Learning and Development Principles for CSP Accreditation of Qualifying Programmes in Physiotherapy

Introduction

This paper sets out the principles on which physiotherapy qualifying programmes should be based in order to obtain Chartered Society of Physiotherapy accreditation.

These principles are intended to help course providers develop their programmes to prepare learners for current and emerging physiotherapy roles that meet changing health and social care needs, and for practice within an evolving context.

For CSP accreditation/re-accreditation, programme teams will be asked to clarify how their programmes are designed to:

- Build and consolidate core physiotherapy knowledge, skills values and behaviours to enable students to develop into safe, effective, caring, confident and autonomous physiotherapists;
- Reflect the needs of local, national and global populations;
- Prepare graduates to work flexibly across care contexts and be prepared to meet challenges associated with population trends and shifting demographics;
- Prepare graduates to deliver effective services that are centred around whole-patient care across the lifespan and spectrum of health and well-being, illness/disability and end of life care;
- Develop skills to identify and implement best practice;
- Develop research skills;
- Develop graduate confidence in the application of health informatics and technological advances to support research and improvements in practice;
- Clarify expectations of existing and emerging job roles for newly qualified physiotherapy graduates;
- Incorporate scope of practice, develop life-long learning skills and raise awareness of links between continuing professional development and future career pathways;
- Develop entrepreneurship and awareness of business services evaluation and related commissioning models;
- Engender graduate confidence and resilience.

These principles have been developed in parallel with the CSP's Physiotherapy Framework setting out the knowledge, skills, behaviour and values (KSBV) required for various physiotherapy roles at different levels, and should be read in conjunction with the KSBV required for qualifying level practitioners *(elements of the framework are included in a supplementary document Section 3: Learning and Development Principles: Quality Assurance Supplement for CSP Accreditation of Qualifying Programmes in Physiotherapy, 2010)*. The principles set out the means by which appropriate learning and development may be achieved in order to fulfil KSBV expectations at professional entry level and to lay the foundations for future career development.

These CSP expectations resulted from a series of consultations with groups comprising academics, managers and clinicians in all four UK countries, and SHAs in England. Discussions were also held with students and CSP committees and groups. Consultations were based on the implications for physiotherapy education (at all levels) of the direction of change in national health policies, together with identified demographic and lifestyle health issues which demand a response from healthcare professions. The CSP 'Vision for the future of UK physiotherapy' underpins these L&D Principles.

The continuing fitness for purpose of newly qualified graduates must be ensured in a climate of change and uncertainty in the UK health economy, while also recognising the opportunities that proposed changes will bring for physiotherapists able to respond to change.

Whilst programmes identify and strengthen physiotherapy knowledge and skills encompassed by the four pillars of practice defined by the royal charter (manual therapy, exercise and movement, electrophysical modalities and kindred physical approaches), enterprise, innovation and creativity in their application in new settings is strongly encouraged.

Transition in the health service from mainly acute sector working towards the majority of physiotherapy services delivered in primary care settings, predicted in the Foreword to the *Curriculum Framework* (2002) and now shifting towards the integration of health and social care (Caring For Our Future: reforming care and support DH, 2012; Health and Social Care (Reform) Act (NI) 2009; Integrated assessment, planning and review arrangements for older people, Welsh Government 2014; Public Bodies (Joint Working) (Scotland) Act, 2014), must be embedded in qualifying programmes. Qualifying programmes need to ensure that physiotherapists are ready to respond and able to adapt to new ways of working in different settings.

Students will need to understand the implications of working in different ways, both in theory and also through exposure to a wider range of placements than at present. Similarly, opportunities arising from greater emphasis on maintaining or regaining the health of the population through exercise and lifestyle change (Reducing obesity and improving diet DH, 2013; Creating an active Wales, Welsh Government, 2013) can only be seized by those who have the necessary knowledge and skills in exercise science and prescription.

