Sustainable undergraduate education and professional competency

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The primary purpose of Schools of Physiotherapy, and their tradition, is to develop in their students the cognitive and practical breadth required to function as competent practitioners immediately on graduation, with the capacity to continue to learn and develop. As schools within universities, they also seek to provide students with broad educational experiences, assisting them to develop generic skills such as independent learning, teamwork, responsibility towards other people, problem solving abilities and the like.

Graduates from the Australian Schools of Physiotherapy are registered to practise by their respective State Registration Boards. Increasingly, this registration will be on the basis of their course being accredited against criteria determined by the Australian Council of Physiotherapy Regulating Authorities (ACOPRA). These criteria were developed in the early 1990s and include, if only by implication and tradition, the expectation articulated by the World Confederation for Physical Therapy that entry-level physiotherapy curricula will allocate a minimum of 1000 hours to supervised clinical education. Graduates from accredited courses are also expected to attain a range of minimum competencies as defined by the Australian Physiotherapy Competency Standards document (Liston et al 1994). In New Zealand, a similar process of accreditation exists.

In a standard four year program, typical of Australia and New Zealand, each student spends approximately 32 weeks each year in full time attendance at university. In most cases, four weeks per year is dedicated to examinations and a further two weeks may be reserved for pre-exam study. For most undergraduate programs, students will spend between 20 and 25 hours per week in face-to-face contact (in lectures, tutorials, practical classes, etc.). These contact hours are much higher than in typical non-clinical degree programs, which have between 10 and 14 hours of class contact. One reason for the much higher number of contact hours is the need for physiotherapy students to practise clinical skills under direct supervision, to ensure safety and effectiveness prior to the student treating patients in the clinic.

During clinical placements, students typically are expected to be on site for 30 to 35 hours per week. Clinical education occupies around 30 weeks of most undergraduate programs, equating to at least 1000 hours. On the basis of this formula, the residual “teaching” period, after deduction of the clinical education, contains a total of between 1500 and 1700 non-clinical hours.

Not all of this “university” time can be devoted exclusively to the study and practice of physiotherapy-specific content. The student requires a sound understanding of fundamental basic sciences such as anatomy, physiology, biomechanics, psychology and sociology. The time devoted to these topics varies from school to school, but usually occupies in excess of 300 hours. Thus the school may have as little as 1200 hours available for the teaching of “professional” content, such as physiotherapy skills.

What should occupy these remaining 1200 or so hours, accepting that students will also learn a great deal within the clinical component of the course? Indeed, is it possible to cover the entire curriculum and ensure that each student has achieved the desirable and required standards of professional competency in such a period?

There has been an exponential growth in the knowledge particular to our profession. The standard physiotherapy library of the early 1970s might have consisted of a scant dozen or so text books, with copies of the national physiotherapy journal. Nowadays, students can expect to refer to literally scores of texts and papers in the course of the average academic year, including journal articles from a large range of professional and related scientific journals. Students are also expected to source much of their material independently through bibliographic databases and the World Wide Web. The literature relevant to physiotherapy has increased enormously within the last few generations of physiotherapy students and no longer is confined to “professional practice” but also includes biomechanics, physiology, motor control, psychology and much more. A recent count of papers reporting randomised clinical trials (RCTs) involving physiotherapy treatment estimates more than 2300 such articles (Figure 1). Papers relevant to our knowledge which are not reports of RCTs account for many times that number. Of course, not all the literature is accessed by students and it is one of the functions of academics to help synthesise and summarise this body of knowledge - itself a monumental task. Nevertheless, there
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is an expectation that students will make use of primary sources to reach their own conclusions and to develop a personal knowledge base.

Our curricula tend to expand at a rate correlated with the growth in knowledge. This expansion, in itself, is difficult to contain, but the situation is exacerbated by the incremental creep in the expected repertoire of the new graduate. Once it was accepted that certain topics and skills were “postgraduate”. Students graduated with some knowledge of these, but were comfortable with the idea that further development would involve continuing professional development and education. Now, Registration Acts and pressure from students and employers of graduates has resulted in a situation where the new graduate is expected to be proficient in the selection and application of many of these techniques and to have a sophisticated understanding of these topic areas.

Few other professions expect as much of their new graduates as ours. A newly graduated medical doctor does not take full responsibility for patient care, nor does the new engineer or new architect expect to be entrusted with the design and construction of a major project. The law graduate begins as an articled clerk or lowly pupil to a barrister, yet the newly registered physiotherapist is expected to contain, but the situation is exacerbated by the incremental creep in the expected repertoire of the new graduate. Once it was accepted that certain topics and skills were “postgraduate”. Students graduated with some knowledge of these, but were comfortable with the idea that further development would involve continuing professional development and education. Now, Registration Acts and pressure from students and employers of graduates has resulted in a situation where the new graduate is expected to be proficient in the selection and application of many of these techniques and to have a sophisticated understanding of these topic areas.

