Title: Assessment of Osteopaths - developing a capability-based approach to judging readiness to practice

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Abstract: ABSTRACT.

A new approach to assessment design is considered through the process of the development of a set of capabilities for osteopathic practice that start from an understanding of a concept of 'practice' applicable to real, situated osteopathic healthcare. Appropriately framed capabilities inform a variety of assessment needs, allowing different tools to assess common standards across many credentialing, high stakes, summative and formative situations, and through work based practice.

An argument is made for the inclusion of a work-based phase of assessment in high stakes examinations for overseas trained candidates as the best way to capture real / situated practice enabling the assessment process to contribute to on-going professional learning. The relationship of assessment to learning is regarded as vital to the development of many aspects of regulatory policy, programme accreditation, continuing professional development and needs to be considered by stakeholders concerned with maintaining and improving standards of practice.

INTRODUCTION

Osteopaths are assessed during their education and training, and sometimes during their professional lives, for purposes of credentialing, re-credentialing or, for some, when they migrate to another jurisdiction. The current paper describes an approach to the development of capabilities for osteopathic practice with associated assessment techniques and processes. The proposed approach seeks to align assessment of osteopaths with the best-practice approaches to health care practitioner assessment, whilst still ensuring that what is being assessed is recognisably 'osteopathic'. It discusses a project to develop a set of capabilities for osteopathic practice, as well as the developmental concepts for considering an allied assessment process and assessment tools for credentialing overseas trained osteopaths who wish to work in Australia or New Zealand¹.

The premise of the current paper is that change in assessment design for credentialing overseas trained osteopaths is necessary. The reason for this is that osteopathic practice worldwide is taking place within a changing regulatory framework. For example, in New Zealand the Osteopathic Council of New Zealand administers a single regulatory framework; whilst in Australia from 2010 a single national regulatory framework administered by the Osteopathy Board of Australia took over from a wide range of state registration bodies operating with different standards and assessment regimes. In an increasing number of nations osteopaths are, or are becoming, regulated professionals rather than artisan practitioners, and this places new obligations on the profession. Although the education of osteopaths has been developing for a long time it is now necessary to consider whether the direction of osteopathic education and the ways in which its practitioners are assessed meet both the continuing needs of the profession as well as those of regulators.

As part of the challenges to the osteopathic profession comes discussion about the development of such things as codes of conduct, scopes of practice and standards for and approaches to assessment within osteopathic training and practice. The aim is to achieve international parity in these matters, as it is only under these circumstances that osteopaths will be able to move and practice in different jurisdictions, with confidence that standards are equitable. This is a major challenge because the historically wide variety of biographies and training of osteopaths' worldwide means that many have quite individualistic perspectives on what constitutes osteopathic practice, standards and scope, as well as the roles and boundaries of practice, and they may take varying views on the values and principles that frame their work. While much is shared across the profession, there is likely to be considerable diversity of practice as a result of variation in training and continuing professional development. This diversity is particularly likely to manifest itself in Australasia as many osteopaths trained overseas have sought registration in Australia or New Zealand. Such variation in training and experiences pose particular challenges to assessment design and implementation within newly emerging regulatory frameworks.

ASSESSMENT CONTEXTS

Should assessment of overseas trained osteopaths for entry into the profession be more closely related to ongoing assessment and authentic work based practices rather than to high stakes examinations conducted at the end of entry-level osteopathic programmes? In one sense, assessment of overseas candidates stands apart from entry level assessment because it necessarily engages with professionals already working within the field who have a much greater range of experiences, capabilities and professional approaches and values. Also,

assessment tools designed within the particular contexts of academic institutions and educational programmes are not readily transferable or applicable to assessment of work based situations²—the institutional assessment culture in this regard is not oriented to the same perspective, that is assessment to certify graduates

is not compatible with that to register overseas trained practitioners. The migration and global mobility of healthcare workers creates a novel set of assessment challenges. It raises the question of 'how assessment can be best organised to capture the nature of a person's professional capability and suitability to work within any given regulatory environment?' and 'how best to guide them for future development to either maintain their regulatory status or to improve and mature their current skills and knowledge to meet required standards for entry?' However, it would seem unfair and inappropriate to use quite different assessments to permit entry into the profession just because candidates come from different origins or have trained through different pathways.

