employer or peer support and the failure to identify and address knowledge gaps. At best, they simply prolong the process or make it difficult to complete. However, they can, in some circumstances, cause the process to fail or create the opportunity for a patient safety incident to occur.

In hospitals [...] there's a support mechanism [...] it may not be officially recognised but the support happens. Whereas, in the community [...] you tend to be in an isolated profession [Participant 9]

An individual [returned from maternity leave] and we gave her a job share and she found it very difficult even to practice, and eventually she had to take a career break. And part of that was that we as an employer had to put her into a part of our pharmacy department that needed her

to take on a lot of different pieces of work. Because she'd been in [that part of the pharmacy] for two or three months before she'd gone, and we had a vacancy [there] [...] we thought well, she'll be picking up where she left off, whereas in reality she wasn't at all. [Participant 8]

One of the things that [had] changed in Northern Ireland, in terms of community pharmacy, was delivery of services. [...] It all makes perfect sense when you see it laid out. But [...] I [didn't] understand the mechanism of how they operate from beginning to end, and how the contractor gets remunerated. And [...] on day one, I didn't know I needed to know that. So that was a bit frustrating. You know [...] what it is you need to find out about them, then lo and behold, you stumble across a whole load of things that you never envisaged that you needed to find out about. [Participant 1]

I had a friend that was working at that time as the pharmacist, and she contacted me to let me know that [the course] was taking place, and she felt that I would be interested in it. [...] I think they would have been advertised to community pharmacists, but the fact that I wasn't working [...] left me out of the loop without any notification really, so I was glad when she told me [about it]. [Participant 14]

I started to shadow [in a pharmacy chain]. [However,] since I'm theoretically a pharmacist and had my registration number and everything else no-one knew how to take me because [the others] were all pre-registered [...] and I was actually made to feel as if I was taking up the time dedicated to them. [...] I was doing very well for about a month maybe and then [...] because I knew the system [...] I was thrown into [...] a shop one day, I had no back-up in the dispensing area, the computer was new to me and it doesn't matter what you know, if you don't have the skills... you know the theory but you can't do anything about it. [...] In those sort of situations if you don't have a good back-up this is where mistakes can come out. [Participant 16]

[The employer is] paying fifteen, sixteen thousand to the [pre-registration] graduate and the rest is absorbed as the training cost to the business. Effectively, their salary is being funded by the Department of Health and at the end of the day, if they're good, you have the option of keeping them as an employed pharmacist or [...] just doing it again with a new pre-reg. [...] [So] why would you take on a potentially rusty return to practice pharmacist who [...] is going to cost you lots of money to mentor in relation to time or just functionality and [then] may walk away and do something else? [...] [Also,] if they give advice or fail to give advice, who would be liable – are they working under my indemnity cover? [...] If this person's work shadowed in my pharmacy [...] then goes out and kills someone, is somebody going to come back to me and say, you said they were okay? [Participant 7]

Participant 9 suggests that support for pharmacists is more likely to be found in hospital than in community pharmacy, and indeed previous research suggests that hospital pharmacies are likely to have relatively well-established mechanisms for performance management (Phipps et al., 2010b). The example provided by Participant 8, though, is of a returner who found herself being “thrown in at the deep end” in a hospital post; although, in that case, the managers noticed that she was encountering difficulties and moved her out of the post. Incidentally, Participant 8 attributed the difficulties in part to the type of work that the pharmacist was asked to take on upon return. The authors’ previous work (Phipps et al., 2010b) has suggested that particular areas of pharmacy practice are intrinsically high-risk, and so these areas might be unsuitable for immediate returners unless appropriate supervision or support is available, or the returner is able to take a supernumerary role instead. Asselin et al. (2006) and Payne (2010) also noted that a lack of social and task support can impede return-to-practice.

Participant 14 notes that while she had been given access to a training course, this course had been identified on the initiative of a colleague rather than through an official source. Participant 1 mentions a particular problem that she encountered whilst familiarising herself with her new role: not only did she need to acquire the relevant knowledge and skills, but she had to identify what these actually were. In other words, she needed to “know what she needed to know”. This is of interest given the suggestion made previously by the authors (Phipps et al., 2010b) that pharmacists who did not possess this “meta-knowledge” were of greater risk, because of the likelihood that they would take on tasks they were ill-equipped to do.

Participants 16 and 7 allude to an attitudinal barrier to the reintegration of returners into the pharmacy workforce: employers might see them as a less desirable return on investment than pre-registration trainees. In a sense, it seems, returners could be regarded (rightly or wrongly) as either obsolete or not up to the standard that the employer assumed them to be. Possibly the returner can be “rehabilitated”, but employers might not be willing to invest the effort and resources to do so, nor to assume liability for any pharmacists under their tutelage. Gould (2005) also noted that employers may be put off by uncertainty about the capabilities of returners.

3.3.5 Training and development needs for a change in practice

Given the variety of circumstances surrounding changes in practice, and the variety in pharmacists, their job roles and their employers, it is difficult to be prescriptive about training and development needs. Some resources that already exist might usefully be adapted for pharmacists undergoing changes; for example competency frameworks, training courses, and continuing professional development.

I think it's very difficult to say one specific [requirement], because obviously everybody's job is different, but I do think that it would probably be a good idea to have some physical quality control, before people returned to work. [Participant 4]

As long as you actually do keep up with the journals and the various publications that come out, and also do your distance learning and keep up to date with any new drug releases and things like that it is actually fairly easy to come back with a bit of on the ground practical experience. [Participant 3]

We [provide a portfolio] with the competencies from the [...] Royal Pharmaceutical Society of Great Britain, in terms of what you would expect from a newly qualified pharmacist. We took that as a minimum standard [...] [However,] in five days you're not going to cover all of this meaningfully so [we] look at the areas where individuals felt they were weakest. [...] People are individuals, we didn't want to have a 'one size fits all' course. [Participant 9]

The basic framework could be the same [for all pharmacists] but I think there's certain individuals that need [...] more tailored aspects of the training. [...] [For example, when you see people are faltering [...] you know they have someone to come back to, [...] that knows about the problem and can [say] "Okay, we realise you need to spend more time in this, that your knowledge base is very good but your confidence with the customer, you need to spend a couple more months in this," [...] just allow people to be mentored the whole way down so that when they come out they're crack and ready to go. [Participant 16]

I think it would be useful [...] to have a study group, if you like, a follow up period when they're back in practice. [...] So, in some ways, rather than just studying information, it's more of a sharing of situations in terms of, you know, what did I find easy when I returned to practice? What did I find difficult? [...] I think [that] would be useful, as a follow up to your initial training. [Participant 9]

I'd like to see something in place that can be accessed any time. [...] Throughout any given year, somebody will want to return to practice, at any given time and a course, two days or whatever [...], at a certain time of the year may not match in. What can be there for you to get you back to practice when you need to return to practice? [...] [But then,] how can we justify investing and getting those structures in place? Those are the structures you'd like to see in place but are they actually going to happen? What can we actually afford to have in place? [Participant 17]

My concern is [the] sizeable number of people who remain on the register [during a career break], so they're actually dipping in and out of practice without ever leaving the register. [...] I don't have any parameters that I can put on them at all and [...] part of me would like to work more with employers about how do you ensure yourselves that your staff are competent. [Participant 7]