Within the context of national policymaking and implementation, there is increasing autonomy and diversity in decision-making at local level. Programme designers and providers must therefore be responsive to a range of local stakeholders including:

- NHS Commissioners and planners[1], reflecting the health needs of the local population
- Service users
- Practice placement providers across health and social care sectors
- The local physiotherapy community
- Their own university
- Their students

[1] Funding bodies differ in the four UK countries. In Northern Ireland, the Department of Health, in Scotland the Scottish Funding Council, and in Wales the Welsh Assembly Government provide funding for physiotherapy and other healthcare programmes and so ensure that their governments' health policies are implemented through the education and development of their future workforces

It follows that the CSP, to be enabling and supportive of programme teams, must have L&D expectations that permit the essential flexibility and dynamism that such local decision-making will increasingly demand. The programme must also conform to National frameworks criteria: the HCPC SETs and SOPs, the NHS KSF at Band 5, and the QAA FHEQ at the appropriate level.

The format chosen for the CSP principles below reflects the necessary freedom that programme providers must have in order to meet locally developed policies and the needs of the local population, while also meeting regulatory and academic quality standards set nationally.

Each principle is followed by a commentary, then questions for programme providers to ask themselves to address the principle (self evaluation questions). By doing so they will find their own solutions as seem appropriate to their local conditions. Through articulating aspirational principles, enabling providers to choose their own approach but then fully justify it, the CSP will be leading best practice in programme modernisation, avoiding prescription, and encouraging innovation in design and delivery.

By using these principles in their programme design, teams will show that they are changing in response to evolving patterns of service delivery and addressing the particular needs of their local population.

Information about the CSP's Quality Assurance and Enhancement (QAE) processes for the re/accreditation of qualifying programmes can be found within the supplementary document [programme lead handbook]. This document provides comprehensive support for programme providers on the CSP's approach, practical arrangements and the type of documentation needed to support the re/accreditation process.

1

Principle 1 Programme Outcomes

Qualifying programmes should aim to develop the knowledge, skills, behaviour and values (KSBV) required to practise physiotherapy at newly qualified level (NHS Band 5 or equivalent), while nurturing the skills, behaviour and values that will enhance career-long development and practice.

The broad expectation is that programme planners should aim to ensure the KSBV required of a newly-qualified physiotherapist are effectively developed (*the main elements of the framework can be found within Section 2: Learning and Development Principles: Quality Assurance Supplement for CSP Accreditation of Qualifying Programmes in Physiotherapy, 2010*). This will equip new graduates with the competencies to ensure fitness for purpose in a first post and to meet the requirements for registration with the Health Professions Council, ie a secure foundation of knowledge, sound clinical skills of assessment and treatment, and generic communication and relational skills.

It is not expected that graduates will have developed specialist skills. Rather they must have a fundamental understanding of biomedical and human sciences, together with a strong grasp of the fundamentals of the therapeutic process, ie physical assessment skills, clinical reasoning, a repertoire of safe, effective prevention and treatment skills to address commonly occurring problems of movement dysfunction, health and well-being to meet the needs of people of all ages, evaluation and discharge/ modification skills. An evidence-based, problem-solving and person- centred approach, coupled with strong clinical reasoning skills and the ability to reflect, evaluate and adapt to changes in practice are considered an essential foundation for developing a professional career including specialization.

The Physiotherapy Framework domains contain the knowledge, skills, behaviour and values required of a newly qualified physiotherapist. Ultimately decisions about the programme should be taken in partnership with students, service providers and service users, within the guidance specified in the Framework, ensuring the currency and fitness for purpose and practice required in the context of changing demands in health and wellbeing provision.

As local decision making will inevitably lead to some differences in emphasis among programmes, as now, it would be good practice for universities to be explicit about their programmes in their marketing materials.

Self evaluation questions for programme providers:

- How do we ensure our graduates are fit for practice in their first posts, with the necessary KSBV?
- How are new needs, demands or opportunities being addressed by the programme changes we are making?
- Are service providers and service users sufficiently involved in our programme design and delivery?
- How well can prospective students find out about the emphases and balance of content within our programme?