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The process of specialisation in physiotherapy, and the APA's voluntary/mandatory continuing professional development (MCPD) does not articulate easily with the undergraduate programs. In reality, so long as the MCPD process is neither regulated, nor inextricably bound to registration, there is no real incentive to pay more than lip service to it. While most physiotherapists are realistic about the extent of their knowledge and do have a desire to develop their professional capacities, the fact remains that there is no particular reason for them to do so. After all, they may think the schools have educated them to a level of professional competency which is deemed equivalent to all other registered physiotherapists and thus, by inference, they need learn no more.

Schools of Physiotherapy occasionally hear concerns expressed that the contemporary graduate is not as well prepared for clinical practice as was formerly the case. Is it, perhaps, because contemporary clinical practice has become too advanced for the beginning level practitioner? It has become questionable whether Schools of Physiotherapy can cover the curriculum in its entirety in the 1200 hours available to them. It is, of course, possible to cram more material into an ever-diminishing timeframe, but this is, inevitably, at the cost of time for the student to reflect on and absorb new information, practise new technical skills and reach comprehension of concepts and issues.

Schools of Physiotherapy are expected to keep adding to the curriculum without, however, being permitted to subtract material from it. It is ironic that there continues to be a marked shortage of physiotherapists in regional, rural and remote settings and in areas such as gerontology, all of which are growth areas of practice. Schools wish to address these changing demands within the health care setting by developing their curricula appropriately, however it is not possible for a curriculum to evolve if the profession will not allow some judicious pruning of the “dead wood”. There can be difficulties inherent in a curriculum that seeks to use an evidence-based approach while retaining components which, while lacking evidence for their efficacy, carry significant safety issues and thus demand continued inclusion and adequate practice.

In the last 10 years, the number of physiotherapy schools in Australia has grown from five (Curtin University, La Trobe University and the Universities of Queensland, South Australia and Sydney) to a total of nine, with the addition of Charles Sturt University (CSU), Griffith University and the Universities of Melbourne and Newcastle. The consequence is that more physiotherapists graduate each year. According to workforce data, between 1996 and 1999 the number of undergraduate physiotherapy students rose by 20% (AIHW 2001). In that period, the retention rate for senior staff in public hospitals around Australia appears to have decreased. The tradition of the new graduate first working in a large public hospital with a number of relatively senior physiotherapists to provide mentoring has changed. Increasing numbers of graduates are taking up appointments in settings where they are responsible for critical clinical decisions without a network of support. Even in the public hospitals, staff shortages and cuts may
have led to a more pressured work environment with fewer senior staff to give new graduates the support they need. How well prepared is the new graduate for the changing demography of the health system, with its greater emphasis on community-based services with small, quasi-autonomous teams of health workers, each expected to be an “expert” in their field?

One of the attractions of our profession is its global relevance. For many years, our graduates have enjoyed the opportunities afforded to travel the world and to use their skills in the pursuit of clinical excellence. Here, too, we find a problem as different countries are demanding that, before they can be registered, graduates need to demonstrate a variable range of skills and knowledge. In some cases this involves an explicit minimum number of hours of experience in using a modality such as hydrotherapy, or the practice of specific electrotherapy techniques, which may no longer be used in Australia and New Zealand. If we are to continue to graduate physiotherapists who are able to work overseas, we come under pressure to include other national curricula as part of our own. We are, after all, part of a global organisation.

The Heads of the Schools of Physiotherapy in Australia and New Zealand feel that these issues require urgent discussion. Practically, extending the length of the undergraduate course to accommodate an increase in content is not the answer, apart from the fact that such an initiative is unlikely to attract a sympathetic reception from government funding agencies. Such a stop-gap measure would soon be overtaken by increased expectations of such an extended program and many students would have difficulty in meeting the costs of five years of university education. At this stage we are limiting our discussion to the most common method of entry to our profession, the “conventional” four year undergraduate program. The introduction of double degree and graduate entry programs may help solve some of these problems, but only time will tell.

Few of us would be keen to see courses with dramatically reduced clinical education components. It is part of the strength of our programs that they integrate academic and clinical units of study in a seamless continuum, but a relatively easy change, for some schools at least, would be to exclude some or all of these clinical placements and simply teach the academic content. The implications of such a step would be enormous.

It may be that one way ahead for undergraduate physiotherapy education is to identify the absolute “core” competencies and attributes we desire in our graduates and provide flexible learning options for students and schools with respect to the other competencies. This recognises that their entry-level degree is merely the start of their lifelong learning in physiotherapy, not the end. Currently, opportunities for continuing education are better than ever before and, with ongoing developments of more flexible delivery of post-graduate courses, physiotherapists have the chance to advance their interests to the level of specialist practitioners. It is also a matter for employers to take more responsibility in providing further education and training for their physiotherapist employees. It could be argued that too much of the responsibility for this is presently devolved to universities. Few other professions can boast of such a well-prepared workforce with such a small investment on the part of the industry concerned.

At all events, the time has surely come for our profession to recognise that specialisation is not a single step confined to relative senior personnel, but rather is a staged process over many steps. Perhaps the new graduate should not be able to act as an autonomous professional? Perhaps some form of structured internship is needed to develop the latent capacities of the new graduate?

It is in a spirit of optimism that we raise these issues for debate. Our profession is too valuable to be compromised by a situation in which the expectations of the physiotherapy graduate are at variance with the capacity of the universities to meet these expectations.

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