These comments point to a range of measures that can be taken to ensure the successful (re)introduction of pharmacists to a work setting; notably, these potentially involve the pharmacists themselves, their employers and the regulator. Participant 4 suggests an (unspecified) assessment of fitness to practice. In the absence of employers' own assessments, a standardised method could be designed for all returners or transferees. An example of the latter is the physicians' objective clinical skills assessment described by Grace et al. (2010), which comprises an interview, in-tray exercise, role-plays and a psychometric test. However, no such scheme currently exists for Northern Irish pharmacists and it is by no means certain that creating a bespoke scheme would be cost-effective.²

Participant 3 suggests that the use of CPD, supplemented by on-the-job training, is sufficient to prepare pharmacists for a change in practice. As described previously in this section, both measures were considered by other participants to be effective forms of preparation. The CPD system is already used by the PSNI, and so could provide an easily implemented assessment of fitness to practice. However, on-the-job training appears to be delivered in a more ad hoc manner than CPD, with some employers being less willing (or equipped) to deliver such training than others, and no universally-adopted framework for organising and delivering such training. Some of the hospital pharmacies and large

² As described in Section 4, a similar assessment is used in parts of Canada for the revalidation of pharmacists.

community chains are likely to have both formal training and development schemes (for example, the General Level Framework, which was developed for secondary care practice but has also been trialled in primary care pharmacy: Mills, Farmer, Bates, Davies & Webb, 2008) and a large enough complement of staff to provide supervision to new or returning pharmacists. An alternative candidate for an off-the-shelf solution is the return-to-practice programme provided by the NICPLD.

Incidentally, Participant 3 also implies a need for pharmacists on a career break to keep their knowledge up to date in preparation for a return to practice. This observation has been alluded to previously in the current section; here, it is apposite to note the suggestion made by Bullen (2003) that recent clinical experience, involvement in continuing education, and awareness of practice developments should be prerequisites for admission to a midwifery return to practice scheme. Similarly, Yancy & Handley (2004) surmised on the basis of a small-scale survey that nurses who have had a substantial period of clinical experience prior to a career break are more likely to make a successful return than those who have not.

The suggestions made by Participants 16 and 9 reflect the theme highlighted earlier of interpersonal relationships as an aid to career development. Firstly is the nomination of a mentor or a point of contact to guide the pharmacist through the process of changing practice. As indicated previously, the presence of a contact already within the place of work can facilitate the process, and evidence from dentistry and midwifery highlights the value of pastoral support for returners (Bullen, 2003; Firmstone et al., 2007). Secondly is the formation of a peer support group for collaborative learning. Such a group could provide an environment for pharmacists undergoing a change in practice to share experiences and knowledge, and foster participants' sense of professional identity as a pharmacist through interaction with others in their profession (in other words, it can function as a "community of practice": Wenger, 1998).

One consideration raised by Participant 17 is the irregularity of pharmacists transferring roles or returning to practice; unlike the pre-registration graduates, they do not come as a single, large cohort. Hence, it is preferable for learning resources to be accessible at any location and time. Study groups and mentors would fit this criteria, as would self-directed study resources such as asynchronous online training (Bullen, 2003; White, Roberts &

Brannan, 2003). However, traditional training courses that follow a fixed timetable may be less suitable for pharmacists changing practice. One option could be to provide a combination of these delivery modes and study resources, much like the return to practice course run for general practitioners in the West Midlands region of England (Muller, 2002). This course is also noteworthy for the breadth of its syllabus; it aims to cover not only the technical skills required for the job, but also “non-technical” material such as self-directed study skills and knowledge of the primary care sector, thus providing delegates with the ability to manage their own career development subsequently. The self-confidence and capacity for self-reflection that is presumably developed from such training can be important for returners (Asselin et al., 2006).

While CPD and training have been suggested as ways of ensuring that pharmacy returners and transferees are fit to practice, Participant 7 alludes to a group of pharmacists mentioned earlier: those who take career breaks but remain on the register while doing so. Such pharmacists may not come to the attention of the regulator if they are maintaining their CPD. Hence, there is a need to consider whether CPD will suffice for ensuring that returners and transferees are fit to practice. While CPD confirms that registrants are conducting activities to keep their knowledge up to date, it may be the case that a comprehensive, periodic assessment of basic skills is required, especially for registrants who have not been practising continuously. Hence, a periodic revalidation of fitness might be considered a suitable complement to the CPD scheme.

Finally, Participants 17 and 7 raise the question of who should take responsibility for developing pharmacists who are changing practice. As intimated earlier, an investment of time, effort and finance is likely to be required. Potentially, this could come from the Society, from other professional organisations, from employers, from individual registrants, or from all of these sources. However, as suggested earlier, the current labour market for pharmacists in Northern Ireland appears to be less favourable than that for those healthcare professions that have had greater exposure to change in practice schemes. In addition, the economic argument made for supporting return-to-practice schemes in other healthcare professions – that it maximises the return on the investment made in practitioners’ initial training (Baker et al., 1997; 1998; Amin et al., 2010) – carries less weight in community pharmacy, where employers do not necessarily fund the initial training. Hence, it may be difficult to convince many of the pharmacist interest groups that

there is merit in investing en masse in the development of pharmacy returners and transferees, even if they are willing to do so on an ad hoc basis. Guest, Budjanovcanin & Oakley, 2008b) predict that, in Britain, some areas of pharmacy practice will experience a shortage of pharmacists (specifically, large community chains and schools of pharmacy), while others will have a surplus. This would lead to some demand for returners or transferees. However, these projections predate more recent economic and political changes that affect the provision of health services – for example, the abolition of primary care organisations – and, notably, they do not include Northern Ireland. In order to establish a case for employers contributing to formal return-to-practice or transfer schemes, it would be useful to model the supply and demand across the Northern Irish pharmacy workforce.

3.4 Discussion

This section has explored the issues associated with pharmacists returning to practice from a career break or changing sector, using the findings from an interview study. A number of key points have been identified with regard to risk management. Firstly, changes in practice are likely to occur under a range of circumstances, with some pharmacists being better prepared for the change than others. Hence, there is a need to take into account the variety of situations in which a pharmacist returns to practice or takes a career break when formulating managerial or regulatory policies. Secondly, the activities, events and resources involved in the actual change can vary, with some pharmacists having access to many development opportunities and others having access to few or none. It would be useful to consider whether the pathways available for pharmacists changing practice should be more clearly defined, and whether resources should be made more widely accessible to support pharmacists undergoing these processes.

Some specific factors that can facilitate or impede a change in practice were identified. Generally, those who have support from peers and employers, and who are proactive in developing themselves, are most likely to succeed. Conversely, pharmacists who lack both personal knowledge and skills, and support from others, are likely to encounter difficulties; where they are put into roles for which they are unsuited without support or supervision, these difficulties could manifest themselves in patient safety risks.

Finally, a number of measures were suggested to increase the chances of a safe and successful return to practice or change of sector. These include: the use of existing profession-wide resources such as CPD; the more widespread use of other resources such as return-to-practice courses and mentoring; the development of new resources such as study groups and on-line training; and more explicit involvement of the regulator, employer, other pharmacy stakeholders and individual registrants in the development of returners and transferees.

4. Towards a model of risk-based revalidation

4.1 Introduction

The previous two sections have described the empirical work carried out as part of the investigation into risk-based revalidation. Section 2 described a survey of registered pharmacists in Northern Ireland. The key findings of this survey were that, while the risk factors were largely similar across the Northern Irish pharmacy workforce, there were some groups that warranted closer scrutiny; namely, pharmacists working in patient-facing roles and pharmacists returning to practice. In addition, it is important to consider the nature of registrants' work environments, with those imposing a high workload with inadequate task-related or personal support, and those requiring the registrant to work for excessive hours, being likely to be the highest risk.