Principle 2 Programme design

Flexibility and local need will determine programme design decisions, within nationally agreed boundaries.

Innovation in programme design and delivery is actively encouraged and should be evidence-based where possible. Although the minimum requirement for a qualifying programme in physiotherapy is a BSc with Honours, achieved by either full- or part-time study, postgraduate routes to qualification have been successfully developed. The minimum requirement for full-time study is 3 academic years for BSc (Hons), 4 years in Scotland, and 2 calendar years for MSc qualifying routes, with commensurately longer programmes undertaken through part-time study. The requirement is for graduates to attain the Graduate Attributes set out in the QAA qualifications frameworks (appropriate to the programme level). A summary of expectations for Honours and Master's degree awards for the two frameworks is given in *Section 2: Learning and Development Principles: Quality Assurance Supplement for CSP Accreditation of Qualifying Programmes in Physiotherapy*

Flexibility should enable students to obtain intermediate awards in recognition of successfully completed elements, if they fail to complete the entire programme for which they registered. Further, integrated programmes could be considered to permit registration for sub-honours degree awards within honours programmes, in response to local stakeholder need for support worker grade staff. It must be made clear to those exiting a BSc (Hons) programme early that they will not be eligible for registration with the HCPC. However, integration and bridging for support worker grades via intermediate awards or foundation degree qualifications, to develop to fully qualified status, should also be considered in the design of programmes.

Programme design should be inclusive in nature, taking account of the needs of all potential students for access to all aspects of the curriculum. Flexibility for equality and diversity should take account of those with specific learning needs, for example through disability (cross reference CSP disability guidance), and also ensure that design meets the needs of students from different cultural and educational backgrounds, and with different individual circumstances. Due account should be taken of relevant Funding Council widening participation and access policies.

Learning derived from university and from practice-based settings is of equal importance, and practice-based learning is regarded as an indispensable and integral part of the learning process. Students are therefore required to undertake around one third of their programme of study within the practice environment, amounting to 1000 hours of learning (see Principle 6). Programme design must take account of the necessary integration between the new knowledge and skills developed through learning in practice and the opportunity to evaluate, reflect on and develop this further within the university setting, and vice versa.

Where possible, elements of student choice should be built in to programme design. The ability to exercise initiative and personal responsibility - a graduate attribute at both BSc and MSc levels (QAA, 2008) – is desirable as a means of encouraging students' personal interests and development through optional programme modules or choice within modules. However student choice should be embraced as a means to enhance student experience and not as an opportunity to opt out of parts of the compulsory curriculum.

Although the CSP wishes to encourage programmes to develop with increasing flexibility, it is still important to balance this against the need for provision of a coherent student journey for those who through illness or other mitigating circumstances find themselves taking longer to complete. Therefore the CSP continues to recommend that programme designers continue to set a maximum term for the completion of their programme, appropriate to the length and level.

Self evaluation questions for programme providers:

- Have we explored all opportunities for flexibility in design - including step-on, step-off and opportunities for student choice?
- Do we have effective strategies in place to ensure sufficient integration between learning derived from practice and learning in the university setting?
- How do we ensure inclusivity?

Principle 3 The learning process

The learning process experienced by students should prepare them well for initial practice upon qualification, to promote continued learning and enable them to adapt to the challenges and opportunities of an ongoing career in physiotherapy.

