

AN INDEPENDENT EVALUATION OF FRAMEWORKS FOR PROFESSIONAL DEVELOPMENT IN PHARMACY

**Report of the MPC Workstream 2 Project: Independent evaluation
of competency frameworks within pharmacy education in the UK**

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Foreword

The Modernising Pharmacy Careers (MPC) programme board is carrying out a review of post-registration career development of pharmacists and pharmacy technicians. The aim of the review is to provide advice to the MPC Programme Board on developing the registered pharmacy workforce across all fields of practice, to allow patients, the public and the NHS to benefit more completely from the important contribution that the pharmacy workforce makes to health, well being and patient safety.

As Workstream Leads for this review, we recognised that non-statutory frameworks are increasingly used in the development of healthcare professions generally and in pharmacy specifically and that there is a diversity of views on their use and effectiveness. Forming a view of the appropriate place of frameworks in supporting and shaping careers and development of pharmacy professionals was thus of paramount importance in our ongoing work. As a result, we commissioned an independent evaluation of frameworks for professional development in pharmacy from the University of East Anglia in September 2011 and their findings and recommendations are set out in this report.

We are grateful to the Department of Health for funding this independent evaluation of frameworks and are pleased to be able to share the findings with a wider audience as part of the next stage of our deliberations. We would like to thank Professor David Wright and Dr. Lindsay Morgan from the University of East Anglia for their hard work over the autumn of 2011 to complete this evaluation within a challenging timescale and enabling us to consider it as an important piece of evidence in our wider discussions regarding post registration career development.

We are intending to publish the first key output of the post-registration workstream, a discussion paper that outlines the major issues we have identified in our review and why they are important for patients, the NHS, employers and individual practitioners. The paper will be a focus for meetings with stakeholders to sense check the issues, discuss where the responsibility lies for addressing these issues, and how the work can be progressed. The results of this phase of engagement will form the basis of the MPC Programme Board's advice to Health Education England as it establishes itself in readiness to take on responsibility for the £5 billion Multi-professional Professional Education and Training (MPET) budget in April 2013.

We hope that this report on frameworks helps to inform the debate and thinking as pharmacy considers how its workforce is developed and deployed most effectively in the current financial climate to deliver public health and medicines optimisation services, as well as the established pharmaceutical services.

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Glossary of terms

Competence:	Being able to perform the tasks and roles required to the expected standard.
Competency:	A quality or characteristic of a person required for effective delivery of a role. For assessment purposes, it is a subjective, context and time specific.
Competency framework:	A list of competencies, which in combination define what, is required to deliver a specific job or role to the expected standard.
Capability framework:	A generic competency framework, which allows for both horizontal and vertical development within a role i.e. it, is not constrained by the requirements of a specific job or role.
Education supervisor:	A person in the workplace and is responsible for independent evaluation of individual progress.
Mentor:	A person who supports an individual's development in the workplace but is not associated with their assessment, appraisals or performance management.
Performance standard:	Term used within regulatory frameworks to describe an expected level of performance within a task.
Trainee:	Someone who is training in the workplace, either for career development or for an education qualification.
Tutor:	In pharmacy this is someone who assumes the role of both mentor and education supervisor.

Executive Summary

Background and objectives

Competency based frameworks are used for regulatory, developmental and membership purposes throughout the pharmacy workforce. Developed by regulatory bodies, special interest groups and pioneering individuals there are differences in both construct and implementation. Two widely adopted frameworks, the General Level Framework (GLF) and Advanced and Consultant Level Framework (ACLF) have been developed and introduced independently of the UK pharmacy regulator or representative bodies. The appropriateness of the different frameworks with respect to construct, role and implementation has not been independently evaluated. The objectives of this report were to:

- Compare current practice related to pharmacy frameworks with the wider competency literature
- Describe and critique the evidence for the effectiveness of competency frameworks
- Determine the suitability of current pharmacy frameworks and associated processes for their role
- Make recommendations for future practice with respect to competency frameworks within pharmacy

Results & discussion

Personal and professional development is a result of individual and environmental drivers. Competency frameworks provide a structure to vertical development within a specific role whilst more generalisable professional development frameworks support both vertical and horizontal development. There is limited evidence for the benefits of competency-based frameworks, with the focus largely on the trainee rather than organisation or service recipients.

Assessment of competence is complex, subjective and should be based upon frameworks with limited numbers of competencies to minimise bureaucracy. Where a large number of behaviours are required to demonstrate a competency a sample of behaviours should be used. Similarly, where competency frameworks consist largely of tasks then a sample should be selected to be used to demonstrate individual competence.

Within pharmacy in the UK, competency-based frameworks are found within the pre-registration year, early career for many hospital and some community pharmacists (GLF), for the development of pharmacy technicians, leadership skills, provision of advanced services, allocation of prescribing rights and specialist roles via derivatives of the advanced and consultant level framework (ACLF).

The national on-line survey found that the use of frameworks was broadly supported within the profession at all levels, providing both structure and focus to the professional development process. Views on the ACLF and its derivatives were largely positive and supportive. Limited responses regarding recently introduced frameworks (pharmacy technician and leadership) were obtained, with review at a later date recommended. The pharmacy technician framework with 93 competencies, which are largely task based, may be overly complex. A representative sample of competencies could be used as a proxy for demonstrating overall competence.

Community pharmacists identified difficulties in demonstrating some of the clinical competencies within the GLF, whilst hospital pharmacists reported difficulties in demonstrating management competencies. A misalignment between the GLF and ACLF identified a lack of focus on the development of research, training and leadership cultures within early pharmacist's career and this may partially explain the difficulties reported with meeting these competencies by more senior pharmacists utilising the ACLF.

Repeated comments regarding the restrictive nature of frameworks were made and consequently a move to more generalisable professional development frameworks may be appropriate. Some postgraduate diplomas provided by Higher Education Institutes (HEIs) incorporate the GLF summatively to structure hospital and community pharmacist development. Due to the subjective nature of competency, assessment is recommended to be of a formative nature for developmental purposes and summative purposes only for regulatory purposes.

Oral evidence gathering from education experts identified the importance of the ability to develop reflective practice skills within individuals with its effective attainment believed to represent the point at which a practitioner is safe to practice autonomously. The need to provide greater support for tutors within the workplace to ensure effective implementation of professional development frameworks was identified with the current combination of the mentor and supervisor role seen within pharmacy creating conflict between the need to encourage development, a desire for close working relationships and the ability to provide honest constructive feedback when individuals are underperforming.

Recommendations emerging from the evaluation

- Generalisable professional development frameworks to be used for professional development throughout the pharmacy profession
- The ACLF to form the core of senior pharmacist development frameworks
- Develop a generalisable professional development framework for early career pharmacists
- Identify funding for the ongoing development and maintenance of such frameworks
- Assessment against personal development frameworks should be formative for developmental purposes.
- Postgraduate qualifications should be utilised to encourage reflective practice, networking and support the development of research, leadership and mentoring skills
- A more formal mentoring and supervision structure for support of the post-registration pharmacy workforce should be developed

Emerging themes for further exploration

- Could postgraduate multi-professional deaneries better support the pharmacy workforce?
- Is there a patient safety concern that requires addressing by regulation that is more formal when early career pharmacist's transition to undertake roles with significant potential for patient harm?

- Are there any advanced or enhanced community pharmacist roles, which may require greater regulation than that currently in place

Introduction

The use of competency-based frameworks for the development of healthcare professionals is now commonplace for the purpose of certificating practice, informing personal development, identifying whether practice allows membership of a special interest group and/or to obtaining a further qualification. With little formal structure to the post-registration development of pharmacists in the UK, competency based frameworks have been introduced by pioneering individuals and groups, frequently in isolation from regulatory or professional bodies.

Within pharmacy, the frameworks, which certificate practice and are maintained by the regulatory body include the performance standards for pre-registration trainees and those used for Independent and Supplementary Prescribers. Frameworks for advanced community pharmacy services such as those for Medicines Use Reviews are the responsibility of the Pharmaceutical Services Negotiating Committee, whilst frameworks developed by specialist groups such as Pharmacists With Special Interests (PWSI) and pharmacy staff involved in Education, Training and Workforce Development (ETWD) have been introduced largely for use by practitioners to structure their personal development, and to confirm their eligibility for specialist group membership.

A competency-based framework for the early career pharmacist, which has been extensively developed and evaluated, is now being widely used across England mainly for the professional development of hospital pharmacists to provide evidence for the employee to apply for new posts at a higher Agenda for Change band. In some locations, it is additionally being used for qualification purposes. Similarly, an advanced level framework has been nationally adopted for guiding development and supporting promotion to specialist and consultant level roles. Neither framework is currently used for regulatory purposes and therefore their adoption and implementation is at the behest of the practitioner and employer. When such frameworks are utilised for qualification purposes the accrediting higher education institute may outline its expectations with respect to standards and breadth of experience required to the employer. It is ultimately up to the employer, however, to decide whether to meet these or select another qualification route for their employee.

In education terms, the concept of competency and competency frameworks is relatively new with the literature on their role within the workplace, derivation and implementation constantly developing and maturing. To date there has been no independent evaluation of pharmacy competency based frameworks currently being utilised within the UK.

The aim of this evaluation is to:

- Compare current practice related to pharmacy frameworks with the wider competency literature
- Describe and critique the evidence for the effectiveness of competency frameworks
- Determine the suitability of current pharmacy frameworks and associated processes for their role
- Make recommendations for future practice with respect to competency frameworks within pharmacy

Chapter 1 Literature review

Knowledge, Skills and Competency

Knowledge has been classified as being either codified (what is known and recorded), practical knowledge of formal education (ability to read, listen, write and transform codified knowledge of differing complexity and content) and cultural knowledge (practice and activity related knowledge). Consequently, a skill is a construct of codified, practical and cultural knowledge rather than a separate construct in itself. Competence however, is defined as 'being able to perform tasks and roles to the expected standard' and entails an additional social judgement which varies across contexts, over time and also, sometimes with the experience, responsibility and reputation of the assessor or person being assessed.[1] A competency is a quality or characteristic of a person required for effective delivery of a role. Whilst it entails a subjective assessment, which is context specific, the individual is expected to demonstrate some consistency within the competency in order to demonstrate competence.

Derivation of competency frameworks

Competency frameworks are an attempt to encompass the role of a worker within a list of competencies, which describe what is necessary for them to operate at and or develop towards the expected standard. Three approaches to competency framework development have been identified: the worker-orientated, the work-orientated and the multi-method-orientated.[2] The worker-orientated approach is where competence possessed by workers is represented as knowledge, skills, abilities and personal traits required for effective work performance, and frameworks are developed by job incumbents and supervisors. The work-orientated approach is where activities undertaken by the worker are identified as central to their role and these are then broken into personal attributes. The multi-method-orientated approach combines both the worker- and work-orientated approaches and therefore is more comprehensive. Whilst the major criticism of the worker-orientated approach is that it produces descriptions of competence which are too general and abstract, the work-orientated approach also has limitations; chiefly that the list of work activities does not sufficiently indicate the attributes required to accomplish activities effectively.

The multi-method-orientated approach attempts to avoid the criticisms levelled at the other two by drawing on the strengths of both. In all cases, competence is regarded as an attribute-based phenomenon, with the attributes being context-independent. Such an approach is believed to result in a narrow and simplistic description that may not adequately reflect the complexity of competence in work performance.[3] One concern is that the usual approaches to competence description confirm a researcher's own view of competence rather than capture workers' competence. Furthermore, such approaches produce descriptions of competence, which do not actually capture an individual's ability to accomplish work itself. Two workers may be rated as being equally competent in a range of

attributes but may accomplish work differently depending on which attributes they use and how they use them.[4]

When a competency framework consists of competencies, which require a combination of several behaviours to be integrated, the resulting framework may be too atomised. Atomised frameworks which define technical competencies for each type of job are also seen as being very hard to manage and keep up to date.[1] Conversely if one competence requires several performances to give a sufficient range of evidence it may be too holistic for giving useful feedback.[1] The move from the 1990s atomised frameworks to more generic competence frameworks which define some aspects of job performance which are seen as important, seems to be more pragmatic approach.[5]

Rather than attempting to develop a competency framework against which a individual's ability could be monitored, Mulder *et al.* in 2010 identified a small number of activities which the professional under investigation must master in order to be able to progress in their training.[6] Observations of these 'Entrustable Professional Activities (EPAs)' were then used to determine whether the professional was sufficiently competent. This is a reductionist approach to competence assessment and may only be appropriate for roles with limited complexity. Such a task-focused approach does not enable characteristics, which require an individual to operate in a variety of environments and communicate with different individuals on a range of levels to be evaluated.

Hierarchy in competency

Within many competency frameworks, there is a notion of hierarchy, which supposes that individuals in the workplace transition through different compartmentalised levels of development. This hierarchical approach to development was first presented by Dreyfuss and Dreyfuss in 1986 [7] and describes how an individual develops from someone able to follow explicit rules only at novice level, to someone who can choose a plan, goals and strategies for when and how to apply rules at the competent level and then ultimately to an expert who has reached a stage where they do not rely on rules but can intuitively and holistically identify problems, goals, plans and actions. An expert will also simultaneously see a problem and the way to solve it. Within pharmacy there is clearly a hierarchy of responsibility, autonomy and role complexity, which ranges from the responsible pharmacists on day one of registration to specialist pharmacists in defined roles which require a certain expertise to that of the consultant pharmacist working in a complex leading edge environment.

Whilst versions of this form of hierarchy are commonly adopted throughout many disciplines, such an approach to workplace development is not without its criticism.[8] Research has shown that when objective comparisons between novice and expert teachers were made, individual variation was found to be as great within groups as it was between groups and this is expected due to the dynamic and varied nature of practice within different settings.[8] Furthermore development should not be seen simply as a vertical progression but also outwards, as individuals start to question authority, provide criticism, develop innovation and initiate change. These changes in capability tend not to be captured within confined vertical competency frameworks and consequently models, which identify capability rather than measure competency, may be more useful for workforce development.

Sandberg suggests that a phenomenological approach to competence framework derivation may overcome at least some of these criticisms.[4] In 2000, he described taking 20 employees at different stages in their careers and undertaking interviews based on observations of their work. The interviewer asked the workers to describe their conceptions of work and the interview transcripts were then analysed for meaning in context, rather than for content. This information was then used in an iterative manner to develop competence criteria. The approach resulted in 13 attributes divided between three concepts, with the concepts providing some insight into hierarchy of competence. Sandberg states that 'variation in performance is not related to a specific set of attributes possessed by those who are regarded as the most competent. Instead, why some people perform particular work better than others is related to variation in ways of conceiving of that work'. Whilst this research was performed on engineers working for Volvo, this different approach to defining competence may transfer to other roles or professions. Instead of measuring individuals against pre-defined frameworks, it is proposed that it is the employees who are asked to state their conception of the role and this is used to determine where change is required. This recommendation seems to suggest that practitioners should be expected to reflect regularly on their role and their current abilities and learning needs and by undertaking this process with their mentor, they can both identify where the trainee is in the development continuum.

Dall'Alba and Sandberg, in 2006, argue that the individual's understanding or conception of and performance within their role should form the basis for development rather than development through a compartmentalised step-wise model.[8] It has been suggested that learning trajectories provide a more useful approach than competences as they 'take into account continuities and discontinuities of learning that result from changes across contexts and over time' (Figure 1).[1] The generic framework suggested by Eraut should then be used by the trainee and their mentor to determine where they currently are located within each of the trajectories and which require development at that point in time to enhance the role they currently perform. Generic frameworks, such as that outlined by Eraut, can be described as capability frameworks, which support both horizontal and vertical development. It could therefore be argued that whilst competency frameworks are focussed on vertical development in a role and are best used for performance management and regulatory purposes, capability frameworks are less restrictive and therefore are more suitable for appraisal and personal development purposes.

Whilst such a capability framework may be useful for the development of employees beyond registration or early career, it would provide limited value to a regulatory body, which is trying to ensure consistency across a profession. In such instances, a basic level of expectation in the form of a framework is necessary for the employer to determine what learning experiences should be provided and for the employee or trainee to understand the expectations of them up until the point of regulation and beyond. An alternative and perhaps more appropriate term for a capability framework for the purposes of professions is a professional development framework.