In Section 3, a specific regulatory concern – registrants returning to practice or changing sector – was explored in depth. This found that, while registrants needed to take responsibility for maintaining their fitness to practice, the risks associated with return to practice and change of sector could be reduced with support from peers, employers, training providers and the regulator.

This section begins by reporting on a workshop conducted with a consultation group of pharmacy stakeholders in Northern Ireland. This workshop draws together the themes developed in the previous sections, and indicates ways in which the work described in those sections might impact on pharmacy practice. Following the workshop report, the section concludes by proposing options for how risk-based revalidation might be carried out by the PSNI.

4.2 Stakeholder workshop

4.1.1 Method

In considering the implications of the study findings for policy and practice, the researchers wished to confer with representatives of the Northern Irish pharmacy workforce. Therefore, a full-day workshop was convened in Belfast, with the objective of reviewing the study findings and generating recommendations for risk management and risk-based

revalidation. Delegates were selected using purposive sampling to obtain as broad as possible a representation of pharmacy practitioners, managers, professional body representatives and regulators. In addition to the delegates, three members of the research team (DLP, DA and PRN) were present and acted as facilitators. This workshop was attended by 32 delegates, who together represented the following stakeholder groups:

- PSNI, including both pharmacist and lay staff;
- DHSSPS;
- National Pharmacy Association;
- Pharmaceutical Contractors' Committee;
- Ulster Chemists' Association;
- Guild of Healthcare Pharmacists;
- HSC Western Trust;
- HSC Belfast Trust;
- HSC South-Eastern Trust;
- HSC Board;
- Independent community pharmacies;
- Boots;
- Medicare Pharmacy Group;
- Queen's University School of Pharmacy;
- Ulster University School of Pharmacy;
- NICPLD.

During the workshop, the facilitators gave three presentations. The first outlined the concept of risk-based revalidation, while the second and third focused on the findings of the survey and interview study respectively. The latter two presentations were each followed by discussion groups, in which the delegates were invited to consider a set of key questions identified by the facilitators (see Table 4.1). The delegates were divided into three groups for the purposes of the discussion, with each group comprising a mix of roles and including one of the facilitators. Each group summarised the outcome of its discussion on a flipchart, which was then presented to the remainder of the delegates in a plenary session to stimulate further reflection and discussion.

Table 4.1 Discussion points for the workshop

Session 1: Risk-based revalidation and survey of risk factors

1. How effective are the current arrangements for managing risk in the pharmacy profession?
2. What would you expect risk-based revalidation to achieve that the current (CPD-based) arrangements do not achieve?
3. Is a different approach needed? If so, how should it be delivered?

Session 2: Return to practice and changing sector of practice

1. How should registrants prepare for return to practice or a change of sector?
 2. Are the risks associated with return to practice recognised?
 3. What requirements, if any, should be set for pharmacists returning to practice or changing sectors?
-

4.1.2 Findings from the workshop

Following the workshop, DLP transcribed the flipchart notes and organised them into superordinate themes, which were reviewed by DA and PRN. The definition of themes was guided both by the work described in the previous sections of this report and by the researchers' previous research on pharmacy risk assessment (Phipps et al., 2010b); in addition, contemporaneous notes taken by all three facilitators were used to assist in interpretation of the flipchart content. The themes used to summarise the delegates' discussions are described in the following paragraphs.

Expectations for risk-based revalidation. The delegates felt that a revalidation scheme could potentially be used to manage pharmacy risk. They envisaged a scheme that required registrants to demonstrate competency for their roles against defined standards of practice. It would acknowledge the level of risk present in different pharmacy roles, and that risk in pharmacy extended further than dispensing errors. For example, it potentially needs to take account of risk at three levels: risk associated with the practitioner; risk associated with the organisation in which the practitioner works; and at times, risky tasks that the practitioner may undertake. Furthermore, it would complement or incorporate existing regulatory approaches, such as CPD and pharmacy visits, and potentially solicit input from employers (for example, by using information from their performance appraisals of staff). Other methods for revalidation could include skills assessments such as objective structured clinical examinations.

Use of CPD. As a CPD scheme is already used by the PSNI and is a condition of registration, this could provide the basis for a revalidation scheme. For example, as mentioned previously, CPD portfolios could be assessed or peer reviewed as part of a revalidation exercise. However, the delegates noted that, in order for CPD to be used effectively for risk-based revalidation, it needs to be explicitly linked to risk management. In practical terms, CPD activities should be related to risk reduction, encourage reflection on this issue, and be assessed against explicit standards of practice.

Return-to-practice and change of sector. There were divergent views about the significance of career breaks and movement between sectors from a regulatory perspective. Some delegates suggested that a framework for these processes, clarifying the responsibilities of employers, individual registrants and the regulator, would help to minimise any associated risks. In addition, they echoed the suggestions made in the previous chapter that the provision of learning resources, such as training courses, CPD programmes and IT-based material, plus a mentoring or facilitator scheme, would be useful. However, some delegates queried the definition of a “career break” from a regulatory perspective, noting that the career breaks of different individuals may not be directly comparable due to the activities that take place during each. For example, during a break of a given length one registrant might be parenting or travelling full-time, while another might be practising outside of Northern Ireland.

Cost implications. With regard to return-to-practice and change of sector schemes, delegates raised the concern of funding and queried who should be remunerated and by whom for supporting these processes: individual participants; the PSNI; the employer; or all three? While concerns about cost were only explicitly mentioned during the second discussion exercise, they would equally apply to risk-based revalidation in general (cf. Phipps et al., 2010b).

Division of responsibility. Again in both exercises, delegates raised the issue of how responsibility for managing risk should be divided. A general sentiment was that risk is a product both of pharmacists and of work systems, and as such both pharmacists and their employers have a responsibility with regards to reducing risk. Some delegates pointed to the quality management systems in hospitals, which include monitoring, audit,

performance appraisal, and, at times, competency tests. Specifically with regard to return-to-practice and change of sector, some delegates argued that individual registrants had a professional responsibility to ensure that they maintained fitness to practice³, and that it was also incumbent to employers to ensure that they had competent staff. Some further queried whether the role of the regulator in such situations should be to provide guidance rather than regulatory protocols. Their comments echo in part sentiments expressed in a recent white paper on healthcare regulation, which acknowledges that as well as the regulator, individual practitioners, their peers and colleagues and their employers have a role to play in ensuring safe practice (Secretary of State for Health, 2011).

4.1.3 Summary

The workshop provided a means of reviewing the findings from the previous chapters with an audience that was representative of the pharmacy community. A number of themes emerged from the workshop discussions. These both confirm and elaborate on some of the issues identified from the survey and interviews. The remainder of this chapter will focus upon the insights obtained from the survey, interviews and workshop to suggest an approach that can be used for risk-based revalidation.

4.2 Proposed models for risk-based revalidation

From the foregoing material, two main requirements for risk-based revalidation can be identified. Firstly, it needs to incorporate different types of risk; while the stereotypical risk is dispensing errors, there are other ways in which harm may result from pharmacist activity, for example by professional misconduct (Phipps et al., 2010b). Secondly, while possibly introducing new processes, it should make effective use of existing assessment and development resources, for example continuing professional development and employer appraisal.