The learning process within qualifying programmes should enable physiotherapy students to develop the following:

- An ability to learn independently, while being aware of relevant and appropriate sources of support, advice and guidance and how to access these
- An appreciation of the inter-dependent relationship between theory and practice within professional learning
- A capacity for clinical reasoning, problem solving, practice evaluation, reflection and recognition of the central importance of these in all elements of professional practice
- A capacity for critical appraisal of the profession's evolving evidence base and its application to practice, and the ability to adopt a critical and questioning approach in practice
- A capacity for effective communication and interpersonal skills
- An enterprising and creative approach to the promotion and provision of physiotherapy services including an understanding of social enterprise
- An enterprising attitude to practice and rehabilitation that values creative and evaluative approaches to innovation and risk taking
- A capacity to recognise the scope for, and to engage in, the transfer of knowledge, skills and behaviour to different professional settings and situations, while having due regard for the limits of their personal scope of practice
- A capacity to demonstrate leadership appropriate to their role[2], and to take the initiative in identifying potential improvements in physiotherapy services
- A strong understanding of the links between different elements of the programme they follow and an appreciation of the broad concepts and values that underpin physiotherapy practice in all settings and environments
- Recognition of the fundamental importance of client autonomy and partnership
- An aptitude and enthusiasm for life-long learning and an appreciation of the continuum from qualifying education into post-qualifying practice and development.

[2] The need for leadership skills for NHS staff at all levels was proposed in *A High Quality Workforce : NHS Next Stage Review* (DH, 2008c), and the Department of Health is currently developing guidance on how this should be interpreted for AHPs in England at each level, including newly qualified staff. Similar guidance is likely to be made available in Wales, Scotland and Northern Ireland. It seems likely that this guidance will be based on the already published Medical Leadership Competency Framework (Academy of Royal Medical Colleges and NHS Institute for Innovation and Improvement, 2009). Work is currently underway to assess whether the MLCF is relevant for AHP leadership competencies. Of the five groups of competencies doctors at the point of qualification are required to have achieved competence in two: 'demonstrating personal qualities' and 'working with others'. They should have an understanding of the knowledge and skills required for the other three groups: 'managing services'; 'improving services'; and 'setting direction', but competence is not expected until later in their careers. It is expected that for AHPs guidance would include working alongside support and assistant grade staff, and also the need to develop the confidence and initiative to contribute effectively to service improvement. When the DH guidance for AHPs is available it will be incorporated into these principles more explicitly.

Self evaluation questions for programme providers:

- Does each component of our programme enable learners to develop independent and ongoing learning skills?
- How do we support our students to develop transferrable knowledge and skills, and adapt to different professional settings?
- How effectively do we enable learners to develop the values underpinning physiotherapy practice? *(Reference to new Code of Professional Conduct)*
- How do we encourage our students to show initiative and develop anticipatory leadership in contributing to service improvement?

Principle 4 Learning, teaching and assessment strategies

Learning, teaching and assessment approaches should be adopted that facilitate the development of high level cognitive skills.

Decisions about the particular learning, teaching and assessment methods used within programmes will be made by the education provider. However an active learning and student-centred approach should be paramount. All those involved in delivering and supporting qualifying education should genuinely recognise students as active participants in the learning process, with their thoughts, ideas and contributions respected at all stages and in all environments in which learning occurs.

Learning and teaching strategies and content should be evidence-based, and students should be encouraged to adopt a questioning, critical stance, while understanding that evidence may be accumulated in different ways and at different levels (Sackett et al, 2000).

Developing a true integration of learning in all settings will facilitate students' understanding of the use of evidence in practice settings, and will help them to transfer new knowledge and skills from one area to another. Students should be explicitly introduced to the skills of reflection as a tool for learning from experience. Allocating specific time within the programme – and providing appropriate tools and support – to reflect on their learning in both university and practice settings will promote integration of learning. It will also assist the development of higher level cognitive skills.

Assessment should focus on students' development and demonstration of the key qualities of learning expected at honours degree level (and above in postgraduate-level qualifying programmes). A range of different methods provides for individual differences in learning styles and ensures an equitable chance of success for all students. Valid assessment methods that demonstrably test learning outcomes appropriately, for example testing practical skills in practical or clinical contexts, and with good reliability to ensure equity and fairness, will provide assurance that graduates have the necessary knowledge, skills, behaviour and values.