Table 1 Eraut & Hirsch Typology of Learning Trajectories

Task performance

Speed and fluency
 Complexity of tasks and problems
 Range of skills required
 Communication with a wide range of people
 Collaborative working

Awareness and understanding

Other people; colleagues, customers, managers
 Contexts and situations
 One's own organisation
 Problems and risks
 Priorities and strategic issues
 Value issues

Personal development

Self-evaluation
 Self-management
 Handling emotions
 Building and sustaining relationships
 Disposition to attend to other perspectives
 Disposition to consult and work with others
 Disposition to learn and improve one's own practice

Accessing relevant knowledge and expertise
 Ability to learn from experience

Working with others

Collaborative work
 Facilitating social relations
 Joint planning and problem solving
 Ability to engage in and promote mutual learning

Role performance

Prioritisation
 Range of responsibility
 Supporting other people's learning
 Leadership
 Accountability
 Supervisory role
 Delegation
 Handling ethical issues
 Coping with unexpected problems
 Crisis management
 Keeping up to date

Knowledge of the field

Knowing the repertoire of practices
 Evidence of their effectiveness in particular contexts

Using knowledge resources and networks

Knowing what you need to know
 Making practices more explicit
 Conceptual and theoretical thinking
 Use of evidence and argument
 Writing appropriate documents

Decision making and problem solving

When to seek expert help
 Dealing with complexity
 Group decision making
 Problem analysis
 Formulating and evaluating options
 Managing the process with an appropriate timescale
 Decision making under pressure

Judgement

Quality of performance, output and outcomes
 Priorities
 Value issues
 Levels of risk

Competency framework implementation

Within the competency literature, it is the implementation of competency frameworks, which has raised most concerns i.e. how they have been used by trainees and tutors to demonstrate and assess development. If used inappropriately, competency frameworks can be responsible for reducing the assessment of complex professional behaviours to a tick-box exercise, where more energy is expended on 'signing off' than on individual development [1, 5, 9]. Brown suggests that 'the compilation of evidence of achievements at work against detailed performance criteria for competence based qualifications, such as national vocational qualifications in England, can actually be antithetical to learning and development because so much time was spent on bureaucratic requirements of assembling evidence of existing competences'.[5] This is of greatest concern where competency frameworks are atomised into a large number of behaviours and tasks as the trainee is then required to spend significant amounts of time linking evidence to each individual behaviour, in the belief that all of the behaviour boxes need to be ticked off for the trainee to demonstrate competency. The Academy of Medical Royal Colleges suggests that mentors or supervisors consider evidence from a sample of the listed behaviours underpinning a competency rather than expecting all of them to be signed off individually.[9]

Whilst competency frameworks can be used by individuals in isolation to identify their learning needs, when they are used for certification or qualification purposes then it is usual practice for a workplace mentor to support and review the development of the individual. Workplace-based assessment is believed to be best performed by a mentor or supervisor using a variety of assessment instruments as this enables the whole picture of someone's competency to be best portrayed.[5] Medical education has led the way in developing such assessments, identifying a range of tools which encompass multi-source feedback, direct observation, utilisation of routinely generated data, covert simulated patients and oral presentations[9] and such tools have been adopted by pharmacy practitioners in implementing frameworks designed to develop early-career pharmacists.[10] Evidence collated in isolation without an accompanying narrative may however be unreliable and therefore trainee and trainer reflection and comments on the activity are believed to enhance the quality of the evidence for the assessor. Consequently it is important for trainees to provide some text alongside each piece of evidence which describes what the evidence demonstrates, signposts its quality and reflecting on their future learning needs.

A summary of observations of workplace learning is summarised in table 1, and shows that for effective workforce development the mentor has the role of identifying tasks of appropriate challenge and complexity, identifying and managing the appropriate amount of independent working, providing feedback on performance, role modelling and providing appropriate exposure to the bigger picture. It is also important for the mentor/manager to ensure that 'workload is at a level which allows the individual to respond to new challenges reflectively, rather than develop coping mechanisms which may prove ineffective as their career develops. The concept of transition shock is well documented,

with recommendations that it is managed by better bridging between undergraduate educational curricula and escalating workplace expectations.[11]

Table 2 Summary of workforce training reviews

Area	Context Recommendation	LiNEA Project (2000)		Evetsin (2008)
		Accountants [12]	Engineers [13]	Healthcare scientists
Mentoring	Mentors trained in coaching	✓		✓
	Provided by a range of mentors	✓	✓	
	Includes regular feedback		✓	
Tasks	Sufficiently challenging	✓		✓
	Increase in size and complexity	✓	✓	
Individual	Allowance for independent working to increase with time	✓		✓
	Regular exposure to the bigger picture	✓	✓	
	To be able to provide feedback on their experience		✓	✓
	Regular exposure to excellent role models		✓	
Evidence	Competence assessment to be robust			✓
	Certified competence			✓

Whilst the different roles of the mentor in the trainee development process have been identified, it is believed that an effective mentor needs to demonstrate a number of competencies themselves. When considering the role of the clinical psychologist mentor it has been suggested that the competencies should include ‘establishment of the supervisory alliance, supervision contracting, dealing with strains and ruptures to the alliance, technical competence, diversity competence, evaluation and feedback and legal and ethical competence.[14] Consequently, there are significant training needs for effective mentor or supervisors if developing training competencies is not part of trainee development.

The role of Higher Education Institutes (HEIs)

The role of HEIs, which are focussed on the delivery of codified and practical knowledge, in the workplace where employee development is focussed around the development of cultural knowledge and competence is contentious. HEIs were originally set up to develop, impart and assess codified and practical knowledge and therefore traditionally focussed on the provision of qualifications within subjects such as science and humanities. The inclusion in the last fifty years of professional courses within HEIs started to blur their vocational role, with the inclusion of polytechnics in the 1990s further transitioning societal expectations of HEIs from ‘centres for learning’ to ‘centres for vocational preparation’.

Whilst the appropriateness of this transition to a vocational role for HEIs has been questioned by some,[15] the inclusion of HEI qualifications for certification of workplace practice does create difficulties. It is strongly believed throughout the competency literature that due to the subjective and developmental nature of workplace-based assessment it should be low stakes and formative.[5, 9, 14] The role for HEIs in workplace assessment should therefore not be in certifying competency but in encouraging regular reflection by the practitioner on their development within the framework and encouraging the use of a variety of evidence, which should be discussed and overseen by their mentor.[5] The act of reflection is seen as a powerful formative assessment as it enables practitioners to recognise that learning has taken place[1, 5] and additionally enables the mentor to determine the location of the individual's development. HEIs can enhance personal development by providing learning networks and enabling practitioners at the same stage of the development process to learn from each other's experiences and compare their current practices.[5] Whilst the roles identified for HEIs in worker development could also be undertaken by regulatory bodies or workplace-centred processes such as appraisal, HEIs are able to provide qualifications which act as an additional incentive for the learner.

Pharmacy education in the UK: A brief historical perspective

The traditional model of UK pharmacist education consisted of a three-year science degree followed by a year in practice under the mentorship of an experienced pharmacist. This resulted from the need for pharmacists to be able to quality assure ingredients and formulate medicines from basic scientific principles on the pharmacy bench and an increasing demand for formulation scientists, pharmaceutical chemists and pharmacologists from an expanding pharmaceutical industry. Since the early 1970s, the role of the pharmacist within hospital has transformed from medicines supply, which is increasingly becoming the domain of automation and technicians, to medicines management. A need to manage local prescribing budgets, implement national and local prescribing guidelines and prevent medication errors have resulted in pharmacists becoming increasingly ward and patient focussed. Consequently, the role has changed from being product to patient focussed with an associated increase in complexity due to the need to make higher-level pharmaceutical decisions and interact with other healthcare professionals for the purposes of enhancing patient care rather than mainly preventing prescribing errors and addressing supply difficulties. More recently, pharmacists with additional training have been afforded prescribing rights and this has added an additional level of autonomy, which providers and regulators of pharmacist undergraduate education had not anticipated.

In recognition of the increasing clinical role of the pharmacist which was developing within secondary care and predicted to occur within primary care, the 1986 Nuffield report [16] recommended that an extra year should be added to the undergraduate course to better prepare students for more patient facing roles. Whilst this change to pharmacist education was not realised until the early 1990s, the extension was based upon science rather than clinically based education funding, with students therefore remaining largely within the academic setting, with limited opportunities to develop patient facing knowledge, skills and attitudes. A London-based survey of newly graduated pharmacy students in 2004 showed that whilst pharmacy graduates felt more confident in undertaking product-

based activities such as dispensing, they were less confident in undertaking more complex decision-making processes involved within the process of delivering pharmaceutical care. [17] Consequently, pharmacy graduates were found to be leaving their HEI without the sufficient knowledge and skills necessary for their role as a pharmacist.

The identified need for further training of pharmacists in secondary care to ensure patient safety within new ward-based clinical roles created a demand for postgraduate training and the subsequent development of university-accredited postgraduate clinical certificates and diplomas. Postgraduate courses developed in response to local needs, being structured by the capacity and capabilities in the academic workforce and the willingness of employers to engage in the course design and teaching delivery. Consequently the outputs from such diplomas varied depending on the modes of delivery and assessment, [18] with employers selecting distance learning courses where resources have not allowed for significant local mentorship. The use of distance learning programmes which largely provide codified and practical knowledge for the development of early career pharmacists is however questionable as it allows practitioners to avoid close observation of their practice, limits opportunities for networking and may not be sufficiently focussed on the development of cultural knowledge.

Within community pharmacy, the patient facing roles anticipated within the Nuffield report have not been realised until relatively recently and these have largely involved public health and medication adherence interventions, which can be described as defined tasks, which provide relatively limited opportunities for patient harm. Consequently, pharmacists entering community pharmacy posts from the pre-registration year are not required to undergo the additional clinical training, which is seen within the hospital setting. The main deficiencies identified within the community pharmacy setting with respect to cultural knowledge following the undergraduate degree and pre-registration year have been around management, leadership and organisation. Development of community pharmacists in the workplace has been additionally hampered by a predominant culture of working in isolation.

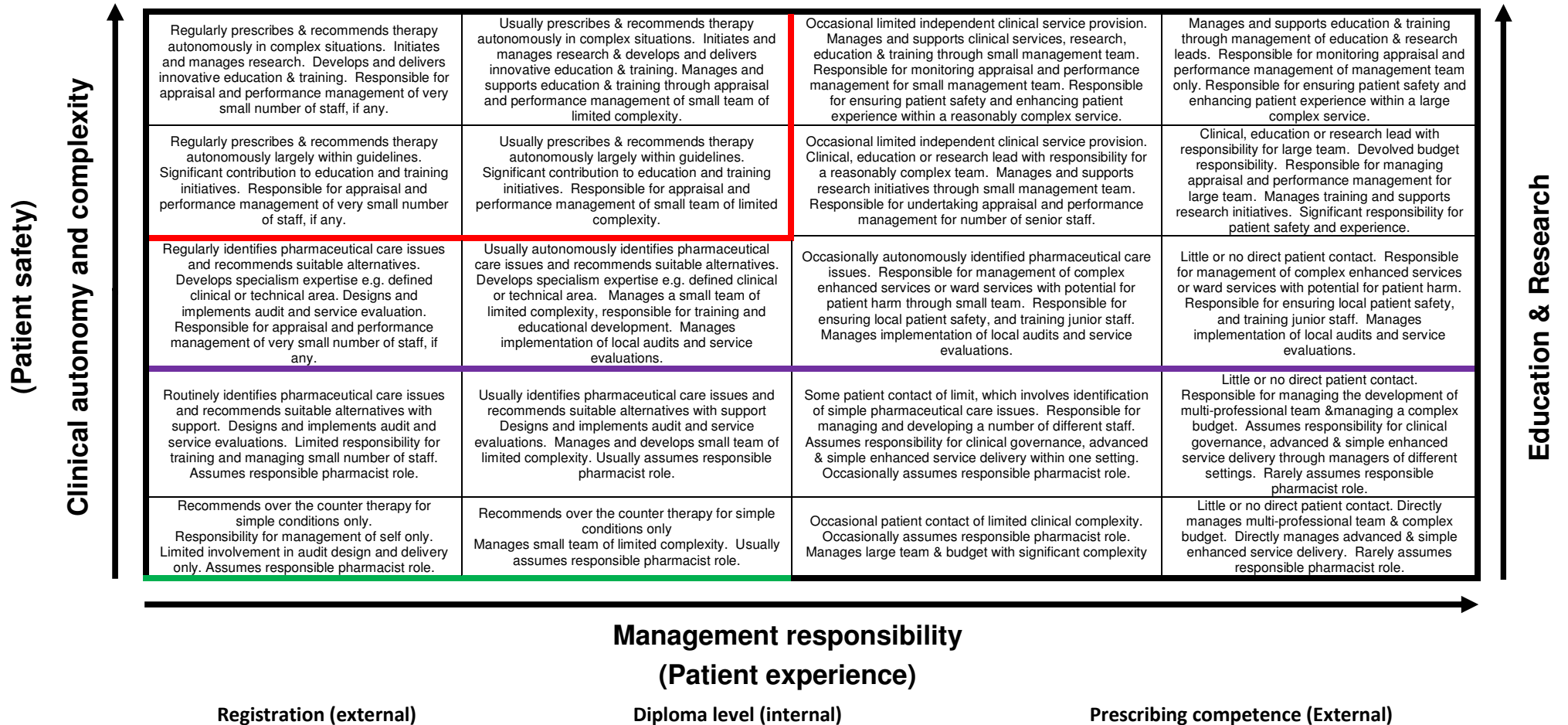
Figure 2 provides a summary of the different career trajectories undertaken by pharmacists following their first appointment in either a hospital or community setting. Whilst not designed to describe the location of all individual pharmacists within their careers the schematic is provided to give an oversight of the relationship between clinical service provision, management, research and education within the different roles of pharmacists. Additionally it identifies the points at which significant regulation, either internal by employers or external by the pharmacy regulatory body, currently takes place.

The bottom left corner is the point at which a pharmacist enters the framework and is operating either as a band 6 hospital pharmacist, relief community pharmacy manager or locum pharmacist. The traditional clinical pharmacist trajectory would be through the left hand side of the framework with a juncture appearing at the time of completing a postgraduate diploma and a further juncture when prescribing rights are sought. The top left hand side of the framework therefore describes the role of the consultant pharmacist. The first juncture is where autonomy to provide complex patient services is afforded to the individual, with postgraduate clinical qualifications being used as evidence of

appropriate development. The decision to allow an individual to take on autonomous roles is currently an internal regulation decision made by employers and is managed accordingly. With all hospital employers, requiring postgraduate qualifications or equivalent at this juncture, the question is whether the postgraduate qualification is undertaking an assessment or development role and if it is the former due to concerns regarding quality of patient care and safety, whether the professional regulator should assume greater responsibility at this point. A senior hospital manager will invariably have undertaken a postgraduate clinical qualification but undertaken a more diagonal route to senior management in the far top right hand corner, thus ensuring that they can safely oversee the delivery of complex patient facing services with higher levels of risk to patient safety.

The far right bottom of the framework is where area and regional community pharmacy managers or large store managers operate and whilst they have significant management and leadership responsibilities and are responsible for the experience of pharmacy by large numbers of patients, the patient safety aspect is limited due to the nature of the patient facing roles undertaken by the community pharmacy staff employed by them. The question for community pharmacy is whether more formal qualifications or regulation may be required, similar to that seen within the hospital setting, if community pharmacy provided services become more complex with greater opportunity for providing patient harm.

Figure 1 Summary of pharmacist career trajectories, including current internal and external regulatory junctures



Competency and pharmacy in the UK

The introduction of performance standards to the pre-registration year in the late 1990s was the first attempt within UK pharmacist education to standardise outputs and describe the skills required for a day one pharmacist. This approach by the regulator, though laudable, was introduced with little funding and hence limited ability to support tutor development and therefore standardise the assessment of performance or even confirm that evidence to demonstrate performance had been provided by the trainee. Furthermore, the model of utilising tutors rather than mentors and supervisors places tutors in the unenviable position of having to support an individual, develop a working relationship and then assess their competence at the end of the process. It was, however, the first competency framework introduced to the UK pharmacy workforce and recognition that workplace-based assessment was a necessary element of pharmacist development.

General Level Framework (GLF) history and evidence

The first work to develop a competency based professional development framework for early career pharmacists in the hospital sector, which arose from the new clinical governance agenda and desire to improve the quality of clinical services, was reported by McRobbie *et al.* in 2001.[19] Whilst the initial draft of the framework consisted of 10 competencies and over 20 associated behaviours, Davies *et al.* introduced a revised version to the profession in 2002 which was developed using recognised processes[20] and consisted of 15 competencies.[21] The new framework consisted of competency clusters and behaviours (or in some instances tasks) which could be used to demonstrate that competencies were being achieved. McRobbie *et al.* proposed that each behaviour should be assessed by describing the frequency at which it was demonstrated using a four point scale ranging from always to never.[19]

The 2002 paper by Davies *et al.* was the first to recommend the formation of training alliances between trusts to sustain the competency-based programme and the need for external accreditation of such a programme.[21] This latter process was recommended to be undertaken by universities in the absence of any vocational based quality assurance processes within pharmacy, such as those seen within medicine and other professions in the form of deaneries. The natural extension of this proposal was the inclusion of the general level framework (GLF) within some postgraduate diplomas to both refocus them on competencies rather than knowledge, and standardise the outputs from such qualifications.

A small scale study in 2003 with an active group of 24 practitioners and four control practitioners demonstrated that over a 12 week period those utilising the GLF were more able to perform key tasks at the end of the period.[22] Whilst the practitioners in both arms were not comparable at the start and allocation was not random, it is reasonable to expect that the provision of assessment criteria to practitioners who are cognisant of the fact that they are to be assessed on the criteria is more likely to enhance individual practice than in practitioners where the assessment criteria are hidden or unknown. Perhaps of greater interest from the study were the views of five assessors from the active sites who

were interviewed about the usability of the grids. Whilst acknowledging the empowerment of the assessor by the competency framework and the ability of the framework to drive educational innovation in different sites it identified concerns regarding the consistency of the assessment process and a requirement for clearer guidance as to what constitutes a competent practitioner. The interviews also identified differences in the perception of the purpose of the GLF, with some tutors perceiving it primarily as an assessment tool and others as an aid to identifying the training needs of junior pharmacists. A GLF handbook was subsequently produced to provide guidance to pharmacists and supervisors with respect to expectations for each competency and behaviour.