CPD-only scheme. One approach that could be taken is to revise PSNI's existing CPD scheme. This approach would be consistent with the proposal already made by the PSNI for a revalidation scheme, in which CPD is the main vehicle for assessment of pharmacists but is supported by candidate self-certification, and a review by the regulator, against

³ This argument has also been made with respect to other healthcare professions (e.g. Bram, 1995). Perhaps the issue of contention in the current study is: how much support should registrants have from other parties, such as employers, locum agencies, or the regulator?

performance criteria. An advantage of this approach is that CPD is already well established in the PSNI. However, some concerns have been noted about the scheme in its current form, both in the current study and in previous research. A survey by Haughey, Hughes, Adair & Bell (2007) found that the majority of their respondents supported the idea of CPD, and about half supported a mandatory CPD scheme, but that fewer respondents supported the idea of sanctions for non-participants and fewer still themselves maintained a CPD portfolio. (This survey predated the formal introduction of mandatory CPD). As mentioned previously in this section, several delegates at the workshop conducted during the current study noted that CPD was not linked to explicit standards of practice, and instead appeared to be an end in itself – that is, the purpose of the exercise appeared to be to complete the portfolio in the “correct” manner rather than to improve one’s competence. In addition, respondents to Haughey et al.’s (2007) survey identified, amongst other things, support from CPD administrators and from employers as a prerequisite for the successful implementation of a mandatory scheme. Perhaps the absence of the latter in particular contributed to the belief of community pharmacists responding to McCann, Hughes et al.’s (2009) survey that the CPD scheme contributed to work-related stress.

At this point, it would be apposite to consider a recent study conducted for the RPSGB, which investigated the utility of CPD in the context of revalidation (Donyai, Alexander, Denicolo & Herbert, 2010). This study found that:

- Levels of engagement with CPD varied across the profession;
- There is a need to identify and remove barriers to engagement with CPD, which include a lack of clarity about the process and outcome of the process and the lack of protected time to complete CPD records;
- For revalidation standards to be of use, they should be easily understood and applied, and have a clear link to relevant outcomes (e.g. risk reduction);
- Using a framework to guide the preparation and assessment of CPD entries improved their usefulness for revalidation.

Hence, if the CPD scheme is to be adopted as the main vehicle for revalidation, then there are two areas in which it should be developed. Firstly, additional support could be provided to participants, in terms of both guidance on what is required. Secondly, the scheme, and the activities required to succeed in it, could be more explicitly aligned to

performance criteria. Some examples of criteria that could be used will be suggested later in this section.

CPD plus competency assessment. An alternative proposed scheme is based on the pharmacy quality assurance programme in Ontario (Austin et al., 2003). In this programme, shown in Figure 4.1, all registrants declare themselves to be either practising or non-practising. In the UK, the Health Professions Council has a broad definition of “practising”, which includes research, teaching, voluntary work and any roles that make use of practitioner skills (HPC, 2008). However, in the context of pharmacy practice (and especially given the findings of the survey study in this project) it might be more appropriate to define “practising” more narrowly, for example restricting it only to those who provide services directly to patients (Austin et al., 2003). All registrants are required to maintain a CPD portfolio and make this available to the regulator for review when requested. For registrants on the non-practising register, this is the only requirement placed upon them. However, those on the practising register are also eligible for a periodical, more intensive assessment. Each year, 20% of these registrants, randomly sampled, will be invited to undertake a “Phase I” assessment, in which they complete a self-assessment (to identify existing knowledge, skills and areas for further development) and a summary of their CPD portfolio. Of those registrants who are selected to undertake Phase I, 15% – again selected at random – are asked to undertake a further “Phase II” assessment. This involves an open-book exam testing knowledge, an OSCE-style role-play assessment, and a group seminar in which participants present their CPD portfolios for peer discussion.

On the basis of the CPD review, the Phase I or the Phase II assessment (whichever is the end point for the registrant), the registrant will either be revalidated for further practice or, if necessary, referred for remedial action. The latter could include any or all of training, mentoring, supervised practice or reassessment. Only in the event of remediation being unsuccessful at bringing the registrant up to a suitable standard of practice would the registrant be suspended or removed from the register. Hence, the emphasis is on bringing registrants up to an acceptable standard of practice rather than on finding opportunities to “weed out” registrants.

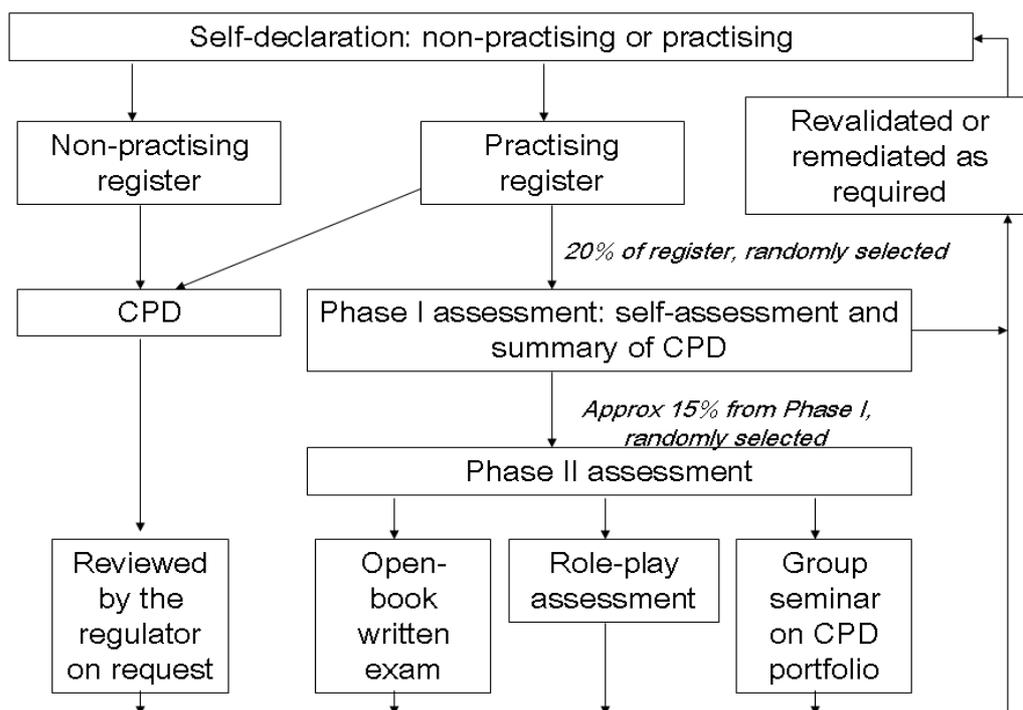


Figure 4.1 Ontario pharmacist quality assurance programme (Austin et al., 2003)

The non-practising register could be used as a way of allowing registrants to maintain their registration when not actively practising. In the Ontario programme, registrants are required to have worked in a patient-facing role for a minimum of 600 hours in the previous three years in order to be eligible for the practising register, while the Pharmacy Board of Australia (PBA, 2010) set the requirement at 450 hours with no change of sector (in both cases, there are no additional requirements about the spread of these hours – for example, a maximum number of hours per month – but one could be made if required). A similar criterion could be used for the proposed scheme. Hence, pharmacists who wish to take a career break could be given the option of either maintaining a minimum number of hours, transferring to the non-practising register and maintaining a CPD portfolio only, or de-registering completely. Returners who wish to return to the practising register would be required to spend a period of time building up the requisite hours under supervision before declaring themselves as practising. A requirement could also be put in place for registrants changing from a non-patient facing role to a patient-facing one to spend a similar period of time undertaking supervised practice in the sector to which they wish to transfer. In the Australian scheme, registrants moving onto the practising register are eligible for an assessment similar to the Phase II assessment in the Ontario programme immediately upon transfer.