Learning, teaching and assessment strategies should be developed inclusively and with sensitivity to individual needs in terms of access to the curriculum. Appropriate adaptations should be made in accordance with ethical and legal expectations.

Self evaluation questions for programme providers:

- How do we ensure that the principles of active learning are adopted in all settings?
- How do we ensure our teaching is evidence-based?
- How do we make reflection in and on practice an integral part of our programme? How do we ensure all our assessments are valid and reliable?
- How do we accommodate individual needs in both learning and assessment?

Principle 5 Interprofessional education

Opportunities for interprofessional learning with students from other disciplines should be made available in both university and practice settings.

Interprofessional education, in which students from two or more professions learn with, from and about each other, offers opportunities to develop understandings of the roles and approaches of other health professions. This lays foundations for collaborative and team working in practice, including the skills of promoting interprofessionalism, to the benefit of clients (CAIPE,2002). Although much progress has been made by many programme planners further opportunities could be explored, and consideration given to the point in the programme at which they would be most influential.

Sustainability of interprofessional education can be problematic due to programming incompatibilities, large groups created when different professions learn together, with timetabling and resourcing difficulties, and staff development issues. A distinction also needs to be drawn between interprofessional education and multiprofessional delivery of shared learning in which two or more professions learn side by side and results in large student groups being taught together about topics that are regarded as generic, such as research methods. Although the difficulties of interprofessional education must be acknowledged the value to students of interprofessional experiences is becoming increasingly recognized and promoted by the Department of Health, with support from CAIPE (DH, 2007).

Interprofessional education appears to be most effective within faculties that have an interprofessional culture, so that collaboration between different professional programme teams is explicit and evident to students. This may be at the level of interprofessional interaction between individuals, which is in the control of every member of the Faculty, or it may involve more complex infrastructure such as central timetabling. It is not the intention to impose a principle that is beyond the control of the programme team but it is desirable that physiotherapy education should continue to work towards an interprofessional ethos.

Self evaluation questions for programme providers

- How far do our existing interprofessional education activities promote understanding of the roles and ways of working of the other professions involved?
- Is there scope for us to increase interprofessional education opportunities in either university or practice settings?
- How far can we promote and enhance interprofessionalism within our Faculty?

Principle 6 Practice placements

Each student should experience a balanced sequence of practice placements, representing a diverse range of settings in which they are likely to practise on qualification. The placements should make progressively greater demands in terms of competencies, such that successful completion will ensure graduates can practise as autonomous newly qualified practitioners.

Students should be enabled and supported to develop the knowledge, skills and professional behaviour to manage a broad range of conditions relating to human movement. They must also be enabled to develop their understanding of the wide range of individuals who can benefit from physiotherapy and the diverse settings in which physiotherapy is provided.

Physiotherapy education should therefore incorporate placements for all students that cover a broad learning experience of physiotherapy practice. Students must receive sufficient preparation before a placement to ensure they work within their scope of practice, under supervision. Likewise, placements providers should also receive sufficient preparation and ongoing support throughout the placement from the programme team. Placements should be able to demonstrate evidence of their commitment to inclusive practices with regard to students and employees from diverse groups. These practices should respect and value difference and diversity and should be based on the principles of dignity and human rights.

Students need to gain a breadth of clinical experience through which they can develop learning across a wide range of physiotherapy practice. They need to develop transferable skills that are fundamental to professional practice, including: assessment; critical appraisal and evaluation; clinical-reasoning and problem-solving; self and caseload management; communication and teamwork. These skills can be achieved through undertaking a variety of clinical placements in a range of practice environments.

The settings in which students gain clinical experience should reflect the kinds of environments in which they are likely to practise on qualification. The CSP Vision statement recognises and celebrates the differences in service configuration and the ways that the physiotherapy workforce will be employed. Recognising the increasing diversity of physiotherapists' practice within health and social care, in terms of its setting (primary, intermediate or acute care), sector (NHS, social services, independent and private practice, industry or the voluntary sector) and patterns of teamwork (with individuals increasingly working with members of other professions and relatively dispersed from other physiotherapists), the CSP promotes a flexible approach to how students' learning in the practice environment is organised, delivered and recognised.