A larger scale trial of the GLF performed in 2005, across 22 NHS trusts in the South of England over a period of 12 months, demonstrated a similar effect to that of the smaller trial, with pharmacists receiving a training program based on the GLF found to be more professionally able at the end of the trial than their counterparts who received 'usual' training.[23]. Unfortunately due to the automatic inclusion of GLF pilot sites into the intervention arms and allowance of trusts to ultimately select the arm of the intervention to which they were allocated it is difficult to delineate the effect of the framework from that of the employer and the individuals within the trusts, who select the employer based on the training provision offered.[21]

In 2005, Mills et al. reported the first attempt to develop a similar general level competency framework for primary care and community pharmacists, resulting in an adapted GLF framework consisting of 104 behavioural statements.[24] This revision resulted in minor additions of small numbers of behaviours to individual competency clusters and the addition of an entirely new competency cluster for 'Management and Organisation'. Consequently, the GLF was revised to encompass early career competency requirements for both hospital and community pharmacy practitioners and now consisted of 4 competency clusters, 25 competencies and 104 associated behaviours.

A 12 month study to compare the effect of implementing the new GLF with community pharmacists and primary care pharmacists on the delivery of patient care and management and organisation competency clusters showed that, via self-assessment, primary care pharmacists were more likely to achieve their desired outcome than their community pharmacist colleagues, although both groups demonstrated the desired level of improvement.[25] Whilst acknowledging the limitations associated with self-assessment[26] the study utilises individuals as their own comparator and consequently the effects of under and over rating will be accounted for. Similar to other studies in secondary care[22] the research demonstrated that the GLF provided a development focus for the practitioner. Similar results have also been reported when introducing the GLF to community pharmacists in Croatia.[27]

Whilst the initial acceptability of the framework was reported from interviews with a small number of tutors,[22] a large number of individuals have since utilised the GLF in both primary and secondary care and no independent evaluation of its wider acceptability to practitioners has been undertaken or reported. Considering figure 1, the GLF is currently designed to encompass the development of both community and hospital pharmacists between registration and diploma level.

Advanced to Consultant Level Framework (ACLF) history and evidence

In response to the proposed introduction of consultant pharmacists, Davies *et al.* in 2004 proposed four levels of pharmacist practice; a registered pharmacist, a general level pharmacist, an advanced level pharmacist and a consultant practitioner.[17] Later that year the same team, led by Naomi Meadows, reported on the development of the advanced to consultant level competency based framework for pharmacists.[28] The framework, which was derived from a literature review and consensus development panel, was shown to be able to differentiate between advanced and consultant level practitioners by rating their level of practice as foundation, excellence or mastery level. The final professional development framework consisted of 6 competency clusters and 34 competencies with no described behaviours. The ACLF is now routinely adopted and recommended for use within the NHS to support the development of advanced level pharmacists to consultant pharmacist level. It can be seen from the comparison of the competency clusters within the ACLF and GLF (Table 2) that although the foundation level of the ACLF follows on from the end of the GLF there is little commonality between the two, with lesser expectations of general level pharmacists with respect to research, leadership, education and training or building working relationships.

Table 3 Comparison of competency clusters between the GLF and ACLF

Competency Cluster	GLF	ACLF
Building working relationships		✓
Leadership		✓
Education, training & development		✓
Research and evaluation		✓
Management & organisation	✓	✓
Expert professional practice. (Delivery of Patient Care)	✓	✓
Personal	✓	
Problem solving	✓	

In 2011 McKenzie *et al.* reported on a number of tools which could be used by advanced level practitioners to demonstrate their level of practice and utilised within a practice portfolio which would form the basis of any interview to credential the practitioner.[29] The tools were recommended due to their robust, efficient, consistent, practical and holistic nature, and consisted of mini-clinical evaluation exercises, case-based discussions and 360 degree peer assessments. These were mapped by practitioners utilising the ACLF at either the competency cluster or competence level. The same tools are utilised by practitioners operating the GLF as part of the Joint Programs Board across the South East of England [10, 30] and are rated by an observer at the competency level and are mapped within practice portfolios at the individual behaviour level.

Pharmacist competency framework

In 2004 the Royal Pharmaceutical Society of Great Britain presented the 256 competencies, within 20 categories, it believed were necessary for the development of pharmacists.[31] 118 were deemed common core competencies which should inform the undergraduate pharmacy degree, whilst the remaining 148 had currency within different areas of pharmacist practice. The competencies were largely task orientated and consequently frequently role specific. Although the framework has not been reported within the literature since its introduction, it was initially incorporated within the continuing professional development recording software used by practising pharmacists and then eventually removed due to its complexity.

Adult critical care: Specialist Pharmacy Practice

In 2005 the Department of Health, in association with the United Kingdom Clinical Pharmacy Association (UKCPA) produced an Adult Critical Care: Specialist Pharmacy Practice framework to provide guidance on practice, skills and experience relevant to pharmacists specialised in critical care areas. Based on the ACLF, it also identified the core knowledge required for such a role.[32]

Competency Framework for the Assessment of Pharmacists Providing the Medicines Use Review (MUR) and Prescription Intervention Service

In 2005 the Department of Health published a competency framework for accreditation of community pharmacists wanting to provide medicines use reviews to their patients under the new pharmacy contract.[33] The framework was not designed to be an exhaustive list of the competencies which may be required to undertake an MUR, but consisted of those key elements that can be assessed in a robust and reliable manner by HEIs who were given the responsibility for accrediting practitioners. The framework was constituted of five competencies only under which expected behaviours were outlined. The behaviours were a mix of learning outcomes associated with codified knowledge such as 'demonstrates knowledge of the scope of the MUR service', practical knowledge indicated by 'demonstrates the ability to evaluate written information' and skills, for example 'documents the MUR process and resulting recommendations in a succinct manner using the nationally agreed templates'. Practitioners were frequently deemed competent within this framework via on-line assessment only, thus demonstrating its knowledge, rather than competency focus.

Competency framework for Pharmacists with a Special Interest

In 2006, the Department of Health in collaboration with NHS Primary Care Contracting produced a framework for Pharmacists With a Special Interest (PhWSI). Derived from the ACLF, it was designed for pharmacist practitioners wanting to put themselves forward for accreditation as a pharmacist with a special interest or for organisations or employers who want to accredit such individuals. The framework consisted of all competencies within the ACLF competency clusters 'Expert professional practice' and 'Building working relationships', the majority of competencies within the 'Leadership' and 'Management'

competency clusters, leaving the 'Education, training and development' and 'Research and Evaluation' competency clusters as optional.

Harmonisation of Accreditation Group (HAG) competency and training frameworks

The Harmonisation of Accreditation Group (HAG) was set up to address variations in competency requirements between different primary care organisations providing similar enhanced services as these provided artificial barriers to pharmacist working across geographical boundaries. The HAG frameworks were not reviewed as part of this process, as they are service-specific and by definition limited in nature.

Prescribing frameworks

In 2006, legislation was introduced to enable pharmacists to independently prescribe. The associated framework, which set the standards for pharmacists wanting to be certified as an independent prescriber, consisted largely of learning outcomes, rather than competencies, thus reflecting its appropriateness for assessment and accreditation by HEIs rather than through less formal workplace-based mechanisms. [34] Nine competencies and 80 related behaviours are embedded within the framework and suitable performance within these is expected to be captured within the workplace via portfolio and sign off by an experienced independent prescriber.

Chief Pharmacists Framework

In 2008, Fernandes *et al.* reported on a project to determine the suitability of the ACLF for use by chief pharmacists.[35] Following a literature and work-based competency review, nominal group review and expert panel review identified a need to change descriptor terminology in 35 instances, discard 11 competencies and incorporate a further 9. The 'professional practice' cluster was renamed 'expert professional management' to incorporate an identified need to ensure a greater emphasis on professionalism. The 2008 report demonstrated how the ACLF provides an appropriate basis upon which specialist pharmacist groups can build individualised competency frameworks with a primary role of identifying suitability for inclusion.

Education, Training & Workforce Development (ETWD) framework

Launched in 2008, the ETWD framework was introduced to be used by any member of pharmacy staff involved in education, training and development of others to guide and structure career development. Validated from an extensive number of stakeholders, the final framework, which was again derived from the ACLF, consisted of five of the six ACLF competency clusters, with 'Expert professional practice' renamed 'Expert professional role in education, training and workforce development' and 35 associated competencies. The framework utilises a number of case studies to usefully outline how it relates to different roles and the relevant professional development opportunities. Furthermore, it provides an exhaustive list of the examples of evidence, which could be used for each of the competencies.

Global Competency Framework

The FIP Pharmacy Education Taskforce presented a global competency framework for the support and development of pharmacists in 2010, which was based up a range of frameworks from different countries, including the GLF.[36] Consisting of 22 role based competencies and over 100 identified associated behaviours it demonstrates the similarities, which exist between different countries regarding the role of the pharmacist.

Leadership and competency framework for pharmacy professionals

The Royal Pharmaceutical Society introduced a leadership competency framework for students, practitioners and experienced practitioners in 2010 which was constructed to help with the design of training curricula, highlight individual strengths and development areas through self-assessment and structured feedback from colleagues and to help with personal development planning and career progression.[37] Based upon similar frameworks developed for other healthcare professionals the framework was developed in consultation with a large number of stakeholders. The framework consists of five domains each with four elements and then a further four competencies for each element. Usefully the framework provides a list of learning opportunities and examples in practice to enable a pharmacist to consider their development in the 80 competencies.

Pharmacy Technicians

Also in 2010, Hough *et al.* introduced a Professional Development Framework for Pharmacy Technicians in Medicines Management.[38] Based on the GLF and developed with extensive input from stakeholders, the final version consists of 4 competency clusters, 93 competencies and a larger number of associated behaviours. Many of the competencies within this framework are associated with specific tasks and roles and this may reflect the more structured role of the pharmacy technician.

Table 3 provides a summary of the different frameworks used post-registration within pharmacy in the UK. It can be seen that evidence relating to the level of adoption, appropriateness for use or effectiveness of any of the currently used pharmacy competency framework except the GLF is extremely limited, being largely confined to brief conference abstracts.

Table 4 Summary of post-registration pharmacy competency frameworks in the UK

Framework	Year	Description	How developed	Associated evidence
General Level Framework	2002	25 competencies + 104 behaviours	Standardised approach. Significant stakeholder involvement	Some available. Wide adoption by both professional bodies and employers.
Advanced to Consultant Level Framework	2004	34 competencies	Extensive stakeholder involvement	Recommended for use for credentialing to consultant level within NHS
Adult Critical Care: Specialist Pharmacist Practice	2005	39 competencies	From ACLF with extensive stakeholder involvement	None
Pharmacists with a special interest	2006	28 competencies	From ACLF with extensive stakeholder involvement	None
Prescribing framework	2006	9 competencies + 80 behaviours	Regulatory body	None
Chief Pharmacists' Framework	2008	32 competencies	From ACLF with extensive stakeholder involvement	None
Education & Training Workforce Development Framework	2008	35 competencies	From ACLF with extensive stakeholder involvement	None
Leadership Framework	2010	80 competencies	Professional body	None
Pharmacy Technician Framework	2010	93 competencies + large number of behaviours	From GLF with extensive stakeholder involvement	None

Competency within other healthcare professions

The use of competency frameworks for registration and practitioner development purposes is common within other healthcare professions. The General Optical Council require 39 core competencies to be demonstrated for registration purposes, each of which having a number of associated performance criteria.[39] Similarly the General Dental Council has identified 38 clinical skills, practical procedures and patient investigations which registrants must be competent in to achieve registration.[40] Post-registration, a framework for dentists exists which is designed to support their development to specialist level. A similar framework for use post-registration for optometrists was not identified.

In 2009 the Academy of Medical Royal Colleges published a Common Competences Framework which was developed to identify the common competences which should be acquired by doctors in core and speciality training in the United Kingdom.[41] 26 competences were identified and for each of which the knowledge, skills and behaviours which may be assessed are outlined. Additionally a level descriptor is provided to differentiate expectations between the early career specialists and high level specialists.

Chapter 2 Evidence for competency frameworks

A systematic literature review was conducted to determine what evidence existed to support the effectiveness of competency frameworks in professional development. The review involved identification of studies, which addressed the effectiveness of professional frameworks across all healthcare professions and any evaluative study designs, were included. Systematic reviews were also considered.

A preliminary literature search was performed. The search terms employed were devised using MESH terms for 'competence', 'professional' and other key variables such as 'staff development' and 'effectiveness'. The products of this search identified a number of themes that, along with the use of the MeSH descriptors, informed upon the selection of keywords making up the final systematic literature review protocol. In addition, a number of descriptors were present in single and plural and so the longest common abbreviation was used to infer such to ensure full data capture.

The following databases were used to search literature with 'English Language', 'Human' and '2002-2011' as search limits.

1. PubMed
2. PsychINFO
3. CINAHL
4. PHARMLINE (now provided through the National electronic Library for Medicines (NeLM))
5. Cochrane Database of Systematic Reviews (CDSR)

This strategy was necessarily modified according to idiosyncrasies specific to each database and the bibliography of included studies was reviewed to further identify additional references. As the NeLM cannot be searched using a systematic strategy, the search term 'professional framework' was used.

The original strategy aimed to search in two phases: to identify evidence for the effectiveness of professional frameworks across all healthcare professions first, followed by a targeted search to isolate evidence relating to pharmacy practice. The additional resolution provided by a second phase proved unnecessary as the number of articles identified in the first instance was low.

Screening and selection

Independent, duplicate screening of titles and abstracts was performed. The search produced 739 abstracts. Following review and removal of abstracts relating directly to non-healthcare situations, specific medical treatments and interventions, formal examination, undergraduate activity, other obviously irrelevant papers, and the removal of duplicates, 11 abstracts remained for full text retrieval. Following a review of the full text, nine papers were included in the review.

A summary of the search process is provided in table 4. Table 5 provides a summary of the papers reviewed.

Table 5 Summary of systematic review findings

Database	No. Hits	Abstracts rejected	Papers reviewed
PubMed	180	172	8
PsychINFO	270	267	3 (duplicate)
Cinahl	40	39	1 (duplicate)
Pharmline (NeLM)*	115	114	1
Cochrane Database of Systematic Reviews	134	134	0

* Cannot be systematically searched – ‘professional framework’ used as search term

Table 6 (Part 1) Summary of reviewed papers

Author	Profession	Study design	Main findings	Additional Comments
Barrett [42] Internat.	Nursing	Questionnaire and online forum – responses analysed by thematic analysis. 80-177 countries, forum had up to 615 subscribers	Respondents felt standardisation of training curriculum globally and international protocols for prescribing would be beneficial to improve standard of mental health care in low/middle-income countries	Frameworks not mentioned specifically, but implied by the term 'standard'
Berkow [43] USA	Nursing	Online survey. 5700 nurse leaders. 400 nursing school deans/directors. Rated satisfaction of new nurse proficiency according to 36 consensus-developed competencies and overall	Raters consistently found same competencies in lowest rated category (initiative, tracking multiple responsibilities, delegation – tasks less readily taught in the classroom) – general observation that new nurse improvement strategies should be thusly focussed	Competency framework was considered useful tool to identify learning/teaching needs.
Santiano [44] Australia	Nursing	Questionnaire = 20 competency standards + corresponding elements. Convenience sample, final n = 39. All Graduates of Graduate Certificate of Intensive Care Nursing (GCICN). Used the questionnaire to self-rate the Perceived Level of Competence (PLC) at which they performed on a Likert scale then rate whether GCICN influenced PLC, then as open-ended questionnaire to explore if GCICN prepared them for current career path that was analysed using thematic analysis. 2 groups - > 2 yrs post course (old) and < 2 years post course (young)	Majority perceived that the course enhanced performance of competency (mean score > 3). Research rated lowest, recognising own ability and level of competence highest (?) – new graduates rated PLC higher than old graduates (but non-significant), new graduates rated influence of course on PLC higher than old graduates. Higher PLC correlated to higher perception of courses influence on PLC . Course appears to have most effect on problem-solving competency domain.	Tested course rather than underpinning framework. May indicate that framework improves PLC but cannot distinguish effect of framework from formal course. Nurses tested were critical care nurses, accepted to be younger, more motivated, professionally curious and able to seek/utilise learning opportunities especially well, and thus may have increased their PLC via different means.
Colthart [45] UK	All HCP	Systematic literature review - sought to identify evidence for the effectiveness of self-assessment interventions to: *Improve perception of learning needs *Promote change in learning activity *Improve clinical practice *Improve patient outcomes Excluded papers that didn't describe an explicit self assessment tool	Nothing satisfied Kirkpatrick's hierarchy above 2 or looked at the association between self-assessment and resulting changes in clinical practice or patient outcomes. Some evidence that accuracy of self-assessment enhanced by feedback, providing explicit assessment criteria and benchmarking guidance	Concludes that more rigorous study designs needed and comments upon the poor quality of the research in this field.
Gardner [46] Australia /New Zealand	Nursing	Secondary thematic analysis of interview data collected for a different study. 15 nurse practitioners were interviewed. Analytical framework established from 5 attributes of capable people (Davis and Hase, 1999) and data deductively coded according to the framework. Supportive quotes reproduced.	Used analysis of interview responses to support their initial ascertainment that in addition to competence frameworks, there needs to be a way of developing capability – the demonstration of competence in novel and challenging situations. Competence is necessary but not sufficient for advanced and extended nursing practice.	Conclusion essentially published before finding...no idea what other comments were and the author's linking some of the comments to their conclusions is sometimes tenuous. Data not collected for the purpose of the analysis presented and so may lack power.