The Pharmacy Council of New Zealand (PCNZ, 2007) has set a requirement for any pharmacists who have not practised in New Zealand for more than three years and wish to resume practice to undergo a return-to-practice course, provided by the Council, in addition to competence assessment and a period of supervised practice. The Health Professions Council (HPC, 2008) have recommended that practitioners who take a career break of 2-5 years undergo 30 days of skills updating, with 60 days for those who have taken a longer career break. Should a requirement for training be adopted by the PSNI, the content and delivery of this training could be based on the existing return-to-practice course provided by the NICPLD. Chapter 3 emphasised the importance of workplace mentoring, study groups and distance-learning as in addition to traditional classroom-based training. Also, the GPs' return-to-practice course described by Muller (2002), with its broad syllabus covering study and career management skills as well as technical knowledge, could provide a source of inspiration for pharmacist training.

The proposed system has a number of advantages. Firstly, it provides an integrated process for pharmacists in a range of settings and employment circumstances, including returners and transferees. Secondly, it builds upon the already active CPD scheme. Third, it is a process that could potentially involve the employer as well as the individual registrant, while keeping the latter at the forefront of the process.

Incidentally, while the focus of revalidation is on individuals, there could additionally be a means by which the work environment can be taken into context. One way of integrating the work setting into revalidation could be to explicitly include work characteristics into any assessment. This is the approach taken in the revalidation model proposed by the Canadian National Association of Pharmacy Regulatory Authorities (NAPRA: Winslade, Tamblyn, Taylor, Schuwirth & Van der Vleuten, 2007); this suggests that pharmacy characteristics such as workflow, training and staffing should be assessed alongside the individual registrant. To achieve this objective, the proposed assessment takes a number of methods, including questionnaires, written and practical examinations, on-site assessment, and practice management assessment. Should the regulator wish to integrate revalidation of individuals with the pharmacy visit scheme, then NAPRA's model may provide a way of doing so.

General remarks. Earlier, the issue of defining standards of practice was raised. This is a point that applies whichever revalidation scheme is adopted. As examples of the standards of practice that could be developed, Tables 4.2 and 4.3 list those used by the Pharmacy Council of New Zealand and the Ontario College of Pharmacists in Canada. Both of these are high-level frameworks; for example, the standards listed in Table 4.2 are further broken down into activities that registrants should evidence in order to fulfil that competency. Some of the standards in Table 4.3 (specifically parts of standards 2, 5 and 6) are assessed not by CPD or competency-based examination but by pharmacy visits; hence, this framework integrates evaluation of the registrant with evaluation of the registrant's work environment (Austin, Marini, Croteau & Violato, 2004). Tables 4.2 and 4.3 have been provided here in order to stimulate discussion and reflection on whether a similar framework would be useful to guide the PSNI's registration and revalidation processes (see also Donyai et al., 2010).

Table 4.2 Standards used to assess pharmacist CPD portfolios in New Zealand (Pharmacy Council of New Zealand, 2011)

| Standard | Definition |
|----------|---|
| 1 | Practice pharmacy in a professional and culturally competent manner |
| 2 | Contribute to the quality use of medicines |
| 3 | Provide primary health care |
| 4 | Apply management and organization skills |
| 5 | Research and provide information |
| 6 | Dispense medicines |
| 7 | Prepare pharmaceutical products |

Table 4.3 Standards used to assess pharmacists registered in Ontario (Austin, Marini, Croteau & Violato, 2004)

| Standard | Definition |
|----------|---|
| 1 | The pharmacist, using unique knowledge and skills to meet a patient's drug-related needs, practices patient-focused care in partnership with patients and other health care providers to achieve positive health outcomes and/or to maintain or improve quality of life for the patient |
| 2 | The pharmacist practices within legal requirements and ethical principles, demonstrated professional integrity, and acts to uphold professional standards of practice |
| 3 | The pharmacist identifies, evaluates, interprets and provides appropriate drug and pharmacy practice information to achieve safe and effective patient care |
| 4 | While respecting the patient's right to confidentiality, the pharmacist communicates and educates to provide optimal patient care and promote health |
| 5 | The pharmacist, in collaboration with the designated manager or hospital pharmacy manager, manages drug distribution by performing, supervising or reviewing the function of selection, preparation, storage and disposal of drugs to ensure safety, accuracy, and quality of supplied products |
| 6 | The pharmacist applies knowledge, principles, and skills of management as they pertain to the site of pharmacy practice, with the goal of optimizing patient care and inter-professional relations |

The two models presented here provide alternative options for developing risk-based revalidation. They do have a common theme in that they both use CPD, although the emphasis given to CPD, and how it is used, differs in both schemes. In deciding which scheme to implement, the following issues should be considered:

- How *intensive* should the revalidation scheme be? The “CPD-plus-assessment” option is the more intensive of the two, as it requires a selection of registrants to undertake a comprehensive assessment as well as CPD portfolios;
- What is the *cost* of the scheme? CPD-plus-assessment is likely to be more costly, due to the need to design and run competency-based assessments. In addition, participants in the scheme would need to spend time to prepare for the assessment. Therefore, consideration would need to be given to who is expected to meet the costs of the scheme (for example: all registrants; only those registrants called for assessment; the employers) and what their contribution would be;
- What is the *benefit* of the scheme? Benefits could be framed in terms of accessibility to participants, contribution to their professional development, acceptability to other stakeholders (for example, pharmacist employers) and coverage of risk factors.

While two discrete alternatives have been suggested here, this does not preclude the use of elements from one or both of these schemes in a “hybrid” model. For example, a CPD-only scheme could also include a peer review exercise similar to that used in the Ontario programme. However, regardless of the elements included in a revalidation scheme, the issues identified in this section will be of importance when deciding on its design, content and implementation.

4.3 Summary

The workshop described at the beginning of this section provided an opportunity for the researchers to involve pharmacy stakeholders in a review of the study findings. During the workshop, a number of themes were identified, which reflect the findings of the previous sections and, in doing so, highlight key issues to consider when designing a risk-based revalidation scheme. Two exemplar approaches are proposed: one which is centred on CPD; the other combining CPD with a competency-based assessment and a two-part register. The relative advantages and disadvantages of these approaches are discussed, together with some issues to consider when formulating a revalidation scheme. These

include intensity, cost, and perceived benefits. In addition, should CPD be retained, it is desirable to revise it so that it informs the development of pharmacists against explicit performance criteria.

5. Conclusions and recommendations

5.1 Conclusions

Risk factors in pharmacy practice

Pharmacists in Northern Ireland report similar levels on measures of risk factors – safety climate and job characteristics – to pharmacists and other healthcare professionals in Britain. Psychological health concerns appear to be more prevalent amongst the study sample than in the Northern Irish general population, although this could be due to changes in the socio-economic climate between studies. Generally, risk factors were at similar levels across the workforce. However, pharmacists in patient-facing roles and those who had recently returned from a career break appeared to have elevated risk factors. In addition, some differences were observed according to the respondent's sector, level of seniority, type of pharmacy, and length of time since first registration. Some characteristics of pharmacists' practice were indicated as being a cause for concern – specifically, work settings with high workload and low levels of support such as staffing and breaks.

Changes in practice

Changes in practice can occur under a range of circumstances, which need to be accommodated in any regulatory policy. There is a range of views about who is, and should be, responsible for the management of registrants' change of practice. Risks associated with changes in practice can be reduced through training and development interventions, and through the establishment of support programmes by the regulator and/or employers.

Risk-based revalidation

Pharmacy stakeholders felt that risk-based revalidation could potentially be used to manage pharmacy risk. Issues that they identified for consideration included the use of CPD, provisions for pharmacists returning to practice or changing sector, cost and division of responsibility. Two exemplar models for risk-based revalidation were proposed. One places greater emphasis on the use of CPD, while the other combines CPD with competency-based assessment. A risk-based revalidation programme could draw upon

either or both of these models. It was recommended that the existing CPD scheme be developed to link to explicit standards of practice.