The CSP encourages an emphasis on the overall profile of practice experience that individual students gain, rather than the completion of specific clinical placements demarcated along traditional lines (CSP, 2005). Practice-based learning therefore needs to be organised in such a way that reflects the increasing tendency to provide physiotherapy services in primary care settings. Core skills may be acquired in different settings, rather than the increasingly unworkable and inappropriate notion of core placements. Attention should be paid to patient pathways, allowing students to have exposure to richer learning experiences that cross boundaries in the way that patient journeys do.

Although the quality of students' learning experiences and the successful achievement of the programme's outcomes has pre-eminence over the quantity of experience in practice settings, the CSP believes it appropriate to retain an indicator of the minimum amount of practice-based learning students need, alongside an outcomes approach to programme design. The consensus from the student body, academics, managers and clinical educators within the profession remains that 1000 hours, which has equivalence to one academic year of full-time study (or one third of a three-year degree programme) is an appropriate minimum for practice-based learning. This should enable programme outcomes to be achieved in the majority of cases and ensure a good balance between learning in practice and academic environments.

Moreover, the retention of a minimum requirement seems warranted within a context of: increasingly diverse programme structure, length and level; the CSP's emphasis on students completing an individual profile of learning within the practice environment; and the need to ensure consistently high quality provision responsive and relevant to the demands of contemporary professional practice.

In proven exceptional circumstances for a student - such as significant illness or personal circumstances, and where it can be demonstrated that the learning outcomes have been successfully achieved - students should not be penalised for a small deficit in the number of hours completed in the practice environment.

It is essential that students document the full range of their learning experience of physiotherapy practice in order to facilitate delivery of a balanced programme and in the formal processes for the assessment of learning within a qualifying programme. The majority of programme providers have developed a portfolio, whether electronic or in hard copy, which students use to record their learning experiences. The portfolio approach helps learners to develop habits of reflection that will underpin CPD and lifelong learning.

Self evaluation questions for programme providers:

- Do our placements adequately reflect the environments in which students first practise after graduating?
- How could our placements be differently arranged (in terms of length, location and supervision) so that students can follow the patient journey and gain a more complete understanding of progressive management?
- What implications would there be for student assessment if we had more diverse placements and how could these issues be addressed effectively?

Principle 7 Models of practice

A programme should be based on models of physiotherapy practice that are person-centred, appropriate to the settings and roles in which graduates will practise.

Programme developers base their decisions upon educational philosophy, whether implicit or explicitly articulated. Programme documents submitted for CSP accreditation all contain a component that expresses the philosophy upon which the programme is based, and should continue to do so: for example, the approach to student learning, evidence-based teaching etc. However the underlying model of physiotherapy practice is less frequently addressed either in the programme philosophy or explicitly in the teaching itself.

New ways of working involve shifting models of practice and curricula have continually expanded to incorporate elements needed to practise in broader settings, including community-based placements. Content has also broadened to encompass wider patient groups. Nevertheless, variations in practice within these different settings would benefit from a coherent and explicit analysis. Students need a fundamental grasp of the benefits and limitations of different models and the ways of working associated with them, and also need to develop the flexibility required for working competently within each model. Adopting such a model-based approach, emphasising principles and concepts, may help to reduce the overload resulting from continually adding material related to diverse patient groups or settings. This approach would build a conceptual framework enabling students to be more adaptable and work towards new understandings of person-centredness in new and different contexts.

The emphasis in health policy in all four UK countries on public and population health (Scottish Government, 2007; Department of Health, 2008a; Welsh Assembly Government, 2005) will require further adjustments to traditional models of practice with implications for physiotherapy programmes.