Table 6 (Part 2) Summary of reviewed papers

Author	Profession	Study design	Main findings	Additional Comments
Spicer [47] China	Nursing	Two surveys (demographic survey followed by competency survey) of Directors of Nursing (DON) and Chief Operating Officers (COO) to determine the perceived importance of DON role competencies defined by the Forces of Magnetism. Random sample of 300 DON and COO.	The Chinese DONs and COOs rated role competencies based on the Forces of Magnetism to be important for DONs to be effective. One of the 14 'forces' of the magnet system is competency-based professional development.	Magnet is an approach to altering working environment and philosophy to improve standards of working environment, improve nurse retention and positively affect patient outcomes. While it incorporates a professional development cluster into its 14 point framework, the requirements needed to successfully implement the whole Magnet strategy are such that the workplace itself would be transformed. The overall strategy appears to be effective in its aims, but any specific effect of the professional development cluster is impossible to elucidate.
Ginsberg [48] Canada	Medicine	Interviewed 19 experienced clinicians and asked them to describe one specific outstanding, average and problematic trainee. Data was analysed using grounded theory – 8 themes identified.	Senior clinicians overlooked/excused deficiencies in residents they considered outstanding, but competence or excellence in some domains did not save other residents from being viewed as problematic.	Despite efforts to create standardized, objective, competency-based evaluations, assessment of residents' clinical performance still has a strong subjective influence. Assessment methods should consider ways of accommodating these impressions to improve evaluation.
Carberry [49] UK	Nursing	The project strategy centred on the recruitment, training and preparation of critical care nurses to undertake advanced assessment roles. Used workload analysis to determine whether Hospital At Night (HAN) could be successfully implemented using nurse-led Hospital Emergency Care Teams in the wake of European Working Time Directive restrictions on junior doctor availability.	Nurses were trained using a recognised framework. Main outcomes: a multidisciplinary HECT of five could manage overnight workload and level of acuity in a DGH of 420–500 beds, and that critical care nursing staff can be prepared for advanced supporting role. Recommend development of national framework to inform areas such as multidisciplinary competency-based education and training.	No data on patient outcomes or the staff/patient experience but study calls for this to be the next step.
Antoniou [23] UK	Pharmacy	Multi-centre controlled trial with 2 arms. Intervention arm used competency framework for practice development, control arm used usual in-house practice development methods. Intervention group = 74 pharmacists (13 sites), control group = 30 (9). Participants assessed at baseline, 3, 6 and 12 months for competence using the General Level Framework.	Pharmacists receiving a training program based on the GLF were found to be more likely to be competent at the end of the trial relative to the GLF than their counterparts who received 'usual' training.	No randomisation – hospitals self-selected desired arm. Intervention arm had previous experience of intervention and therefore knew assessment criteria in advance Pharmacists tend to select trusts based on perception of training experience at lower grades, and recruitment into intervention hospitals is highly competitive, possibly selecting for better graduates in the first instance.

Chapter 3 Opinions of practitioners on different frameworks

The survey was opened on 21st October and closed on 21st November. In excess of 400 responses were received from across the profession. Regularly recurring themes were identified and reported with supporting quotes that have been reproduced verbatim with corrected spelling. Some respondents gave demographic data only, not specific comments, and so this has been presented to indicate the relative usage of the frameworks across sectors and geographies. The survey was publicised via a quarter page advertisement in the Pharmaceutical Journal, a half page advert in the UKCPA “In Focus” e-magazine, and the details emailed directly to the UKCPA membership, the RPS membership and PEDC (Pharmacy Education and Development Committee).

Advanced to Consultant Level Framework

Respondents

136 respondents started the consultation; 86 full responses beyond basic demographic data were received.

Of the total number of respondents (136), the majority (45 %) were framework users (trainees), followed by managers (20 %) and tutors/mentors/trainers (20 %).

Most respondents were working in hospital roles (87 %), followed by academia (5 %) and primary care (4 %). The NHS region in which most respondents were located was London (34 %), followed by the South Central region (14 %), the North West (13 %) and Yorkshire and The Humber (11 %).

The primary purpose of the ACLF was considered to be personal development by the majority (45 %).

The majority of comments were very supportive of the framework and considered its overall impact on professional development to be positive.

THEME 1: Standardisation and Benchmarking

A large number of respondents felt that the ACLF was a useful tool to ensure that what constitutes an advanced pharmacist and how to achieve this status was defined, that there was a way of recognising an individual with advanced skills and that the advanced level of practice was standardised across the profession.

“I feel it allows direction post registration and structure for pharmacist to be able to work towards. It sets a benchmark that can be used to measure ones competency and feel confident in safe practise in what you intend to do.”

“...the greatest value comes from having a single standardised and recognised process that can be communicated both within and beyond the boundaries of pharmacy.”

“They are a way of helping to define a pharmacist post registration. This leads to greater understanding within the profession, multi-professionally and by the public in terms of who they are talking to and what they should expect of them. At ward level the public and I know when we are happy dealing with a junior doctor and when we want to speak to the consultant - this should be the same in pharmacy.”

Many pharmacists found the ACLF to be useful in informing upon the in-house appraisal process of their employers.

Commonly used phrases/statements included:

- Standardises approach
- Provides a benchmark
- Provides structure
- Defines (advanced) pharmacists
- Ensures quality
- Useful in appraisals
- Help frame discussions with management
- Credentialing
- Useful guide post-diploma

THEME 2: Impact on the User

Overall, respondents considered the impact on the user to be positive, providing motivation to engage in Continuing Professional Development, to career plan and to seek exposure to novel work environments/tasks in order to develop. The ACLF was also considered to be helpful in career planning.

“Within each cluster, I have identified which competency that I have vast experience in and working at excellence level. However, there are few areas that I need to read up on to gain knowledge and seek opportunity to apply the knowledge to practice.”

“The major contribution is to provide the pharmacist with a clear idea of what they need to do to develop and move forward in their career that is in line with what the employer is expecting. Professional development has become much clearer. This is particularly the case in community pharmacy where previously there was no defined career path.”

Commonly used phrases/statements included:

- Identifying priorities
- Understanding current state and goal
- Motivating
- Mapping the career
- Drives improvement in practice

THEME 3: Application to Practice

Some respondents had concerns that the ACLF could be restrictive to some aspects of development that were not necessarily prescribed by the framework, thus limiting holistic practitioner development. This was alluded to by other respondents, who highlighted the work of a number of groups to develop bespoke derivations of the ACLF for application in various specialties and the positive impact of this work, although many respondents considered the ACLF in its current guise to be broadly applicable.

“Framework may be restrictive and limit creativity if used without other approaches. They tend to be necessarily simplistic in order to be manageable and cannot really reflect the high level of complex and multitasking skills employed by competent pharmacists in the various channels of the profession.”

“Very useful but must be flexible enough to recognise differences in the nature and scope of professional practice, particularly at advanced levels. At the same time, however, they must be rigorous enough to ensure consistency of practice standards.”

“...informative and necessary although not fully applicable to all care settings- thereby resulting in bespoke derivations being developed which potentially may dilute the validity of the framework.”

“The rounded nature of it ensures that the learner explores all necessary skill sets instead of concentrating on favourite topics. It will hopefully promote research as well.”

Some respondents considered that the competencies/behaviours of reflective practice, negotiation skills and business planning were developed by individuals during the period of framework use but were not currently captured by the framework itself, however most respondents did not consider the ACLF to be lacking in this regard.

Many respondents considered the clusters relating to Research and Evaluation, Management and Leadership to be difficult to achieve competency in. It was generally agreed that this was due to a mixture of cultural barriers and workplace opportunities rather than a weakness of the framework.

“The breakdown of the Research section makes it quite difficult to attain competencies. They are quite heavily focussed on original research which the majority of hospital pharmacists would find impossible to incorporate into their everyday working life.”

“Pharmacy has insufficient research grants to support a potential explosion of pharmacists wanting to conduct research into professional activities. There may need to be a pairing of undergraduate projects with follow-on postgraduates to enable a research-based development of practice given the rapidly changing environment in which we work.”

“It is generally very difficult to demonstrate competence in those behaviours which can only be gauged through observation by a senior colleague.”

Commonly used phrases/statements included:

- Possibly reduced to tick box activity and doesn't encourage reflection
- Reflective practice and self-reflection not developed
- Can be seen as constrictive
- Competency level descriptors not always reflective of an individual's ability
- Poorly realised how to use frameworks across mixed knowledge groups
- Lengthy/complex
- Need to update/out of date

THEME 4: Support, Mentorship and Tutelage

It was felt by a number of respondents that in order to use the framework effectively across the profession, an education and training infrastructure to provide expert advice and support was necessary that is not currently widely in place. The proposed necessity of this infrastructure appeared to relate to improving the facilitation and understanding of the framework, managing the large amount of paperwork/evidence generated and for quality assurance and standardisation. It was identified that support was hugely variable across sites due to external pressures, and that standardisation of the roles of the tutor and the mentor and investment in area would be beneficial.

“Difficult to ascertain the quality of the evidence presented and even more difficult to standardise self-assessments or tutor led assessments.”

“Need more guidance on the expert practice section; availability of specialist curricula. Can be difficult to separate foundation, excellence and mastery and to be clear about what fits each level; needs more (detailed) examples.”

“Entirely dependent on organisation and local networks. Support is rapidly diminishing as staffing cuts are targeting all activities at front line patient focussed work and none on staff development.”

“Would be extremely valuable especially for those of us working in smaller hospitals or in isolation in any branch of the profession without regular contact with somebody that has at least gone through the process”

"I think that this is essential for the framework to be successful, the more involved the tutee & mentor are in the relationship, the more successful the framework is."

"It is an area we recognise in this department to be one we need to develop. Resourcing and time to achieve this effectively and in a sustained manner are our biggest barriers"

General Level Framework

Respondents

199 respondents started the consultation, 103 full responses beyond basic demographic data were received. Of the total number of respondents (199), the majority (61 %) were tutors, mentors or trainers, followed by users/trainees (19 %) and managers (10 %). Most respondents were working in hospital roles (78 %), followed by community pharmacy (13 %) and academia (5 %). The NHS region in which most respondents were located was London (38 %), followed by the East of England (18 %), the South East (9 %) and the South West regions (8 %).

The primary purpose of the GLF was considered to be personal development (51 %).

The majority of comments were very supportive of the framework and considered its overall impact on the professional development of general level pharmacists to be positive.

As the GLF has been widely used in the hospital setting for some years compared to its fairly recent utilisation in community pharmacist development, the two groups were considered separately.

Community Pharmacist responses

Over half of the community pharmacist respondents (58 %) considered the primary purpose to be personal development, with 23 % of community respondents using the GLF to achieve an academic qualification. Of the 26 responses from the community sector, 10 completed the consultation beyond basic demographic data. Of this 10, eight considered the framework to be primarily for the purpose of personal development, with 1 respondent using the framework to gain an academic qualification.

THEME 1: Standardisation and Benchmarking

It was clear that, as with the ACLF, community pharmacist felt that the GLF could provide a useful standard to which they could compare themselves and their practice in order to develop.

"Concentrates the professional on areas where s/he is expected to perform."

"It has set a standard if you like a bench mark onto which one can measure themselves. This has thus allowed to see yourself and to see where you fall within this bench mark"

"It was worth looking at just to identify the different skills and expertise we should all have or be achieving."

THEME 2: Impact on the User

This was considered to be largely positive. A number of respondents considered the GLF to be a useful tool in guiding CPD choices and ensuring a broad development. In the main, the respondents described the GLF as useful in identifying areas of professional weakness and/or gaps in knowledge, which could then be addressed using the CPD cycle. It was also felt that the implementation of the GLF had contributed to improved working practices and patient safety outcomes.

"Helps me to comply with my CPD requirements."

"This has helped to assess myself with different fields in Pharmacy and as result has helped generate CPD cycles and improved myself and confidence in sorting different aspects of Pharmacy."

"Also helped in running and deliver the NHS contract efficiently and improve Patient safety considerably"

THEME 3: Application to Practice

Many felt that the proper utilisation of the GLF was difficult, as the competencies/behaviours did not always relate to the role that they were performing in the workplace.

"Certain ones [competencies] were only difficult to demonstrate due to the location of work i.e. some would be easier to demonstrate in hospital than community pharmacy and vice versa."

"In my experience the student is being asked to prove certain competencies that were covered at pre-reg level or lower."

"Some areas of GLF do not translate well to community Pharmacy as pharmacist does not have sufficient information e.g. drug/disease interaction where pharmacist does not have access to patient notes."

THEME 4: Support, Mentorship and Tutelage

There was broad support for the further development in these roles although the level of current support was varied, with some individuals receiving none at all. Increased levels of support appeared to be associated with running a GLF-linked postgraduate diploma, with tutors overseen by the HEI.

Hospital Pharmacist responses

Just under half of the hospital pharmacist respondents (48 %) considered the primary purpose to be personal development, with 19 % of hospital respondents using the GLF to achieve an academic qualification. Of the 155 responses from the hospital sector, 82 completed the consultation beyond basic demographic data.

THEME 1: Standardisation and Benchmarking

There was widespread support for the ability of the GLF to provide structure to development and training, achieve consistency between sites and provide a national system of comparison for pharmacists at the general level of expertise. It was suggested that the GLF filled a previous structural void in pharmacy postgraduate education, providing a better defined pathway for promotion or personal/professional development than what was once the case, although it was often linked to academic qualifications to do so.

"...provides a structured training programme for junior pharmacists which can be assessed and benchmarked appropriately within the busy and dynamic work environment."

"Provides a structure to career development which is accepted around the region, should the pharmacist have to move jobs. Allows consistency of standards. Allows work-based competency assessments in real live situations and allowing you to learn on the job."

"to ensure equal level of patient care and competency in all regions of the country"

"gives a national system for comparison"

"Can prove that I am meeting minimum requirements."

"When completing a formal qualification, professional frameworks bring structure and ensure all aspects related to a particular role or level are achieved."

"Before the framework, hospital pharmacy post-registration development lacked structure and relied too much on informality, chance and assumption. Objectivity was lacking and in cases of substandard performance, time was wasted trying to identify methods to objectively measure performance. The framework's role [...] has changed this."

"However unless the student is doing a post graduate course where their collected evidence from their portfolio can match the various clusters, other members of staff do struggle to provide evidence if they are not actively engaged in a postgraduate course"

Some respondents found it difficult to see how/if the GLF improved upon the Knowledge and Skills Framework (KSF), or if both were necessary for development of the individual.

“Generally they provide a structure which, in the pre agenda-for-change era, was lacking. That being said, they don’t necessarily add very much more to the process than the KSF - which all pharmacists will be following closely as it is the key to advancing through their pay gateway (quite a big incentive).”

“It is a long document that it is time consuming to complete for both tutor and tutee. Not sure how it fits with KSF and is there any point in having two systems.”

Commonly used phrases/statements included:

- Add structure where previously was none
- Attempt to reach consistency between sites and skills
- Backbone for appraisal and assessment
- Improve knowledge, provide national system of comparison
- Methodical, objective
- Allows staff to move around jobs as they have shown a defined standard of competency

THEME 2: Impact on the User

The impact of the framework on the user was considered to be positive in the main. Most respondents considered the frameworks to be motivating and encouraging to the individual and provide a tool to allow weaknesses to be identified and addressed in a methodical way. It was also thought to encourage the process of individual reflection as well as encouraging discussion and communication within the workplace about training needs. There were a small number of concerns that the framework could have a demoralising effect on trainees if they were forced to pursue competence in areas that were not relevant to their role in order to complete the framework.

“Helps to maintain motivation post-registration and focus development.”

“Been a guide to ensure that my appraisals have been structured and covered all aspects of the professional role.”

“It allows the pharmacist to identify areas that need work in a non-judgemental way and can open 2 way discussion to areas of weakness and strength”

“some of the competencies are not relevant to band 6’s and can therefore be demoralising to see no progression in these areas.”

Commonly used phrases/statements included:

- Encourages reflection
- Motivating
- Provides an agenda for discussion
- Can identify areas of poor performance and weakness so that they can be addressed
- Useful to record progress/development.

THEME 3: Application to Practice

Respondents largely agreed that the basic structure and use of the GLF was appropriate and applicable to practice and was being used to provide successful, sometimes targeted development of early career pharmacists.

“Supports the provision of training that is relevant to delivery of service.”

“When assessing junior pharmacists against the framework over a given period of time, you are able to see the progression. The baseline / beginning of rotation assessment can be used to identify specific areas / competencies to target and set objectives. By the end of the rotation, when the framework assessment is repeated the trainee is able to produce specific evidence to show achievement / higher achievement in the identified areas for development.”

Overall, few thought the framework lacked anything specific. However, a number of respondents felt that desirable behaviours such as good communication, empathy, negotiation (described as ‘soft-skills’ by a number of respondents) could not easily be captured by the framework. The following responses to the question, “Please describe any competences/behaviours which were developed by the user whilst using the framework but were not captured within it”, were recorded:

“communication (non-verbal skills, empathy...) ability to prioritise work and achieve set goals dealing with conflicts interpersonal skills...”

“mentoring and teaching”

“Confidence and judgement”

“Self-confidence, honesty, responsibility, kindness, empathy, flexibility”

“I think it is the global assessments that a framework sometimes struggles with e.g. attitudes and behaviours that are not professional.”