5.2 A framework for the development of risk management

This study has identified a number of issues with regard to risk management in pharmacy practice. Figure 5.1 summarises these issues, and provides a framework for the application of the findings and for defining future research questions. The diagram indicates three headings under which risk factors can be classified according to the current and previous studies. *Individual* factors are those that are primarily specific to registrants themselves. They include “hard” biographical data such as the registrant’s role (level of seniority, responsibilities, employment contract) and employment history (recent break in practice or change of sector, disciplinary record), “soft” biographical data such as attitudes, behaviour and level of competence, and transient factors such as physical and psychological wellbeing.

While individual factors are, by definition, the focus of risk-based practitioner revalidation, there are also important influences from the environment within which the practitioner is working. *Task* characteristics include both those specific to the practitioner’s technical work (that is, intrinsic risks due for example to the material used), and those that can be found in all jobs, such as the interplay between demands (e.g. workload, complexity) and resources (e.g. staffing, social support, equipment rewards). *Organisational* characteristics come from the wider organisation (whether an independent pharmacy, a chain, an industrial company or a governmental body). These include the organisation’s sector (hospital, community, etc.) and its safety climate. Individual, task and organisational factors can interact with each other to create risk – for example, a given individual might pose a greater risk in an organisation with a poor safety climate than in one with a strong climate.

In the diagram, these factors are shown to directly influence risk, but also to set the agenda for risk management strategies. These strategies can make use of *existing resources*, which include the Society’s CPD and pharmacy inspection programmes, as well as measures employed by specific employers (such as staff development, competency-based assessment and performance management). It is possible that *future resources* could also be developed – these include training and competency assessment

programmes provided by (or on behalf of) the Society to all registrants, as described in Section 4, an enhanced CPD scheme, and return-to-practice and change-of-sector programmes.

The diagram also shows that risk management can have two effects. The first (indicated by the thick arrow) is a direct, and usually intended, effect on risk itself. The second effect (indicated by the thin arrow) is an indirect effect on the individual, task or organisation. This effect might not be an intended one, but could nevertheless serve either to further alleviate risk (and so support risk management efforts) or to increase risk (thus undermining these efforts). Examples of such side-effects include improving employees' attitudes to safety on the one hand (Remawi, Bates & Dix, 2011), or eroding their sense of influence over safety matters on the other hand (Edwards & Jabs, 2009).

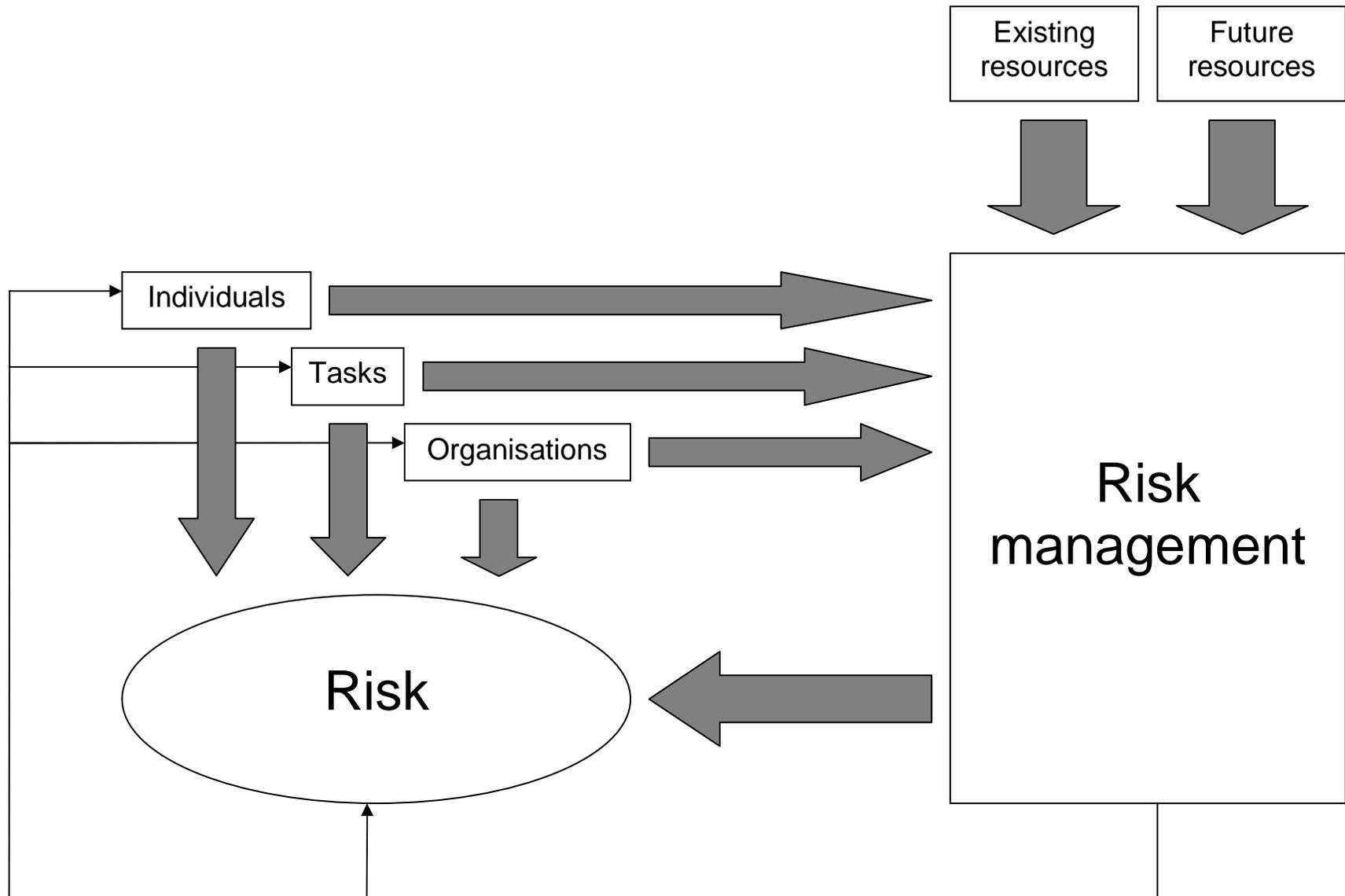


Figure 5.1 Framework for the development of risk management

Figure 5.1 provides a framework for future work on the development of risk management strategies in pharmacy practice. Some key issues to be addressed are as follows.

Risk management. What are the needs of risk management? The reader may recall the definition of risk provided earlier: *the potential for harm to occur to the pharmacy workforce, its organisations or the recipients of its services, as a result of pharmacists' activities* (Phipps et al., 2010b). Following this definition, the “acid test” of effective risk management is the extent to which it reduces harm to pharmacy stakeholders. There are some additional considerations with regard to the implementation of risk management measures:

- Acceptability to pharmacy stakeholders, including the registrants themselves;
- Applicability to different circumstances of pharmacy practice (for example, different sectors, roles and employment circumstances);
- Cost-effectiveness;
- Content validity (with respect to the objective of harm reduction).

These considerations form the basic criteria for the selection of risk management processes. It is recommended that they be used to select and assess the methods adopted by the Society, whether CPD, competency assessment, or an alternative method.