Public health

Physiotherapy has an important and well established role in secondary prevention after injury or disease. However, it has played much less of a role in primary prevention, despite its potential to improve the health and wellbeing of groups such as school children, obese people of any age, and the elderly population. Physiotherapy could contribute strongly to the promotion of exercise and healthy lifestyles, underpinned by a sound knowledge of exercise physiology. There is a consensus amongst managers, clinical educators, academics and students that the skills of physiotherapists in exercise prescription and progression for individuals and groups need to be improved, having been to some extent neglected in recent years. Physiotherapists can make a unique contribution to improved population health through exercise, combining skills of assessment and clinical reasoning with skills of exercise prescription.

Fitness for work

The assessment of fitness for work, highlighted in *Working for a healthier tomorrow* an independent review by the National Director for Health and Work of the health of the working population in Britain (Black, 2008) has been largely neglected in UK physiotherapy

education, although featuring strongly in some European physiotherapy curricula (eg Finland). It is an important and developing aspect of practice, which together with work-related rehabilitation, will enable the profession to contribute significantly to the health of the nation and its economy.

The management of long term conditions

Traditionally the province of physiotherapists, this has recently become a high priority on government agendas, with consequent guidelines about how and where people living with such conditions should expect to receive services (Department of Health, 2008a). This approach to rehabilitation and continuing management again entails a shift away from traditional approaches towards the facilitation of enabling of self-management, requiring a sound understanding amongst physiotherapists of self efficacy theory and practice.

Self evaluation questions for programme providers:

- Do we explicitly and adequately address models of physiotherapy practice within our programme?
- How can we prepare students effectively for working in diverse and changing settings and with different patient groups, without overloading the programme?
- Do we pay adequate attention to exercise and exercise prescription in our programme, and prepare learners for roles in public health and fitness for work?
- How well will our graduates be able to equip people for self-management of their long-term conditions?

Principle 8 Research, critical evaluation and appraisal

The programme should support the development of a questioning and evaluative practitioner who has the knowledge and skills to use and gather evidence in practice, and contribute to the discovery of new knowledge.

Graduates require skills of analysis and enquiry, the ability to devise and sustain arguments and critique research, and the ability to initiate and carry out projects. In addition they must '....evaluate arguments, assumptions, abstract concepts and data, make judgements and frame appropriate questions to achieve solutions to problems' (QAA, 2008). Programme designers are encouraged to choose the means by which their graduates develop these capabilities, based upon student feedback and other considerations such as the university's requirements, the length and level of the programme and the characteristics of their students.

The CSP does not require students to undertake a small-scale research project, although carrying out a project can be a formative and challenging learning experience whether done individually or in a group (which also then serves as an exercise in teamworking). However a potential danger is that students focus narrowly on the demands of the project and do not gain a wider understanding of the nature and philosophy of science and scientific method. This understanding is essential for them to develop a questioning approach to physiotherapy theory and practice, and understand some of the ways in which questions might be answered or investigated. However an experience of data collection would enhance and complement these fundamental understandings, whether as part of a research project or as a form of coursework in any part of the programme.

A proper understanding of the place and use of evidence in practice should include a fundamental grasp of the different ways that evidence is gathered through both qualitative and quantitative methodologies, how it is weighed and critically interpreted, and how it is used to inform decision making in practice settings. As with evidence-based medicine in Sackett et al's definition, evidence-based practice in physiotherapy requires the integration of the best research evidence with clinical expertise and judgment, and the patient's own values (Sackett et al, 2000).) The ability to critically appraise published research should include an understanding of how it relates to and should inform practice, including familiarity with guidelines (NICE; CSP etc.). There is much to challenge students in this and they will therefore need a thorough introduction to critical thinking and skills of database searching, ideally built into the entire programme from Year 1.