“Being able to deal with difficult or tricky situations more appropriately.”

Many respondents felt that the framework needed to be more flexible to accommodate the nuances of individual workplaces and roles to prevent trainees undertaking unnecessary tasks and assessments that would not enhance their performance in their current role. It was also felt by a large number of respondents that the frameworks were bulky, repetitive, and sometimes difficult to understand and contained some criteria that were not relevant to many generalist roles. The collection of a portfolio of evidence was considered arduous by some, and added significantly to the time required to utilise the framework. The competency cluster of Management and Organisation was consistently identified as difficult to achieve or not relevant to the generalist role at band 6 to 7. There was concern that the framework could be restrictive and therefore not encourage the development of other, important behaviours and skills.

“Each hospital has a different ‘pharmacy ladder’ despite trying to be unified by this document due to the size of the department and the departmental needs and priorities. From the perspective of a large district general, there are many aspects, which are being done just to tick the boxes of the GLF. They may be beneficial to the pharmacist’s development but the departmental priorities are not aligned with this, or so it would appear. This may be easier to achieve at a teaching hospital.”

“When the GLF covers areas that are not relevant to the Pharmacist or areas they have not had the opportunity to be exposed to it can have a negative effect, particularly their confidence and makes them worried that they are not doing their job properly if they have covered all of the aspects.”

“The management clusters are really hard for junior pharmacists to gather evidence for. I know the GLF is supposedly structured like this so that both early career community and hospital pharmacists have a common framework but really, they are not the same job at all. We should [...] not limit the development of both by trying to manipulate the roles to fit into a single developmental framework.”

Respondents frequently expressed concerns that the GLF could be interpreted at the user/workplace level as a ‘tick-box’ exercise, with less emphasis on the development of the individual and more placed upon completing the framework and getting ‘signed-off’. The coupling of the GLF to various formal post-graduate qualifications was felt to have encouraged this. The viewing of the GLF as a ‘tick-box’ exercise appeared to be an attitude that could pervade to a management level.

“...many junior pharmacists [...] ‘tick the box’ of achieving a post-registration qualification in order to progress. Since this framework is used as part of the diet of assessment (formative but with a summative element if included in a portfolio), it is sometimes not taken seriously by supervisors either. The framework is also only as efficacious as the person or system using it; and it has been over-used and used at inappropriate times, which can lead to negativity. There is always a tension between workplace-based assessment that is meant to be formative but sometimes contributes to summative assessment.”

“Although the GLF (and ACLF) is very valuable for personal development and in an ideal world this would be its primary purpose, only the most conscientious junior pharmacist would (or even could) realistically use it as a tool on its own without discussion or feedback-or even a specific imperative for its use- to guide their development in their first years of practice.”

“...the pharmacist sees it as a 'tick-box' exercise and focuses on getting things 'signed off' rather than a tool to help their development.”

“Can be seen by those in management positions as a panacea. We have a framework; tick the box all is well.”

“Some junior pharmacists use the GLF as a tick box exercise just for the diploma programme rather than for personal development. This then means that a huge amount of resource goes into supporting the system with very little benefit to the person or organisation.”

“Sometimes it means ticking boxes with trainees rather than looking at their whole experience in my area.”

“It has become a booklet of tick boxes which doesn't allow you to veer off the standard path.”

Commonly used phrases/statements included:

- Inflexible
- Repetitive
- Difficult to implement/maintain outside of the structure and motivation of a post-graduate course
- Needs to be adapted to each hospital, need to be able to pick and chose the bits useful to your environment
- Some competencies too advanced or specialist for band 6
- Not relevant to all people at all times
- Could be restrictive
- Tick box exercise
- Not always used appropriately
- Large document, time consuming, portfolio takes a long time

THEME 4: Support, Mentorship and Tutelage

The level of support provided to framework users was inconsistent and site-dependant, from no support whatsoever to a named off-site tutor, on-site tutor, on site mentor or all three plus a local Education and Training specialist team. Not surprisingly, the greatest support was provided to trainees using the framework as part of a formal qualification. The clear majority of respondents felt that the level of support provided to a trainee had a significant impact on outcomes, and that many of

the potential problems identified that related to misinterpretation, reducing the process to a tick box exercise and lack of breadth/creativity could be addressed by effective support systems in the form of well-trained tutors and mentors.

“An effective mentor / tutee relationship is essential for effective use of the GLF. Without either role, the framework cannot be used effectively. It is equally important that the tutor is supported to undertake this role as the practitioner.”

“The tutor has a key role – if the tutor is inexperienced this could be detrimental to the trainee.”

“Those mentor/tutors who either have experience or are well trained in the use of the framework often deliver a trainee who has worked successfully through the competencies in the framework and can identify examples of how they have developed. If this doesn’t happen, then those benefits are often not realised.”

“There needs to be more investment in it. Post-registration development may be self-directed but it is not optional, and by not supporting it or making it a priority and arranging the workforce accordingly, you simply put a barrier up. The GLF will not replace a good tutor/tutee relationship, nor will it be particularly useful in the absence of one.”

“Self-rating on any scale without any external experience or influence is futile. Experienced tutors need to be in place to ensure that the professional framework is used properly at baseline and that evidence collected towards it is appropriate and relevant. There will be times when a trainee is not doing so well. Without a tutor or supervisor, the trainee can only rely on self-reflection to identify this. Not very helpful. It is my belief that the professional frameworks cannot be used in a vacuum...”

“...the profession is traditionally weak at giving positive informal feedback, particularly when a practitioner has done well or achieved competence. A framework provides an agenda for discussion, in addition to formative feedback, to identify both areas of development as well as areas where the practitioner is performing well. This can be used both to help with academic progress as well as monitoring progress, which pharmacy needs to learn to integrate together.”

THEME 5: Use of the GLF as an assessment tool

This theme did not consistently emerge from the consultation data for any of the other frameworks. There was concern that the use of the GLF as an assessment tool may cause difficulties due to inconsistencies in its implementation and interpretation, difficulties in assessment using the frequency scale and the appropriateness of a tool designed to be formative being utilised in a summative assessment.

“Takes the focus away from the person being assessed. You are more focussed on the form and getting it right – and getting to the end than addressing any problems. It doesn’t produce any solutions.”

“There is no means whatsoever of ensuring inter-rater reliability or test-retest reliability. It is also impractical as an assessment tool. There are too many categories to make it a practical tool. It is biased in favour of the student. As an example ‘always identifies drug-drug interactions’ - how can the assessor make this kind of judgement? The assessor can only comment on the ones the student identified and submitted in patient profiles etc, whereas in fact the student may have completely missed drug interactions on other charts not shown to the assessor. The assessor is also under pressure to say the student has met all the criteria to the correct standard, because otherwise the student may fail the course.”

Respondents identified that interpretation of the framework between individuals or sites was likely to be inconsistent but many felt that any detrimental effects of this could be negated by having networks in place for supervisory staff, meetings, discussions and peer-review.

Differences in interpretation were not always seen as problematic, as long as the framework was used formatively.

“The framework is for the student and mentor to use. I do not think that the content should be compared between students, as the interpretation of one student/mentor partnership could be quite different to another! i.e., there will be inconsistencies.”

“The interpretation is...adequate and, as this is not a tool to make a summative judgement, serves the function it was developed for. The framework is the property of the trainee and must be seen as a way of supporting their self-development – not as an assessment tool, which is used by the employer to performance manage the individual. The four point scale allows practice to be differentiated and is sufficiently robust to support the development of individuals. Pharmacists ... will argue about the interpretation of “usual” or “sometimes” – but this is “missing the point” as it is about development and a general overview of the individual’s strengths and weaknesses.”

Commonly used phrases/statements included:

- Inconsistencies between assessors, different expectations, completion of framework subjective
- Five point scale not helpful – difficult to ever say any practitioner ALWAYS does something
- Not sure if development is due to diploma or due to GLF
- Okay as a guide for development, difficulty comes when using as an assessment tool

Independent and Supplementary Prescriber Frameworks

Respondents

29 respondents started the consultation, 14 full responses beyond basic demographic data were received. Only 1 respondent commented on the Supplementary Prescribing Framework and so the data below represent the views of the Independent Prescriber respondents. Of the total number of respondents commenting upon the Independent Prescribing Framework, 48 % were users/trainees, followed by tutors, mentors or trainers (14 %) and managers (14 %). Most respondents were working in hospital roles (59 %), followed by primary care (17 %) and academia (17 %). The NHS regions in which most respondents were located were the North East and North West (24 % each), followed by the West Midlands (21 %) and London (17 %).

The primary purpose of the Independent Prescriber framework was considered jointly to be personal development or to achieve an academic qualification (38 % each).

Respondents had mixed views of the framework.

THEME 1: Standardisation and Benchmarking

There was an impression that the framework contributed to practitioner standardisation and minimum standards in this specific area of practice.

“Standardisation of required competencies for prescribing role-benchmark”

“Standardised what is expected of individuals.”

THEME 2: Impact on the User

Some respondents talked about personal improvements in their practice as a result of the framework, relating to inter-professional relationships, self-confidence and planning one's own development, but there were also a number of respondents who did not find the experience positive.

“Bought together working relationship with medical staff. Learnt a lot and confidence increased”

“It allows the user to identify areas that may be lacking so that further knowledge can be sought through a personal development plan and through CPD”

THEME 3: Application to Practice

This was the only framework to highlight a possible patient safety concern as a result of the framework that was not being currently addressed. There were also concerns that the framework had not been updated recently, and that it could be easily reduced to a tick-box exercise. One respondent felt that, following qualification, there was no ongoing support in place.

"I think that the IP prescriber course may give too much responsibility to individuals without the sufficient knowledge to use it safely. I was shocked at how little I had to know about the drugs involved to pass the course, (more so for nursing colleagues)."

"Lacking in support. Lack of funding. Lack of momentum after qualification gained from employing Trust and pharmacy regulatory body. Focused on the academic qualification and not enough regulation and support after qualification gained. If stipulated that prescriber had to attend x lectures or CPD events if they are a prescriber then it may impact their Trust to let them attend."

"To stay current, the framework requires regular review and reassessment. This does not appear to have happened since the framework was first introduced."

"They can become a tick box exercise and take up a lot of time and this may distract from the underpinning learning"

THEME 4: Support, Mentorship and Tutelage

As with the other frameworks, there was clear support for the development of tutor/mentor roles, although it was not clear whether this would be a development of the mandatory role of Designated Medical Practitioner (DMP) or an extension to include other peers and senior colleagues.

"for effective use the framework needs to be used with a mentor or trainer. Partly this is to provide interpretation of the framework, partly to point out to the student what areas of practice that they may be overlooking that should be included (my DMP pointed out that when I said I didn't keep up to date with the journals that was incorrect as I'd just produced a guideline based on published evidence... my interpretation was going to the library and sitting reading journals,,, I kept up to date - but not as I had envisaged I should be!)"

"Very important to understand how tutor can outline how student demonstrate clinical competencies."

Pharmacists with a Special Interest (PhWSI) Framework

Respondents

25 respondents started the consultation, 6 full responses beyond basic demographic data were received.

Of the 25 respondents, the majority were managers (40 %) followed by tutors, mentors or trainers and users/trainees (28 % each).

Most respondents were working in hospital roles (88 %). The NHS regions in which most respondents were located was London (28 %), the West Midlands (20 %) and the South Central region (16 %).

The primary purpose of the PhWSI framework was considered to be personal development (76 %).

Due to the low number of full responses (6), it was difficult to identify the prevailing themes and so a general commentary is provided.

Respondents seemed to feel that the frameworks did help to standardise pharmacists as well as encourage them to reflect on their own needs and development.

"I am able to assess myself against my speciality framework and see which areas I need to work on and where I stand in relation to others and expectations."

There was, however, the familiar concern of the framework being reduced to a tick box item and the implications of this.

"If the framework is used as a box ticking exercise, it will restrict the learning process"

There seemed to be general support for a better defined process/infrastructure to describe external support, although there seemed to be little in place currently.

"The key is regular review and guidance to keep the process on track and the pharmacist motivated."

Framework for Pharmacy Technicians

Respondents

31 respondents started the consultation, 5 full responses beyond basic demographic data were received. Of the total number of respondents, the majority were managers (39 %) followed by tutors, mentors or trainers (32 %) and users/trainees (16 %). Most respondents were working in hospital roles (97 %). The NHS region in which most respondents were located was the North West (52 %), followed by the East of England (16 %) and the North East (13 %).

The primary purpose of the Framework for Pharmacy Technicians was considered to be personal development (58 %), followed by the achievement of an academic qualification (26 %).

Due to the low number of full responses, it was difficult to identify the prevailing themes and so a general commentary is provided.

Most respondents felt that the Framework for Pharmacy Technicians had helped to provide consistency, improve recruitment and retention and give a feeling of satisfaction to the individual.

“The framework has contributed to staff retention; it has given staff a feeling of achievement and self belief that there is more to their role than just dispensing. It has given them the opportunity to take on roles with greater responsibility and expertise which had not previously been available and also to show their professionalism and the high standards to which they work every day.”

There was a concern that the frameworks did not support development in all directions.

“Pathways may inhibit sideways development; engineered structure may inhibit thinking outside the box.”

The role of the tutor or mentor was considered to be of significance, to guide the trainee and also to protect training time and encourage success and external support was considered.

“It is important that the mentor has a good relationship with the trainee that the trainee can feel comfortable and confident that if any issue arises that this can be talked through and a solution found. The mentor must be understanding that in cases where the departmental workload is heavy that the trainee must be protected and allowed to do the framework, unless it is an absolute necessity. Mentors should congratulate trainees when successful and if they err, they should be supportive and help the trainee understand where they have erred. This will give confidence and self- belief to the trainee which is very important.”

“External workshops would be a useful addition to this training for mentors/assessors and this would also allow networking of delivery methods and discussion of issues raised.”

Oral evidence gathering

Five recognised national and international experts in the field of competency frameworks in the workplace were interviewed using the following questions:

- What are the strengths for professional frameworks for practitioner development?
- What are the weaknesses for professional frameworks for practitioner development?
- What is required for optimal implementation of frameworks?
- How can the implementation of frameworks be quality assured?
- What is the future for development of practitioners in the workplace e.g. alternative approaches?

Below is a summary of the main themes and important comments derived from those interviews, which were transcribed verbatim.

The role of the competency framework

All interviewees were in agreement that there was a role for competency frameworks

‘the strengths are that they’re very practical in use and very supportive, very generic, they allow flexibility so there’s not just one type of evidence that contributes towards you demonstrating you have attained a certain level’

Competency frameworks were seen as a positive step forward from traditional models where the amount of time served in practice was used to accredit individual practice.

‘Well the strengths are that everyone is clear what is expected to be achieved at each stage so that as a trainee goes through... So that as the trainee goes through everybody knows what that trainee is expected to have completed and how it will be demonstrated....So there is great clarity and it’s surely better than a time-served basis’

One rationale provided for the implementation of frameworks was the recognition, which they provide to peers, public and the patient.

‘by which they can say I am an advanced practitioner, here is my evidence, there is my royal college certificate on the wall and you can trust me for I’m an advanced practitioner, that’s what the public want, that’s what patients want’

Concern was expressed that frameworks may psychologically define the trainee’s role, thereby limiting their interest in developing in areas perceived as important by the employer.

'I think there are large parts of their jobs which it doesn't cover at all and it deflects their attention from those elements of their job so it makes them feel like the only important elements of their job are the clinical elements and it tends to make them feel like the other elements, like being a correct end checker in the dispensary like it's less important'

There was recognition that assessment of competency is subjective and not objective.

'again I think the actual understanding of what it really means is very context specific so it kind of needs to be in the context of the job you're expecting them to do which may vary completely from organisation to organisation and from place to place'

Similarly, competency frameworks can overly simplify a complex role.

'being a pharmacist is a very complex job and trying to develop a competence framework which adequately describes that job is almost too simplistic because it tries to bring a very complex job down to a series of statements which may go some way into describing the job but they don't go fully into describing the job'

There was an acceptance that it was difficult to develop a framework, which does not overly simplify the role and is still understandable to the user, whilst not being restrictive.

'there is a danger that you routinise what is actually a more complex set of phenomena, if you like. So this I suppose the flip side to transparency that in attempting to be transparent and create a framework against which you can assess people and so on, that you actually, not exactly simplify that's not the right term, but you technicise something and therefore create further problems in that that tends to mean that people might stick to what's laid out in the framework, so it can be restrictive rather than allowing for new ideas to come in and for really developing people's potential.'

It was suggested that competency should be used to describe regulated activities, whilst capability was a better term for developmental purposes.

'but you know competency may well be regarded as a regulatory or a performance issue, i.e. what do you do with somebody who's incompetent as opposed to somebody who is perhaps struggling with their capability.'

Clarity as to the role of the framework was seen as instrumental in its acceptance within the workforce.

'So, for example, I've seen competency frameworks used in car manufacturing where I was able to study two different work places and in one the purpose was not really made clear so individuals were not sure whether the purpose of this was really to develop their competence or it was more a case of the organisation doing it to satisfy you know some kind of process of regulation, in other words was it for external purposes rather than internal purposes. Whereas in the other plant the purpose it was made clear that there was more than one purpose to the use of the competency framework and that yes, you know the primary purpose was very much a workforce development purpose that it was to facilitate and support the development of skills and knowledge across the workforce, but at the same

time that in using the competency framework it was a way for the organisation to show to an external audience that if you like they had measures of the levels of skills in the work place. In addition, because the workforce knew that you know there were those two key purposes then they had a better, both a better understanding but also I think they felt they had more ownership of what was happening.