Existing resources. Can the schemes that are currently in use (either by the Society or by individual employers) be tailored to meet the needs of risk management? Two schemes that could be used are the Society's CPD programme and the pharmacy visit scheme. Section 4 discussed ways in which these schemes could be adapted to address the needs of risk management described previously. A key foundation for such an adaptation is to develop a credible set of standards for safe practice, against which any assessments can be made.

Future resources. Some suggestions were provided of resources that could be developed in the future to supplement those already in place. Ones that should be considered include a competency-based assessment, perhaps combined with CPD (see Section 4), and development programmes, in particular for pharmacists returning to practice or changing sector. Again, these can be assessed against a set of practice standards.

5.2 Recommendations

- Develop explicit standards of safe practice. These standards can be derived from existing standards (in pharmacy and in other healthcare sectors), from analysis of previous critical incidents and disciplinary hearings, and from consultation with pharmacy stakeholders;
- Consider developing the existing CPD scheme by aligning it to the standards of practice, and provide additional support for registrants in the compilation of CPD portfolios;
- Consider the use of either a CPD-only scheme, a CPD-plus-assessment scheme, or elements from either scheme, in the design of a risk-based revalidation process;
- Consider the prioritisation of registrants in patient-facing roles and those returning from a career break in risk-based revalidation and the provision of support measures;
- Consider developing guidelines, and training and development resources, for registrants returning to practice or changing sectors and for their employers.

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Appendix A. The survey instrument⁴

INTRODUCTION

The purpose of this survey is to identify the relationship between factors that may influence risk in pharmacy practice. These factors include the pharmacy's safety climate (collective attitudes and behaviours with respect to safe practice), characteristics of the work environment, and the health and wellbeing of pharmacy staff. We would like to gain a better understanding of how these factors vary across the profession, in order to suggest ways of improving safety management in pharmacists' various places of work.

The survey takes approximately 20 minutes to complete. Please note that your responses will remain confidential. We have placed an ID number on the survey simply so that we know who has replied and do not send out reminders unnecessarily.

THE STRUCTURE OF THE SURVEY

- **Section 1** asks some questions about your current and previous job roles;
- **Section 2** asks some questions about the safety climate of the pharmacy in which you work (if applicable);
- **Section 3** asks some questions about your job;
- **Section 4** asks some questions about health and well-being;
- **Section 5** asks some questions about your practice.

⁴ The General Health Questionnaire is not included here due to copyright restrictions.

HOW TO COMPLETE THE SURVEY

Section 1 requires you to tick the relevant boxes or write in the spaces provided, as shown in the example below.

| | | | |
|--|--|---|---|
| 2. Which of the following applies to you? | Currently working as a pharmacist <input checked="" type="checkbox"/> | Currently not in active employment <input checked="" type="checkbox"/> | Currently working, but not as a pharmacist <input checked="" type="checkbox"/> |
|--|--|---|---|

For **Sections 2, 3, 4 and 5**, we would like you to fill in the circle that indicates your response, as shown in the example below.

| | | | | | |
|---|-------------------------------|----------------------|---------------------|-------------------|----------------------------|
| | Strongly Disagree ▼ | Disagree ▼ | Neither ▼ | Agree ▼ | Strongly Agree ▼ |
| 1. All staff are constantly assessing risks and looking for improvements..... | ① | ② | ③ | ● | ⑤ |

Note that you only need to complete Section 2 if you are working in a pharmacy.

If you have any questions about this research, then you are welcome to contact us using the details provided on the final page.

Thank you for taking part in this study. Please turn over for the questions.

1. Background information

1. In what year did you register as a pharmacist?

| 2. Which of the following applies to you? | Currently working as a pharmacist | Currently not in active employment | Currently working, but not as a pharmacist |
|---|-------------------------------------|-------------------------------------|--|
| | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

3. If you are not working at present, please indicate why then go to question 5.

| | | | | | |
|---------------------------------|-------------------------------------|--------------|-------------------------------------|----------------|-------------------------------------|
| On maternity leave or parenting | <input checked="" type="checkbox"/> | Ill health | <input checked="" type="checkbox"/> | Retirement | <input checked="" type="checkbox"/> |
| In full- or part-time education | <input checked="" type="checkbox"/> | Career break | <input checked="" type="checkbox"/> | Another reason | <input checked="" type="checkbox"/> |

4. In the table below, please tick the boxes that most closely correspond to your current main job and any others you have. When you have ticked those boxes, omit question 5 and go straight to question 6.

| | Main job | Job 2 | Job 3 | Job 4 |
|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Community pharmacy: | | | | |
| Owner | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Manager | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Locum | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Relief | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Second | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Non store-based | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Hospital pharmacy: | | | | |
| Locum | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

| | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Band 6 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Band 7 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Band 8a | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Band 8b | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Band 8c | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Band 8d | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Band 9 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Health board / primary care organisation | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Pharmaceutical industry | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Academia | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other pharmaceutical (please specify) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other non-pharmacy (please specify) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

5. If you are not working in any of the sectors listed in question 4, do you intend to return to work as a practising pharmacist within the next 12 months?

After answering this question, you may return the questionnaire and are welcome to make any comments on the back cover before doing so. Thank you for taking part.

Yes No

| | | | |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| | Independent pharmacy | Small chain (2-4 branches) | Medium chain (5-25 stores) |
| 6. If you work in a community pharmacy, please indicate which type(s). If not then go straight to question 7. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | Large chain (over 25 stores) | Supermarket-based chain | |
| | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |

7a. Do you consider your main job to be “patient – facing” (that is, providing a service directly to patients)?

Yes

No

- | | | |
|---|-------------------------------------|-------------------------------------|
| 8a. Have you returned from a career break in the last year? | Yes | No |
| | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8b. Have you moved your job from one pharmacy sector to another in the past year? | Yes | No |
| | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8c. If you have answered “yes” to 8a or 8b then please provide brief details here. | | |

If you are working in a pharmacy then please complete sections 2, 3, 4 and 5 of the questionnaire. Otherwise, you need complete sections 3, 4 and 5 only.

2. Your pharmacy

Note: "Patient safety" is defined as the avoidance and prevention of patient injuries or adverse incidents resulting from the processes of health care delivery. An "incident" is defined as any type of error, mistake, adverse event, accident, near miss or deviation, regardless of whether or not it results in patient harm.

Firstly, please give your pharmacy an overall grade for patient safety.

| Excellent ▼ | Very good ▼ | Acceptable ▼ | Poor ▼ | Failing ▼ |
|----------------|----------------|-----------------|-----------|--------------|
| ① | ② | ③ | ④ | ⑤ |

Now indicate your agreement or disagreement with the following statements about the pharmacy in which you work. If you are a locum or work in more than one pharmacy, please think of the pharmacy in which your main job is based.