Informatics

Health informatics as it is currently practiced may be defined as 'The knowledge, skills and tolls which enable information to be collected, managed, used and shared to support the delivery of healthcare and to promote health' (Department of Health, 2002). Competency in service-related data collection is expected to become a requirement of all NHS allied health professionals, and in any sector data will provide evidence when making a case to have services bought or commissioned. Students will therefore need to develop the required knowledge and skills, understanding the uses to which information is put in service management, evaluation and improvement. Informatics will be used for patient care, for communication with patients and other members of the multidisciplinary team and for the establishment and demonstration of clinical and cost effectiveness.

The NHS Connecting for Health has produced a framework of informatics knowledge and essential IT skills, organized as Levels A-C, where Level A is the expectations of qualifying curricula in all health professional programmes. Published as *Learning to manage health information: a theme for clinical education* (Department of Health, 2009) it is provided as a guide to good practice for programme developers. It is suggested that as IT competencies vary greatly amongst healthcare staff at all levels, including students, that use should be made of one of the available self-assessment tools to determine what additional training an individual requires. Level A competency should be expected of newly qualified physiotherapists.

In addition to clinical outcome measures, patient satisfaction is now regarded as the benchmark of quality in service delivery, and therefore students will need to learn how to measure this.

Self evaluation questions for programme providers:

- How do we develop students' understanding of the nature and philosophy of science and scientific method, and enable them to develop a questioning approach to physiotherapy theory and practice?
- How do we ensure that our students view their research project as the means by which they can learn how to apply science to relevant questions about practice, rather than as an end in itself?
- How do we enable our students to find and apply evidence in individual patient care? How do we familiarise our students with clinical guidelines relevant to their practice
- How do we help students' understanding as to how these are developed?
- Are our students challenged to ask researchable questions arising from practice?
- How do we develop students' understanding of the uses of standardised data collection in service management, evaluation and improvement?
- How do we assess and improve our students' knowledge and skills in health informatics and computing.
- How do we develop students' competence to use a range of physical outcome and patient satisfaction measures?

Principle 9: Resources & programme management

Learning opportunities should be sustained by resources that make their delivery and development viable, and supported by an appropriate programme management that enables and promotes peer review and collaboration, and evaluation of delivery and on-going development.

As indicated within the introduction, programme designers are encouraged to be responsive to a number of stakeholders, including the HCPC and their own university. In addition to the service user involvement [addressed within principle 1] the CSP believes that the success of a programme rests also on the institution's commitment to it. Programme developers should therefore be clear that their programme has a secure place within their institutions business plan.

The CSP encourages an emphasis on the quality of students' overall learning experience; therefore it is essential that the facilities, learning resources and pastoral support systems be appropriate, accessible, available and used effectively. For this reason the CSP also supports the need for ensuring appropriate staffing levels (around 15:1 – see *CSP Accreditation of Qualifying Programmes in Physiotherapy: Quality Assurance processes* 2010 p18). Without prescriptively adhering to this figure, it is essential that programme designers take into account a number of factors when considering what an appropriate level is. Designers should consider the impact that other activities, such as pastoral or management responsibilities, CPD and research activity and other teaching commitments, may have on the teams design.

In addition to appropriately adaptable learning, teaching and assessment strategies [see principle 4], designers should also take account of any impact that these may have on student progression. Allowing students a number of attempts at a module can be problematic for timetabling, resources and staff time. The CSP recognises that balancing the needs of individuals with the overall programme management requires careful consideration. Given the number of requests for support in this area from programme providers, it still seems appropriate at this time to retain the recommendations that programme teams apply with discretion, exceptions to the UK norm relating to attempts at a module (normally no more than two).

For similar reasons the CSP continues to support the recommendation that programme teams consider including programme specific regulations relating to condonement of failure and compensation within practice based learning elements.

Self evaluation questions for programme providers:

- How does our programme fit within our institution's business plan or strategic vision?
- Do staff have the opportunities to develop to ensure that we have appropriate expertise?
- Are our staffing levels adequate to manage the impact of our progression arrangements?

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