A lack of clarity with respect to role within the workplace was however identified.

'The weakness is perhaps also is that some managers tend to view them as performance management tools which again some people might see as a good thing because it's about the guarantee of competence and is my workforce competent? The other side of that coin is that you can also get a service specification from them which is a good thing and again that might lead to harmonisation of expectations within the service which could be seen as good.'

For frameworks to be effective, they need to be adaptable to change in the nature of the work.

'if it works properly, it should be a kind of dynamic framework or approach that actually is kind of constantly adjusting to changes in the nature of work.'

Competency frameworks were seen as an integral part of workforce development and not as a stand-alone intervention.

'I think competency frameworks, I think what they need to do is they need to be embedded within a kind of whole approach to workforce development... I mean I think the work that I've done on with colleagues on workforce development is in trying to argue that it works best when it's linked to the way work's organised, it's linked to very importantly an approach to the organisation of work that gives people discretion to be able to make judgments, take decisions and where employees feel involved. If you can get that right you create what in my work, I have called an expansive learning environment. So you create the conditions in the work place that mean that learning is stimulated and recognised'

The role of the portfolio

The effectiveness of the use of portfolios in performance assessment was seen as dependent on the nature of the portfolio itself.

'I think there's very mixed views because they can be seen as kind of kitchen sink approach, you know like you I've seen lots of horrendous ones, it is absolutely everything. The other problem with them is sometimes it's not quite clear really you know who's really compiled them in the sense of to what extent have the tutors you know, it's been very tutor led if you like. Having said that of course portfolios when they work can be you know very motivating for people because they see this record of what they've achieved building and of course they do capture, or can capture, the diversity of types of work you know and layers of expertise and so on, so I think that's something that, I think what I'm trying to say is that not, no one method is necessarily right or wrong, I think it's about how they're used so if you know in the right circumstances portfolios can work extremely well where the purpose of them again is clear and people take an interest in them because sometimes you find you know

materials being collected and evidence built and so on but actually it's kind of going through the motions.'

There were differing views on the validity of evidence provided by portfolios. Whilst they were seen as providing objective evidence of performance

'so you have a portfolio of different assessment tools at different processes of gathering evidence which can be QAd and you have your how you demonstrate the evidence that you can work with others, which again is robust and systematically undertaken'

Concerns were also expressed about the reliability of the evidence presented for consideration.

'they only show you in a portfolio of evidence the things that they have done right and not the things that they haven't done right, so it kind of puts a very positive slant on it'

For portfolios to be effective it was believed that a wide variety of accepted tools were necessary for inclusion in a structured manner.

'in having a standardised portfolio with all of these performance measures in them, the CPDs, CEXs, GLFs, that whole toolbox is part of the portfolio, it's not just some you know random collection of thoughts that people write down on bits of paper and stick in a file. It must be a very structured approach to it'

It was suggested that a reflective piece of writing summarising the portfolio may be more useful than current approaches, which involve review, by an educational supervisor.

'We have these massive electronic portfolios gatherings of evidence and somewhere or other that's sort of dumped and it might be dumped with a summary, so usually when it comes to an annual review you get their educational supervisor does a report and the educational supervisor's are learning to write comprehensive reports and they're still very variable and it's one of the things that we judge. And the reason that I say that we do it to death is that we all start reviewing the portfolio, my son is an engineer, a chartered engineer, and in order to get chartered what he had to do was write a succinct piece of work pulling from his portfolio his experiences to demonstrate that he had met the competence necessary to be chartered and I just think that's so much easier than...'

The student's ability to conceive their role and ability within it was suggested to be the point at which they are ready to become independent practitioners.

'I think the absolute key is reflection and I think you go through as you develop, you go through where the reflection has to be quite supervised, either in group or one to one, and the point where you are ready to be an independent practitioner is a point where you can do that reflection honestly as an individual.'

A process of rainbow writing was suggested to be one approach to identifying this point.

Linda de Cossart and Della Fish and it's called "developing the wise doctor" and they use something, or they describe something called rainbow writing which is that you write your narrative in one ink and

then you use a different colour ink to overlay, this is all the trainees, to overlay what they were feeling and what was going through their mind, or through this narrative, and then they discuss it with their supervisor and following that they choose another colour ink to pull out what they have learned from their discussion. So in actual fact if you've got in your portfolio several bits of writing that have these different coloured ink you can at least tell that somebody has gone through.

The point at which the supervisor is writing less on the document or comments of a different nature, this is when independence is achieved.

Well that's why I think this rainbow writing is a tool that is merely underused, because I think that if that were the case that your green ink, if green is your third colour, from the tutor might get less but it would certainly get much more deep. So if you were to just read the green writing, the green writing might alter and might indicate that things could have been handled differently but I would expect it would be to be much more of I can take that across to a different area, so there is much more taking across and joining up as a whole so that we stop this, at the moment to my mind the competency framework assessment is like a mosaic, so mosaic pieces are sort of quite chunky and there's quite a lot of mortar and what I would quite like it to be is much more fluid with much more coming across and subtlety and blending.

Workplace support

The nature of the relationship between the pharmacy workplace tutor and trainee was identified as creating difficulties unless the tutor had sufficient training to overcome the tensions between undertaking a supportive and assessment role.

'Again I think it's one of the potential problems is that such a close kind of one to one assessment of an individual can be really affected by the inter-personal relationship between the student and the tutor so as the tutor you've really got to try and get on, if you know what I mean, to develop a good personal relationship with the individual so that the inter-personal relationship between you doesn't cloud your judgment of that person, but in practice that's extremely difficult to do, and I suppose just means that the assessment of a competence framework shouldn't be the only assessment because it's very open to bias on behalf of the tutor.'

The medical model of workplace support was described as consisting of a clinical supervisor who supervises the workplace, an educational supervisor who oversees the trainees' progress over a period of time and a mentor who works closely with the trainee to discuss their practice. Meetings between the mentor and mentee are kept confidential from both types of supervisor. The rationale for these different roles is to allow the educational supervisor to maintain distance and be able to hold difficult conversations. It was believed that an educational supervisor should ideally be responsible for no more than two or three trainees; however, instances of where up to ten students were supervised were described.

A clear differentiation between mentor and supervisor was made and the importance and role of both described.

'The ideal mentors are colleagues who work alongside you and they may be on the same level or they may be more senior but they're people with whom you're sharing your practice and engaging within your practice in various ways, not necessarily every day but reasonably regularly. In addition, the mentor's role is to act as a support in the sense of every day support, which is really just encouragement that you are on the right lines. The supervisor's different in that they should be responsible for actually providing more input where necessary and going above and beyond the every day, the connection between the framework and the everyday work.'

Variation in expectation of trainers was identified when attempting to implement a national competency framework.

'the fourth bit of it was we had an overall trainer's report and it was that overall trainer's report which was quite interesting because what it did is it flushed out the inexperience and the inconsistency among our trainers so you might have a trainee who was deemed by the national assessors not to have adequate consultation skills but their trainer might say they were fine and it actually told us quite a bit about the trainer'

Within medicine, assessment at regulatory junctures is undertaken by assessors who are independent of the employer. A portfolio of evidence, mapped against a competency framework, along with internal performance reports and individual student self-assessment (reflection on performance) are presented to the assessors who then viva the student to determine their suitability at that juncture point. The use of independent panels is designed to remove the tension between mentoring and assessment and to improve consistency with decisions. Training assessors was however seen as problematic particularly when it relied on cascading.

'we ran a series of road shows across the country training up people who then trained up others to this competence assessment framework to try to calibrate the assessors, which was great and it was very laudable, however there wasn't true calibration of the assessors and then as it spread out the calibration got weaker so that if you are not using the same trainers to train your assessors that, as it starts to cascade down you get the variation in standard and then we discovered that the people doing the assessments for the competence framework were not even those who had been trained.'

Examples of regional training structures for competency assessors were provided as an example of how to standardise practice.

'so there is something about calibrating your assessor on the technical, to assess the technical skills, but there is also something about bringing them together to share values and attitudes so that they can then assess behaviours as to what is and what isn't okay'

There was recognition that within pharmacy there was a need to develop mentoring skills earlier on within the career path and that it has been introduced from the top down. It was suggested that that

pharmacy leadership body could assume some responsibility for the development and quality assurance of supervisors.

'but there is a leadership body that can do that; they can if you like quality assure supervisors through a professional recognition model. They can engage with employers to ensure that there is shared practice taking place'

General comments on frameworks

Pharmacy frameworks were seen as necessary for early career practitioners due to concerns regarding public safety.

'we've stumbled along in pharmacy for so long thinking like on day one you can be let loose on the public is really just a nonsense..'

The GLF and ACLF should be seen primarily for the purpose of supporting practitioners and not for grading and gating purposes.

'practitioner support tools. Let us not confuse them with career frameworks, because they are not career frameworks'

The variety of different frameworks now available in pharmacy was seen as creating difficulties in the workplace and that a unified framework may be more pragmatic.

'But my concern all the time was how are people supposed to know what they're meant to be doing with all these different competence frameworks that are telling them all the different things, there's just far too many now, we need to simplify the whole system so we've just got one system that we're all agreed with and are all happy with.'

The ACLF was perceived in a more positive light than the GLF because it was being used purely for personal development and not for assessment purposes.

'I do personally feel that the Advanced Level Framework is better in that respect because I don't really think that we use it to assess our practitioners, it's more used as a tool that they can use to develop their own practice'

Difficulties in assessing behaviours at always, usually and sometimes level were expressed.

'like 'always' does something as being I think it's greater than 70% of the time, etc so I suppose you've got to have a shared understanding of what that means but also how in practice you would assess it, that's where the downfall lies'

Concerns about the use of the GLF summatively and expecting practitioners to meet a certain level in all areas by a certain time created difficulties for mentors.

'and we're told that people have got to achieve certain levels by a certain stage, so by the end of stage one they've got to achieve usually in most things.... and then by the end of level two they've got to achieve always in most things. There's no statement, for example, of say for example there's two

out of those hundred statements that they haven't achieved at the right level, does that mean that they've passed or failed, what's the significance so you don't know the proportion that would be acceptable to pass or fail or almost meet or whatever, so there's no, even though we use it to summatively assess people, at the moment we've got no clear idea of how to make that summative assessment'

Furthermore, the linking of completion of the framework to a qualification was seen as pressuring tutors to sign trainees off.

'again I think the tutors are under a huge amount of pressure to say they've achieved it because if you've said no that they haven't achieved it, you don't know what the consequences of that are because it's not made explicit so if there were an area, say just one area of one of the groups of competencies that the person perhaps wasn't as strong at and you said no they hadn't achieved that or that they only achieved it usually what would be the consequence for that person in terms of the overall awarded qualification'

There was some belief that without being made mandatory by the regulatory body it may be difficult to use frameworks such as the GLF to progress practice.

'That's not to say they need to be mandated, you know people need to find their own ways as well. However, I do not think they are. The regulator has no real appetite to mandate professional development post day one, as I understand it, but you know we ought to be supporting our practitioners to be able to push the boundaries of practice rather than just keeping it at the standards that we have today'

Whether some competency frameworks are actually what they purport to be was questioned.

'And there are lots if you look in the literature you'll see lots and lots of things are actually advertised as frameworks, they're not really frameworks they're lists.'

There was recognition that the GLF may be adopted more widely in the community pharmacy sector

'finally, just where they are of use in our community colleagues, we know that colleagues in XXXXXXXX are really interested in implementing both the GLF and the ACLF because they see it as good for patient safety, they see it as good for recruitment and retention opportunities and the generally more supported and better developed workforce so there's a commercial element to this.'

Chapter 4 Discussion

Whilst this independent review has been undertaken over a short period of time and does not claim to be comprehensive, it has effectively compared current practice relating to pharmacy competency based frameworks within pharmacy in the UK with current thinking within the literature. The data obtained from the on-line consultation and oral evidence gathering have corroborated voiced concerns in the literature regarding the implementation of frameworks with actual current practice.

The limited evidence for the effectiveness of frameworks is perhaps unsurprising given the complex nature of trainee development in the workplace. The framework is one part of the development jigsaw with the environment, tutor and external drivers all contributing to the process. The respondent who stated that 'it is difficult to determine if it [my development] is due to the GLF or diploma' could just have easily have stated 'it is difficult to determine if my development is due to the framework, quality of my workplace support, the opportunities for development afforded to me, my conscientious nature or ambition to succeed'. It is however very clear from the on-line consultation and oral evidence gathering that such frameworks do have an important role in personal development and that they should be used throughout the profession for this purpose.

Personal and professional development takes place both vertically within a role, where an individual assumes greater responsibility, increases autonomy and takes on tasks that are more complex and horizontally where an individual develops competencies, which may not be directly related to the immediate role, thereby increasing their adaptability and flexibility. Competency frameworks tend to be defined by a role and hence support vertical development, whereas professional development frameworks, which are more generically described, are effective at capturing horizontal development. Consequently, whilst competency frameworks can be used by individuals for personal development purposes, employers for performance management/appraisal purposes and regulators for assessment purposes, professional development frameworks are for personal development and appraisal purposes only and by definition are less restrictive.

It is perhaps the role of those frameworks within pharmacy which are not currently being used either by the pharmacy regulatory body for patient safety purposes or by specialist interest groups to determine right of membership which require greatest consideration. Whilst the developers of the GLF and ACLF are clear that the frameworks are for practitioner development and this was how the ACLF was viewed by stakeholders, such clarity was less obvious from trainees and tutors using the GLF. It is unclear whether it is being used to ensure patient safety, to confirm appropriateness of career progression by employers or for personal development by employees.

If there are sufficiently serious concerns regarding patient safety for pharmacists acting autonomously in complex environments then the GLF or a derivation should become regulated with all of the associated rigour that such demands i.e. site accreditation and assessor, supervisor and mentor

training. However if the role is primarily for practitioner development then the current highly structured, summative assessment approach to GLF implementation which is currently associated with HEI involvement and postgraduate qualification provision in some locations may be less appropriate.

Whilst the process of constructing frameworks was not always transparent for regulated or statutory frameworks, for those used within general and specialist practice it is clear that considerable effort and thought has gone into the development process. The construct of such frameworks seems to have taken a multi-method approach encompassing both the attributes of the pharmacist and the role. The effectiveness of this is evident from the on-line consultation, which showed broad support for their current content and structure. The ubiquitous use of the ACLF by specialist groups to develop bespoke frameworks demonstrates its current fitness for purpose.

Many of the 'soft skills' identified as not being captured within the GLF could be defined as traits which should be incorporated within an evaluation of competency rather than as discrete competencies themselves or addressed via other routes. Whilst none of our findings suggested that the GLF was structurally inadequate or lacking in sufficient breadth, there were competencies which community pharmacists found difficult to find evidence for and similarly others which hospital pharmacists found it difficult to find evidence for. This is not surprising however as it is inappropriate to expect a non-regulatory and non-generic competency framework to encompass the roles of employees working within such a diverse range of environments unless the employers are either effectively remunerated for providing the necessary breadth of experiences or agree up to produce generic employees who can then easily transition between employers. The regular identification of competencies and behaviours, which were difficult for practitioners to find evidence for within the GLF, may not be due to their lack of general relevance within the framework but more due to the use of the framework for summative assessment purposes. If the framework was described as a professional development framework for all newly registered pharmacists within community and hospital and the competencies for development were agreed by the employer and trainee as necessary for their current role this would allow certain competencies to be ignored in different contexts, thereby removing stated difficulties with finding evidence. Consequently frameworks such as the GLF and ACLF may be better perceived as professional development frameworks and used by tutors and trainees to describe their development and identify their learning needs. If such frameworks are to be used for personal development then their content should be reviewed against the generic learning trajectories outlined by Eraut[1] to ensure that they are not perceived as restrictive. The GLF does not however currently well align with the ACLF and therefore it may be more appropriate to develop an early career professional development framework, which aligns better with the ACLF, encompasses the generic trajectories and is sufficiently broad to capture primary care pharmacist roles as well.

The on-line consultation regarding the GLF received numerous comments regarding it being a tick box exercise, overly complex and burdensome. The likely reason for this is the recommended use of

the GLF at the behaviour rather than competency level. The experience within medicine of implementing frameworks at such a detailed level has resulted in recommendations for the trainee to be assessed at the competency level with evidence for a sample of behaviours used to determine the level of competence. Strong reservations regarding the need to assess each of the behaviours on the frequency of how often they are met were stated during the oral evidence gathering. The realignment of focus on competency from behaviour would remove this current additional complexity.

The focus on collecting evidence to demonstrate that behaviours are met is an attempt to make a subjective assessment of competency, which by definition is complex and context specific, objective. Whilst the subjective assessment of competency can only be made by a tutor based on their observations and the quality of evidence presented to them, no concerns regarding the types of evidence currently being used within the workplace were identified from the on-line consultation. This supports the assertion that those tools recommended within medicine and increasingly being adopted within pharmacy are appropriate for purpose, and that the current diversity of evidence considered applicable should be encouraged and maintained.

Accepting that there is a need to develop practitioners to enable them to assume autonomous clinical roles with significant potential for patient harm (Figure 2), it could be argued that community pharmacists, within current roles, have no need for the additional training currently expected of hospital pharmacist practitioners. The question however is whether community pharmacists who are increasing the patient facing nature of their role, will eventually want or need to assume roles of similar complexity to those of Band 7 hospital pharmacists and above and therefore whether additional training of a similar nature will become a normal expectation. Those community pharmacists who reported using the GLF, though limited in number, were positive regarding its role in structuring their development.