| Thinking about the pharmacy: | Strongly Disagree ▼ | Disagree ▼ | Neither ▼ | Agree ▼ | Strongly Agree ▼ |
|--|------------------------|---------------|--------------|------------|---------------------|
| 1. All staff are constantly assessing risks and looking for improvements. | ① | ② | ③ | ④ | ⑤ |
| 2. Staff work in "crisis mode" trying to do too much, too quickly. | ① | ② | ③ | ④ | ⑤ |
| 3. When an incident is reported, it feels like the person is being reported, not the problem. | ① | ② | ③ | ④ | ⑤ |
| 4. The pharmacy management seriously considers staff suggestions for improving patient safety. | ① | ② | ③ | ④ | ⑤ |
| 5. It is just by luck that more serious mistakes don't happen in the pharmacy. | ① | ② | ③ | ④ | ⑤ |
| 6. All staff have education and training in safety. | ① | ② | ③ | ④ | ⑤ |
| 7. Staff will freely speak up if they see something that may negatively affect patient care. | ① | ② | ③ | ④ | ⑤ |
| 8. There is a blame culture, so staff are reluctant to report incidents. | ① | ② | ③ | ④ | ⑤ |
| 9. The pharmacy learns and shares information about | ① | ② | ③ | ④ | ⑤ |

| Thinking about the pharmacy: | Strongly Disagree ▼ | Disagree ▼ | Neither ▼ | Agree ▼ | Strongly Agree ▼ |
|--|------------------------|---------------|--------------|------------|---------------------|
| safety incidents with staff and other pharmacies. | | | | | |
| 10. Staff work longer hours than is sensible for patient care. | ① | ② | ③ | ④ | ⑤ |
| 11. The culture is one of continuous improvement. | ① | ② | ③ | ④ | ⑤ |
| 12. Staff feel that their mistakes are held against them. | ① | ② | ③ | ④ | ⑤ |
| 13. Staff routinely discuss ways to prevent incidents from happening again. | ① | ② | ③ | ④ | ⑤ |
| 14. "Lip service" is paid to patient safety until an actual safety incident occurs. | ① | ② | ③ | ④ | ⑤ |
| 15. Staff are seen as already trained to do their job, so why would they need more training? | ① | ② | ③ | ④ | ⑤ |
| 16. The effectiveness of any changes made following an incident are evaluated. | ① | ② | ③ | ④ | ⑤ |
| 17. Investigations aim to learn from incidents and communicate the findings widely. | ① | ② | ③ | ④ | ⑤ |
| 18. There are enough staff to handle the workload. | ① | ② | ③ | ④ | ⑤ |
| 19. Investigations aim to assign blame to individuals. | ① | ② | ③ | ④ | ⑤ |
| 20. The team has a shared understanding and vision about safety issues; everyone is equally valued and feels free to contribute. | ① | ② | ③ | ④ | ⑤ |
| 21. Staff are routinely informed about incidents that happen in the pharmacy. | ① | ② | ③ | ④ | ⑤ |
| 22. Following an incident, there is a real commitment to change throughout the pharmacy. | ① | ② | ③ | ④ | ⑤ |
| 23. Training in safety has a low priority and is seen as irritating, time consuming and costly. | ① | ② | ③ | ④ | ⑤ |
| 24. Investigations are seen as learning opportunities. | ① | ② | ③ | ④ | ⑤ |

3. Your job

Please indicate how much the following statements apply to your main job.

| To what extent do you... | Not at all ▼ | Just a little ▼ | A moderate amount ▼ | Quite a lot ▼ | A great deal ▼ |
|---|-----------------|--------------------|------------------------|------------------|-------------------|
| 1. ...determine the methods and procedures you use in your work? | ① | ② | ③ | ④ | ⑤ |
| 2. ...choose what work you will carry out? | ① | ② | ③ | ④ | ⑤ |
| 3. ...decide when to take a break? | ① | ② | ③ | ④ | ⑤ |
| 4. ...vary how you do your work? | ① | ② | ③ | ④ | ⑤ |
| 5. ...plan your own work? | ① | ② | ③ | ④ | ⑤ |
| 6. ...carry out your work in the way you think best? | ① | ② | ③ | ④ | ⑤ |
| How often do you find yourself meeting the following problems? | Not at all ▼ | Just a little ▼ | A moderate amount ▼ | Quite a lot ▼ | A great deal ▼ |
| 1. I do not have enough time to carry out my work. | ① | ② | ③ | ④ | ⑤ |
| 2. I cannot meet all the conflicting demands made on my time at work. | ① | ② | ③ | ④ | ⑤ |
| 3. I never finish work feeling I have completed everything I should. | ① | ② | ③ | ④ | ⑤ |
| 4. I am asked to do work without adequate resources to complete it. | ① | ② | ③ | ④ | ⑤ |
| 5. I cannot follow best practice in the time available. | ① | ② | ③ | ④ | ⑤ |
| 6. I am required to do basic tasks which prevent me completing more important ones. | ① | ② | ③ | ④ | ⑤ |

4. Your health and wellbeing

Please indicate how much you agree or disagree with the following statements.

| | Strongly disagree ▼ | Disagree ▼ | Neither agree nor disagree ▼ | Agree ▼ | Strongly agree ▼ |
|--|-----------------------------------|----------------------|--|-------------------|--------------------------------|
| 1. The job requires that I only do one task or activity at a time. | ① | ② | ③ | ④ | ⑤ |
| 2. I receive a great deal of information from other staff about my job performance. | ① | ② | ③ | ④ | ⑤ |
| 3. I can do my job well. | ① | ② | ③ | ④ | ⑤ |
| 4. I sometimes think I am not very competent at my job. | ① | ② | ③ | ④ | ⑤ |
| 5. Other people provide information about the effectiveness (e.g. quality and quantity) of my job performance. | ① | ② | ③ | ④ | ⑤ |
| 6. I can deal with just about any problem in my job. | ① | ② | ③ | ④ | ⑤ |
| 7. I receive feedback on my performance from other people. | ① | ② | ③ | ④ | ⑤ |
| 8. I find my job quite difficult. | ① | ② | ③ | ④ | ⑤ |
| 9. I feel I am better than most people at tackling job difficulties. | ① | ② | ③ | ④ | ⑤ |
| 10. In my job I often have trouble coping. | ① | ② | ③ | ④ | ⑤ |

5. Your practice

This is a list of things that might occur during a pharmacist's practice. For each, we would like you to indicate how often, if at all, it has occurred during your own practice. Base your judgements on what you remember of your work over the past six months. We are not expecting a precise answer; an estimate will do.

| How often have you... | Never ▼ | Hardly ever ▼ | Occasional ly ▼ | Quite often ▼ | Frequent ly ▼ |
|--|------------|---------------------|-----------------------|---------------------|---------------------|
| 1. ...checked that your knowledge is up to date? | ① | ② | ③ | ④ | ⑤ |
| 2. ...allowed a safety incident to go unreported? | ① | ② | ③ | ④ | ⑤ |
| 3. ...deviated from standard operating procedures or organisational policies? | ① | ② | ③ | ④ | ⑤ |
| 4. ...knowingly worked outside your boundaries of expertise? | ① | ② | ③ | ④ | ⑤ |
| 5. ...worked for longer hours than you should have? | ① | ② | ③ | ④ | ⑤ |
| 6. ...ensured that your workspace is well organised? | ① | ② | ③ | ④ | ⑤ |
| 7. ...worked alone on a task when you should have had support from someone else? | ① | ② | ③ | ④ | ⑤ |
| 8. ...been "caught out" by something going wrong that you should have anticipated? | ① | ② | ③ | ④ | ⑤ |
| 9. ...ignored concerns about your own health? | ① | ② | ③ | ④ | ⑤ |
| 10. ...continued to work while feeling unfit for work? | ① | ② | ③ | ④ | ⑤ |
| 11. ...failed to report someone who you suspected of committing an offence? | ① | ② | ③ | ④ | ⑤ |
| 12. ...taken no action when someone voiced concern about your performance? | ① | ② | ③ | ④ | ⑤ |

| | | | | | |
|---|---|---|---|---|---|
| 13. ...taken on more work than you feel capable of? | ① | ② | ③ | ④ | ⑤ |
| 14. ...worked somewhere that you felt was unsafe? | ① | ② | ③ | ④ | ⑤ |
| 15. ...spoken to somebody in a manner that he or she thought was inappropriate? | ① | ② | ③ | ④ | ⑤ |