The disparity between the structure of the GLF and ACLF, which trainees transition between, is however of some concern. The voiced concerns regarding difficulties in performing research at the higher level may be due to the lack of a research culture earlier on within pharmacist careers, which is not helped by a lack of signposting within the GLF. Similar comments could be made about developing training skills and leadership skills, all of which should possibly be developed in a limited manner from early on in a pharmacist's career and could be encouraged by greater acknowledgement within any early professional development framework. It could be argued that the two frameworks should be combined, however for early career pharmacists with limited conception of their role there is probably some benefit to be derived from the detail provided in an early framework through the description of behaviours associated with each competency. The list of behaviours would however be used to direct learning rather than for the current purpose of individual mapping. Similarly the limited complexity and autonomy afforded to early career pharmacists, particularly within the hospital setting, possibly warrants the separation of the frameworks.

The different structures and approaches to the development and presentation of regulatory frameworks, which may in some instances already be out of date, are due to historical reasons. For ease of use and understanding, it may be appropriate for all pharmacy frameworks administered by the regulatory body for pharmacy to be derived and presented in a similar manner.

Within the original tender for the review we suggested that for consistency in the application of frameworks, the role and development of workplace tutors required consideration. It is clear from current literature, the on-line consultation and oral evidence gathering that this is an unfounded concern if we assume that competency assessment is formative, context specific and for practitioner development only. Where competency frameworks are used for statutory regulatory purposes then standardisation of assessor, supervisor and mentor roles is of greater importance and local, regional and national networks would need to be established to improve practice. Within both pre-registration and post-registration pharmacy workplace, assessment and development is currently combined in a single tutor role and this clearly creates tension for tutors who need to work alongside junior colleagues on a day to day basis and develop relationships on a personal level whilst concurrently objectively assessing the trainee's performance and providing constructive and honest feedback for developmental purposes. For the implementation of regulated frameworks these roles are separated within other professions.

Training and education within pharmacy is frequently seen as a specialist role to be developed late career and again, similar to undertaking research and development activities, this may be due to the lack of focus on these competencies within the early careers of pharmacists. Accepting that a tutor needs to have sufficient codified and cultural knowledge to be able to develop another's capability, there are always individuals within the workplace either on a temporary (e.g. work shadow or placement student) or permanent basis (e.g. pre-registration pharmacists and pharmacy technicians) whom a registered pharmacy professional can support. Consequently it may be appropriate to reconsider the importance of developing others as an early career competency.

The alignment of the GLF to some HEI qualifications may also have contributed to the expressed concerns regarding the workload, its restrictiveness, difficulties in finding evidence for certain behaviours and the tick box nature of the process. The process of evidence collection and evidence mapping required for the individual portfolio to be passed can distract the student from the process of learning and additionally place an unfair burden on tutors who are under pressure to sign off the student against the framework, as they are concerned about the consequences of not doing so. HEIs which link qualifications with competency development currently require that the GLF is signed off as passed by tutors for provision of a postgraduate qualification and that there is a mapped portfolio of evidence to support this. This seemingly innocuous process elevates workplace-based assessment to summative status and consequently it may be more appropriate to uncouple satisfactory completion of all elements of the GLF from provision of the higher degree. The separation of the two would enable employees and employers to determine which elements of the framework were most appropriate within their context and allow HEIs to focus on their strengths such as introducing

practitioners to cutting edge practices and developing training and research skills. Coupling of the GLF to a HEI qualification may however be appropriate if the framework was to be used for regulatory purposes. For this to occur, the regulator would need to have sufficient concerns regarding patient safety. Currently the GLF is optionally implemented and no significant patient safety concern has been identified at the two or three year post-registration career point.

The use of HEIs to formalise and develop regular reflection by the trainee with their tutor on development against the GLF and to provide networking opportunities to enable practitioners to compare practice across different settings should encourage a CPD culture as well as develop an understanding of the bigger picture. The use of reflection by practitioners is important within the competency literature, with individual conception of an individual's role seen as an appropriate method for determining their current level of competency. It was suggested that a practitioner demonstrates an appropriate level of competency when they are able to effectively reflect on their performance and accurately identify their learning needs. During the online consultation, the reflection competency was frequently identified as either something, which was developed from using competency frameworks, but not captured within them.

Unfortunately only five pharmacy technicians completed the survey on-line fully. The survey was not promoted extensively amongst pharmacy technicians and this may explain the low response rate, it may also however reflect the very recent appearance of the framework and limited national experience of its use. The pharmacy technician framework is largely task focussed and atomised when compared to other healthcare professional frameworks. If the profession is to avoid reducing the use of the framework to a tick box exercise for assessment or employment purposes then the approach taken by Mulder *et al.*, of using a sample of 'Entrustable Professional Activities'[6] to determine competency within the role may be more appropriate than attempting to require pharmacy technicians to map evidence to all 80 competencies. Advanced pharmacy technicians have equal access to non-clinical derivations of the ACLF for example the Education, Training and Workforce Development Framework but the effect of these on pharmacy technician workforce development has not yet been realised.

Within hospital pharmacy in the UK it is usual for pharmacists to have to demonstrate an appropriate level of performance in certain tasks before they are allowed to undertake such roles autonomously. These activities, which could be described as 'Entrustable Professional Activities' can include accuracy checking and clinical checking in the dispensary, performing medicines reconciliation and completing medicines information enquiries. Pharmacists who change hospital employer at any level of seniority within the UK usually have to demonstrate competence in these activities before being allowed to undertake such roles. Whilst there is some inefficiency within this process it is perhaps understandable due to the different expectations and systems available within different hospitals. Interestingly however, demonstration of adequate performance in these tasks is not seen as sufficient in their own right and competency frameworks have been adopted by many hospital employers for

pharmacist development. This perhaps suggests the acceptance of the complexity of the pharmacists' role and the need for development beyond such basic tasks.

The proposed integration of the undergraduate degree and pre-registration year would change the focus of HEIs from the development of codified and practical knowledge to the management of the acquisition of cultural knowledge and consequently not only will the difference in expectations between HEIs and employers reduce, trainees should be better prepared for practice at registration. The current additional two to three years of workplace development seen as required in the hospital environment for safe independent practice and facilitated by HEIs may be reduced to one or two. The proposed change in pharmacy undergraduate education may also require a significant review of the GLF as many of the competencies, such as selecting the most appropriate drug, communication skills and professionalism, currently identified as requiring development during the early career may now be better developed at registration.

Chapter 5 Conclusions, Recommendations & Questions

Based on all the evidence collected and following discussion with the Advisory Group we have been able to draw a number of conclusions about the place of frameworks in relation to personal and professional development for both pharmacists and pharmacy technicians. On the basis of these conclusions we have made a number of recommendations relating to the development and use of frameworks in pharmacy. This work and the discussions that we have had with the Advisory group identified a further set of emerging themes, presented as set of questions at the end of this report, which go beyond the remit of this project but which we feel require further consideration as part of the Modernising Pharmacy Careers programme of work – these are identified as questions below.

Personal and professional development, which is necessary for both organisational effectiveness and for individual role satisfaction, occurs vertically within a defined role to allow for greater autonomy, and horizontally to increase individual adaptability and flexibility. Employee development results from environmental factors such as provision of different experiences and roles, access to tasks of increasing complexity, expansion of autonomy, provision of in-house mentorship/supervision and individual factors which can include the desire for promotion and acquisition of educational qualifications. Competencies are used to describe the different attributes within roles and frameworks are used to support the vertical development process by providing both structure and focus within a specified role. Professional development frameworks, whilst of limited use for regulatory purposes where demonstration of role specific competencies is required, consist of more generic competencies and therefore support both horizontal and vertical development and are consequently utilised primarily for personal development purposes.

Whilst evidence within the literature for the general effectiveness of competency frameworks with respect to patient and organisational outcomes is limited, there is more evidence for their value at the level of the individual trainee. The general consensus from the on-line consultation was that competency based frameworks do play an important and useful role within the pharmacy workplace for the purposes of personal and professional development, regulation and employer support. The general consensus from the advisory panel was that generalisable professional development frameworks should be more widely adopted throughout the pharmacy professions for personal and professional development purposes. Furthermore a need for both early career and senior pharmacist and pharmacy technician professional development frameworks was identified due to the significant development, which occurs with the first few years of practice.

Recommendation 1

Generalisable professional development frameworks, which allow for both horizontal and vertical development to be used for professional development throughout pharmacy at both early and late career stages.

The ACLF was widely accepted as an appropriate tool for the purpose of personal development within more senior roles. DH guidance on developing consultant pharmacist posts recommended that the ACLF be used to help inform the judgement of which individuals have the appropriate capabilities to fulfil consultant pharmacist posts. The ACLF use by both the Department of Health and by specialist groups as a basis for their bespoke frameworks demonstrates both the ACLF's versatility and generic nature. The ACLF does however contain a hierarchy, the validity of which is questioned within the competency literature. Consequently the rationale and appropriateness of these should be reviewed.

Recommendation 2

The ACLF should form the core of professional development frameworks for later career pharmacy professionals undertaking more advanced and specialist roles

Whilst the GLF is designed to encompass both community and hospital pharmacy roles, on-line respondents from both sectors identified competencies and behaviours, which were perceived as being difficult to find evidence for. The use of behaviours within the GLF to signpost the user to what is expected within each competency is appropriate at an early career stage, however the GLF is expected to be operated at the behaviour rather than competency level and with over 100 of these it makes its usage overtly bureaucratic. The rating of how frequently an individual meets the standard expected within each of the behaviours is an attempt to increase the objectivity of an inherently subjective process but seems to only further complicate the usage of the framework. It is therefore unsurprising that the use of the GLF was frequently described as a tick box exercise. The non-alignment of the GLF with the generic ACLF makes it unsuitable for use as the envisaged early career professional development framework.

At the early career level professional development frameworks for pharmacists and pharmacy technicians, which encompasses all roles with limited potential for patient harm, is warranted. Such a framework should be more closely aligned with the ACLF and based on more generic competencies such as those outlined in Eraut's generic learning trajectories.[1] The competency framework should include behaviours to better signpost expectations for each competency however a sample of behaviours should be used to demonstrate competency and it should not be operated at this level.

Recommendation 3

Professional development frameworks for early career pharmacists and pharmacy technicians, which build on what has been learned from the GLF and ACLF and encompasses hospital, community and primary care pharmacy roles, should be developed.

The ACLF and GLF have been developed independently of both the pharmacy regulator and professional body (although latterly adopted by the Royal Pharmaceutical Society) with funding for their development and maintenance resulting largely from significant entrepreneurship by a small number of individuals. If such generalisable professional development frameworks are to be utilised for the whole profession at early career and senior levels then a national organisation, which

effectively represents all stakeholders in the professions, should be found to assume ongoing funding for their maintenance.

Recommendation 4

Appropriate national organisations to be identified to assume responsibility for the ongoing development and maintenance of the professional development frameworks.

Whilst the construct validity of the non-regulated professional development frameworks currently used within pharmacy in the UK was found to be high, the presentation of regulated and non-regulated pharmacy competency based frameworks was different and standardised construct, presentation and language of pharmacy competency based frameworks would improve usability and acceptance across the profession. Evidence and experience suggest that frameworks should not be too atomised. The two most recent pharmacy frameworks for pharmacy technicians and the development of leadership skills with over 80 competencies in each may therefore be overly bureaucratic and review of their usability is warranted in the future when there is greater experience of their adoption. A sample of competencies from the pharmacy technician framework, which is largely task based, could be identified as being sufficiently representative for assessment purposes, thereby reducing the potential need to find evidence to map to all 93 different competencies.

The evidence gathered to inform this report demonstrates that the tutor is a pivotal role within the professional development process, both in discussing and assessing the trainee's progress against the competency framework and in providing the appropriate learning and development environment. Ideally the role of mentor and education supervisor currently undertaken by pharmacy tutors should be separated to enable the mentor to assume a largely supportive role and for the supervisor to obtain an objective picture of the trainee's development. An effective mentor should provide tasks of increasing complexity, provide regular constructive feedback, identify when trainee independence can be increased and provide opportunities for this. Additionally the mentor should assess competence via observation and support the collation of evidence for the trainee's portfolio of evidence and this can effectively be undertaken via the appraisal process. An education supervisor's role would be to review the trainee's portfolio, discuss their progress from an objective view point and provide independent constructive feedback on progress. In employment terms the education supervisor therefore assumes responsibility for management of performance.

To achieve all of these roles effectively mentor and supervisors need to undertake training for the role and ideally some of this training should be incorporated within the development of early career pharmacy professionals. The development of an overarching education and training structure to ensure proper and effective mentor and supervisor training is necessary to ensure consistency in approach to the implementation and utilisation of competency/capability frameworks.

Recommendation 5

A more formal mentoring structure for post-registration pharmacist/technician development should be introduced and funded to support the utilisation of generalisable professional development frameworks.

In providing postgraduate qualifications, HEIs can play a useful role in early career practitioner development by encouraging regular reflection on personal development against such frameworks, providing networking opportunities for trainees to learn from the experiences of others and activities which introduce trainees to the bigger picture. HEIs can also develop research, training and critical appraisal skills and utilise objective assessments to ensure patient safety within the practice of the trainees. The incorporation of the GLF into some postgraduate diplomas, with its eventual sign off being part of the summative assessment process, is seen as problematic due to the use of tutors who assume the role of mentor and supervisor and the general subjective nature of competency, its context specificity and variation between employer expectations. Due to the quality assurance processes required to address such issues e.g. tutor training, workplace accreditation and a need to separate mentor and supervisory roles, it is unusual for HEIs to include the assessment of competency within any qualifications unless they are required for regulatory purposes.

Recommendation 6

Completion of non-regulatory competency frameworks should not be included within the summative assessment process within HEI provided postgraduate qualifications.

FURTHER QUESTIONS RAISED

Whilst the provision of postgraduate qualification incentivises the learning of the trainee, it also creates an expectation of academic reward for workplace development, which not be appropriate. Many of roles described for HEIs above are currently provided for other healthcare professions by postgraduate deaneries. With the proposed fundamental changes to pharmacist training pre-registration, the need for additional generalist postgraduate qualifications for pharmacists post-registration may become redundant. Alternatively, however, the current statutory regulation point for independent prescribing could become achievable within the first two years of registration and therefore the need for more formalised workplace supervision post-registration may actually increase. With postgraduate deaneries potentially assuming some level of responsibility for the pre-registration year of the pharmacy degree it may eventually become more appropriate for postgraduate deaneries to assume responsibility for the development of post-registration pharmacists.

Question 1

Could postgraduate pharmacy workforce development be better supported by multi-professional postgraduate deaneries?

The inclusion of the GLF in postgraduate diplomas, which had significant employer ownership, may represent a subconscious desire by hospital employers to regulate the transition of early career pharmacist to more senior roles due to the increase in autonomy and potential for patient harm. The point within hospital pharmacist development at which pharmacists are expected to operate largely autonomously without supervision is where practitioners transition from Band 6 to Band 7 posts. The question therefore is whether this is appropriate to be maintained as an internal regulatory point by the employer or whether, due to concerns regarding the potential the patient harm, this should be a statutory regulatory point maintained by the General Pharmaceutical Council or a postgraduate deanery.

Question 2

Is there a patient safety concern, which requires addressing by more formal regulation when early career pharmacists transition to undertake roles with increasing autonomy and complexity with significant potential for patient harm?

Competency frameworks have not been widely adopted within the community pharmacy setting. The provision of early community pharmacist career training is obtained in an unstructured and self directed way from a range of sources such as the larger companies delivering in-house training, the Centre for Pharmacy Postgraduate Education, local NHS/Pharmacy structures and HEIs'. The lack of requirement for external validation of employees, which is seen within the hospital setting via postgraduate diplomas, may reflect the lower potential for patient harm within current community pharmacist roles and subsequent lower risk to the employer. If community pharmacy roles are to become more clinically orientated as envisaged with greater individual professional autonomy then the current internal regulation point seen within hospital pharmacy may become more relevant to community pharmacy.

Question 3

Are there any advanced or enhanced community pharmacist/technician roles, which may require greater regulation than that currently in place? If so does this create a similar regulation point to that seen within hospital pharmacy where pharmacists transition into more clinically complex and autonomous roles?

NB The recommendations and questions outlined above are made on the basis of the data which has been collected, and review provided by an advisory panel consisting of representatives from community pharmacy, hospitals and the competency literature (Appendix 3).

Learning points for development and use of frameworks

- Frameworks should include a limited number of competencies to optimise utility
- A list of behaviours which could potentially underpin a competency should be included within frameworks when it is necessary to signpost the user to these
- Competencies should be written to be generic for the hospital, community and primary care setting, with underpinning behaviours bespoke to each setting provided where appropriate
- Frameworks should be defined using a multi-method approach
- Assessment should be at the competency level, with evidence taken from a sample of behaviours
- Trainees should use professional development frameworks to regularly reflect on their current performance, identify future learning needs and agree a personal development plan with their mentor
- Formal assessments of performance against a competency framework should be undertaken within the workplace by an independent supervisor
- Assessment of performance against a competency framework to ensure consistency between sites should be undertaken by a trained assessor who is independent of the workplace

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References

1. Eraut, M. and H. Hirsch, *The significance of workplace learning for individuals, groups and organisations*. 2007, SKOPE.
2. Sandberg, J., ed. *Human competence at work: An interpretative approach*. 1994, Bas: Goteberg, Sweden.
3. Norris, N., *The trouble with competence*. Cambridge Journal of Education, 1991. **3**: p. 331-341.
4. Sandberg, J., *Unnderstanding human competence at work: An interpretative approach*. Academy of Management Journal, 2000. **43**(1): p. 9-25.
5. Brown, A., *Assessment in the workplace of performance, developing expertise and competence*, in *Assessment encyclopaedia*, E.B.a.B.M. P Peterson, Editor. 2010. p. 330-336.
6. Mulder, H., et al., *Building a competency-based workplace curriculum around entrustable professional activities: The case of physician assistant training*. Medical Teaching, 2010. **32**(10): p. e453-9.
7. Dreyfus, H. and S. Dreyfus, *Mind over machine*. 1986, New York: Free Press.
8. Dall'alba, G. and J. Sandberg, *Unveiling professional development: A critical review of*. 2006.
9. colleges, A.o.m.r. (2009) *Improving assessment*.
10. Patel, J.P., et al., *Early experiences of the mini-PAT (Peer Assessment Tool) amongst hospital pharmacists in south east London*. International Journal of Pharmacy Practice, 2009. **17**(2): p. 123-6.
11. Boychuk Duchscher, J., *Transition shock: the initial stage of role adaption for newly graduated registered nurses*. Journal of Advanced Nursing, 2009. **65**(5): p. 1103-1113.
12. Eraut, M., et al., *Early career learning at work*. 2009.
13. Eraut, M., et al. *The LiNEA Project (Learning in Nursing, Engineering and Accountancy)*. 2002.
14. Falender, C. and E. Shafranske, *Casebook for Clinical Supervision: A Competency-Based Approach* 2004, Washington: American Psychological Association.
15. Guile, D., *Conceptualising the transition from education to work as vocational practice: lessons from the UK's creative and cultural sector*. British Educational Research Journal, 2009. **35**(5): p. 761-779.
16. *Pharmacy: the report of a committee of inquiry appointed by the Nuffield Foundation*. 1986, The Nuffield Foundation. London.
17. Davies, G., et al., *Fit for purpose? Pharmacy graduates' perceptions of their readiness to under clinical pharmacy activities*. International Journal of Pharmacy Practice, 2004. **12**: p. R17.
18. Quinn, J., I. Bates, and R. Cox, *Student assessment of postgraduate clinical pharmacy programmes in the United Kingdom (2): results of the course experience questionnaire*. International Journal of Pharmacy Practice, 2000. **8**: p. 253-259.
19. McRobbie, D., et al., *Assessment of clinical competence: Designing a competence grid for junior pharmacists*. Pharmacy Education, 2001. **1**: p. 67-76.
20. Spencer, L. and S. Spencer, *Competence at work: models for superior performance*. 1993, New York: John Wiley & Sons.
21. Davies, J., et al., *A competency-based approach to fitness for practice*. Pharmaceutical Journal, 2002. **268**(104-106).
22. Goldsmith, G., et al., *A pilot study to evaluation clinical competence in junior grade pharmacy practitioners*. Pharmacy Education, 2003. **3**(2): p. 127-134.
23. Antoniou, S., et al., *A controlled study of the general level framework: results of the South of England competency study*. Pharmacy Education, 2005. **5**(3-4): p. 201-207.

24. Mills, E., et al., *Self-assessment of competence in a community pharmacy setting*. Pharmacy Education, 2005. **5**(3/4): p. 189-199.
25. Mills, E., et al., *The general level framework: use in primary care and community pharmacy to support professional development*. International Journal of Pharmacy Practice, 2008. **16**: p. 325-331.
26. Sternberg, R., *Prototypes of competence and incompetence*, in *Competence considered*, R. Sternberg and J. Kalligan, Editors. 1990, Yale University Press: New Haven, CT. p. 117-145.
27. Mestrovic, A., et al., *Evaluation of Croatian community pharmacists' patient care competencies using the general level framework*. American Journal of Pharmacy Education, 2011. **75**(2): p. 36.
28. Meadows, N., et al., *Developing and validating a competency framework for advanced pharmacy practice*. Pharmaceutical Journal, 2004. **273**: p. 789-792.
29. McKenzie, C., et al., *Developing a process for credentialing advanced level practice in the pharmacy profession using a multi-source evaluation tool*. Pharmaceutical Journal, 2011. **286**: online.
30. Patel, J.P., et al., *An evaluation of using multi-source feedback (MSF) among junior hospital pharmacists*. International Journal of Pharmacy Practice, 2011. **19**(4): p. 276-80.
31. Bellingham, C., *What makes pharmacists competent?* Pharmaceutical Journal, 2004. **273**: p. 779-780.
32. DoH, *Adult Critical Care - Specialist Pharmacy Practice*. 2005 [cited 2011 18th November]; Available from: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4114093.pdf.
33. DoH, *The Pharmaceutical Services (Advanced and Enhanced Services) (England) Directions 2005 and determination*. 2005.
34. GPhC. *Pharmacist independent prescribing programme learning outcomes and indicative content*. 2006 [cited 19th November 2011]; Available from: <http://www.pharmacyregulation.org/sites/default/files/Pharmacist%20Independent%20Prescribing%20-%20Learning%20Outcomes%20and%20Indicative%20Content.pdf>.
35. Fernandes, R., et al., *A new professional framework for developing future chief pharmacists* Pharmaceutical Journal, 2008. **281**: p. 329.
36. Bruno, A., et al., *Towards a global competency framework*. American Journal of Pharmacy Education, 2010. **74**(3): p. 56.
37. RPS, *Leadership Competency Framework for Pharmacy Professionals.2010*
38. Hough, J.E., et al., *Framework for pharmacy technicians*. Pharmacy Technician Journal, 2010. **2**(22).
39. GOC, *Optometry Stage 1: Core Competencies*. 2011.
40. GDC, *The first five years - Third edition (Interim)*. 2008.
41. Colleges, A.o.M.R., *Common Competences Framework for Doctors*. 2009.
42. Barrett, T., et al., *Nurses are the key to improving mental health services in low- and middle-income countries*. International Nursing Review, 2009. **56**(1): p. 138-41.
43. Berkov, S., et al., *Assessing new graduate nurse performance*. Journal of Nursing Administration, 2008. **38**(11): p. 468-474.
44. Santiano, N. and K. Daffurn, *Registered nurses' self-perceived level of competence following completion of a specialist graduate certificate*. Australian Critical Care, 2003. **16**(1): p. 16-23.
45. Colthart, I., et al., *The effectiveness of self-assessment on the identification of learner needs, learner activity, and impact on clinical practice: BEME Guide no. 10*. Medical Teaching, 2008. **30**(2): p. 124-45.
46. Gardner, A., et al., *From competence to capability: a study of nurse practitioners in clinical practice*. Journal of Clinical Nursing, 2008. **17**(2): p. 250-8.
47. Spicer, J.G., et al., *Importance of role competencies for Chinese directors of nursing based on the Forces of Magnetism*. Journal of Nursing Management, 2011. **19**(1): p. 153-9.

48. Ginsberg, S., et al., *Towards authentic clinical evaluation: Pitfalls in the pursuit of competency*. *Academic Medicine*, 2010. **85**(5): p. 780-786.
49. Carberry, M., *Hospital emergency care teams: our solution to out of hours emergency care*. *Nursing in Critical Care*, 2006. **11**(4): p. 177-87.

Appendix 1 Biographies for expert panel members (17/10/11)

Professor Michael Eraut, Professor Emeritus (Education), University of Sussex

Michael is the UK's leading researcher into how professionals learn in work place settings. His pioneering research has found that most learning occurs informally during normal working processes and that there is considerable scope for recognising and enhancing such learning. His books include the highly acclaimed *Developing Professional Knowledge and Competence*. In 2007 he completed an ESRC-funded five year study of how professionals learn in the early part of their careers and Michael is working with SCEPTre to help transfer some of this knowledge through conversation and practical guidance and develop new lines of research that will help us understand better the nature of the learning and the way learning is enabled in professional training environments. Ultimately the work is about helping to enhance students' experiences and learning in the professional training work placement.

<http://www.sussex.ac.uk/esw/people/education/person/831>

Professor Alan Brown, Professorial Fellow, Warwick Institute for Employment Research, University of Warwick

Alan was also an Associate Director (with responsibilities for workplace learning and lifelong learning) of the UK's (ESRC) Teaching and Learning Research Programme from 2002-09. His current research, which has a strong international orientation, focuses mainly upon changing occupational identities, continuing vocational training, qualifications development, skill formation, organisational performance, and supporting knowledge sharing and development and learning in professional communities of practice. He was involved in the development of knowledge-sharing sites on research and practice in careers guidance and research and development on lifelong learning, qualifications and work-related learning.

<http://www2.warwick.ac.uk/fac/soc/ier/people/abrown>

Professor David Guile, Professor of Education and Work, Institute of Education, University of London

David is Professor of Education and Work, Co-editor of Sense Series, *Education and the Knowledge Economy*

His research interests encompass debates in:

- (i) Social Theory about knowledge economy/culture/society;
- (ii) Social Philosophy about mind, reason and action; and
- (iii) Cultural-Historical Activity Theory about knowledge, learning and pedagogy.

He uses these interdisciplinary interests to research different aspects of professional, vocational and workplace learning (PVWL).

http://www.ioe.ac.uk/study/LCEN_12.html

Appendix 2 Biographies for telephone interviewees

Professor Jacky Hayden, Dean of Postgraduate Medical Studies, North Western Deanery

Jacky is a medically-qualified doctor with a background in General Practice. She is the Dean of Postgraduate Studies for the North Western Deanery, the aim of which is to ensure that all doctors and dentists training in the Deanery are supported to meet the challenges of their chosen training programme and continue with a life-time of professional development. She has a particular interest in quality management in training.

<http://www.nwpgmd.nhs.uk/content/jacky-hayden>

Professor Lorna Unwin, Professor of Vocational Education, Institute of Education, University of London

Lorna's research interests focus on the changing nature and development of vocational expertise and on work as a site for learning and the improvement of life chances. She draws on a range of disciplinary perspectives and started out professionally as a journalist before teaching in further and adult education. She is currently the Deputy Director of the ESRC Research Centre, LLAKES (Learning and Life Chances in Knowledge Economies and Societies).

http://www.ioe.ac.uk/staff/LCEN/LCEN_42.html

Alison Eggleton, Consultant Pharmacist (Education & Training), Addenbrooke's Hospital; Lecturer/Practitioner - Pharmacist, Homerton College, Cambridge

Alison is the Consultant Pharmacist for Education and Training at Addenbrooke's Hospital (part of Cambridge University Hospitals NHS Foundation Trust) and lecturer/practitioner at Homerton College School of Health Studies, both in Cambridge. Alison qualified as a pharmacist in 1976 and has worked in both community and hospital pharmacy. She has an MSc in Clinical Pharmacy from the University of Derby and a Master of Education degree from the University of Leeds.

http://www.nurse-prescriber.co.uk/Journal_info/EdBoard/alison_eggleton.htm

Dr Catherine Duggan

Catherine is the Director of Professional Development and Support at the Royal Pharmaceutical Society of Great Britain, the new Professional Leadership Body for pharmacy for Great Britain, responsible for the delivery of professional advice and support as well as professional development, science and research strategies in line with the RPSGB mission.

Catherine's previous role was a joint appointment as Associate Director of Clinical Pharmacy and a Senior Clinical Lecturer at the School of Pharmacy, University of London, where she was responsible for evaluating the impact of guidance on clinical drug use patterns and an evaluation culture within clinical pharmacy practice and developing the evaluation skills of advanced and consultant practitioners consistent with the Advanced Level Competency Framework. To date, Catherine has published widely, over 70 peer reviewed papers and articles and secured £600,000 in research income. Catherine was the Chair of the United Kingdom Clinical Pharmacy Association for 2007/2008 and an elected member of the Council of the RPSGB between 2008 and 2009.

<http://www.rpharms.com/rps-conference-speakers/catherine-duggan.asp>

Professor Ian Bates, Head of Education Development, Director of the FIP Global Education Taskforce

Ian is Professor of Pharmacy Education at the School of Pharmacy, University of London. As Head of Educational Development for the University, his role is to progress the organisational and policy development of pharmacy education at national and international levels and promoting informed debate, research and scholarly activity relating to higher education. He is additionally seconded to the NHS in North-Central London, as workforce development facilitator across university teaching hospitals in London. He is Director of the FIP Global Education Taskforce, an international team appointed by the International Pharmaceutical Federation (FIP), WHO and UNESCO, and additionally Editor-in-Chief of Pharmacy Education, an international peer review research journal

<http://www.jpbsoutheast.org/about-jpb/jpb-staff/prof-ian-bates>

Appendix 3 Biographies for advisory panel members (23/11/11)

Nanette Kerr (Representing Day Lewis Pharmacies)

Nanette is dually qualified in pharmacy and law and most recently was Director of Pharmacy at the National Pharmacy Association where she was responsible for Education and Training (the NPA is the UK single biggest supplier of regulated training to the pharmacy sector), Information Services, Pharmacy Service Development and Account Management for the major multiple pharmacy businesses. Prior to the appointment of the current CEO she was the key advisor to the Board on all aspects of policy, professional and strategic direction, including working with the DH on a variety of key projects.

Nanette's previous corporate position was as Head of Professional Service Development for Boots UK Ltd. where she was responsible for research and development of services both for in-pharmacy services and business to business solutions such as the in-house community pharmacy in Heartlands Hospital successfully delivering a new model for outpatient dispensing.

Nanette is currently an independent consultant specialising in supporting pharmacy businesses in strategy, service and clinical governance development.

Professor Alan Brown, Professorial Fellow, Warwick Institute for Employment Research

See above

Professor J. Graham Davies, Professor of Clinical Pharmacy & Therapeutics, Institute of Pharmaceutical Sciences, King's College London

Graham is Professor of Clinical Pharmacy and Therapeutics at the Department of Pharmacy King's College, London having previously held a personal chair at the School of Pharmacy, University of Brighton. He has a keen interest in developing career structures within the profession, in particular as they relate to the competence of pharmacists, and in designing both undergraduate and postgraduate curricula, which embrace novel clinical teaching and assessment methods to promote the acquisition of competencies. In addition, he is Head of Programmes for the Joint Programmes Board for London, East and South East England, with overall responsibility for delivering the key educational strategy and for ensuring that programme development is in line with patient safety and employer need.

<http://rg.kcl.ac.uk/staffprofiles/staffprofile.php?pid=10604>

Steve Howard, Director of Professional Standards & Superintendent Pharmacist, Lloyds pharmacy

Steve leads the:

- Clinical Governance & Professional Standards Teams
- Customer Services Team
- Quality Assurance and Regulatory Affairs Teams

He is an experienced Human Resources professional and training and development / internal communication specialist who has operated at a senior level within a large international company for over 20 years. Steve previously served as an active member of the Preregistration Advisory Group (PAG), Revalidation Advisory Group and Pharmacy Sector Committee and is a current Pharmacy Technician Registration Evaluator and member of the Modernising Pharmacy Careers (MPC) Working Group.

Marc Donovan, Head of Professional Capability, Boots UK

Marc is responsible for the resourcing, learning and development of all professionals within the Company. He is a practising pharmacist and Independent Prescriber, specialising in cardiovascular disease and Medicines Management. He is an Honorary Clinical Lecturer for Cardiff University and sits on the Welsh Pharmaceutical Committee of the Welsh Government. Marc is also a member of the Welsh Board of the Royal Pharmaceutical Society and Community Pharmacy Wales.

Dr Chris Green, Chief Pharmacist, Countess of Chester NHS Foundation Trust

Chris is Director of Pharmacy at the Countess of Chester Hospital with key interests in patient safety, continuous improvement and practice research. His career has included spells as a Resident Pharmacist, Medicines Information Pharmacist, Teacher-Practitioner and Clinical Services Manager. He has been a General Committee member of UKCPA for almost ten years and is currently the Chairman of the Association.

He has supervised all levels of student up to PhD to successful completion, and written or contributed to almost fifty research or review articles, presented a number of times at national conferences and is a co-author of "Pharmaceutical Care Made Easy".

Steve Russell, HR Business Partner, Guys & St Thomas' Hospital

Steve spent many years working in operational roles for international Investment Banks before re-training to work in Human Resources. Three years as HR Manager with a major retailer was followed by a move into the NHS in 2007. Having worked for two Outer London NHS Trusts in senior HR roles, Steve is currently working at Guy's & St Thomas' NHS Foundation Trust; with responsibility for strategic HR across a broad range of clinical areas including Pharmacy, Haematology/Oncology and Dental.

Chris Acomb, Lead Pharmacist for Professional Development, Leeds Teaching Hospitals NHS Trust

Chris is a practising Clinical Pharmacist and Independent Prescriber, working in Care of the Elderly and Acute Medicine. He also has the role of Lead Pharmacist within the trust for Education and Training, Audit, Practice Development and Research.

Current Positions held in Professional Organisations:

2011 - Registered as an assessor of pharmacists for NCAS

2010 - Steering Committee for West Yorkshire Local Practice Forum

2010 - Chair organising committee for West Yorkshire annual Pharmacy Practice Conference

2009 - External examiner. BTech (Clinical Pharmacy), University of Derby