It is proposed here that the best way to answer these questions is to develop a suitable set of capabilities for osteopathic practice and to use these to design and implement appropriate assessment strategies. While the particularities of assessment may differ in the two cases, because of different circumstances, common competencies and capabilities will be assessed. It is in the design of the capabilities and their related criteria—in particular the performance indicators—that one aims to ensure that competency in osteopathy is visible and demonstrable.

The development of any set of capabilities must first start with a reasoned understanding of the concept of 'practice' as this establishes the parameters for the capabilities to be assessed. Pertinent literature in this regard is presented and demonstrates the differences that can emerge in assessment design if one perspective of practice is emphasised over another. Consideration is then given to the relationships between practice, learning and assessment and how these should all have a common framework based on ones perspective of practice. This framework in turn is linked to the development of performance indicators used in assessment. These relationships between practice, learning and performance indicators ultimately orient assessment tool design for any given purpose. By using concepts of practice naturally extant within and suitable for osteopathy it can be insured that assessment is current and situated in actual osteopathic practice, reflecting the real experiences and actions of osteopaths.

Finally, we identify some points for future consideration regarding assessment design and its relationship to continuous learning. These can contribute to developing on-going work-based capability assessments, which could potentially be of interest to regulators, continuing professional programme developers and other stakeholders interested in maintaining, and improving standards of practice.

ESTABLISHING CAPABILITIES FOR OSTEOPATHIC PRACTICE.

In 2008-9 the authors of the current paper undertook a project titled 'Capabilities for Osteopathic Practice' ¹('the project'). The project had two objectives: 1) to develop a set of capabilities for osteopathic practice, and 2) to report on best-practice methods and approaches to assessment and assessment tools that could be applicable to examining overseas trained candidates who wished to practice within Australia.

Tables 1 and 2 respectively outline: a) the steps in the development of the set of capabilities; and b) the domains and their descriptors which were formulated. Each domain has a descriptor, elements and criteria. It is at the level of the criteria (and their related performance indicators) that profession specific (osteopathic) identity and culture can emerge, illustrating the principles, values, approaches and nature of osteopathic practice.

The report¹ described in Table 1 formed the basis for discussion within the project team as to how models of assessment may be oriented for assessment of professional osteopathic practice. The current paper continues that debate and argues for an approach to osteopathic assessment for overseas trained applicants that has implications beyond that particular assessment process.

FRAMING ASSESSMENT

We suggest that at the time the project was instigated approaches across Australasia and globally within osteopathic credentialing assessment were possibly flawed, in and often cannot capture the nature and scope of osteopathic practice. By using principles emerging from the learning and assessment literature an approach to the development of capabilities can be described and these may better frame the subsequent development of various types of osteopathic assessment. The literature discussed in the current paper was identified within the project, and informed our approach to the development of the Capabilities for Osteopathic Practice document. It is also necessary to consider what it is that is being assessed and for what purpose. The assumption is that for overseas-trained candidates (and indeed entry level students wishing to graduate from professional programmes and gain registration for practice) what is being assessed is the candidate's ability to perform or engage in osteopathic practice within the jurisdiction of registration.

The key ideas involved in this assumption are:

- i. any assessment of osteopathic practice one must first identity what is meant by osteopathic practice;
- ii. in assessing any particular individual one must also have appropriate tools which are equitable, fair and perform their task in a reliable, valid and authentic way;
- iii. in assessing practice 'as it should be' within any particular location one must understand the nature of that location and regulatory / healthcare system, including the social, environmental and cultural components of that system.

While these assumptions may be reasonable ones, what is open to question is the definition of 'osteopathic practice', 'the appropriateness of assessment tools' and the implications of the 'as it should be' nature of that osteopathic practice. These need to be carefully determined in turn before one can consider how to develop any particular assessment approach.

WHAT CONSTITUTES PRACTICE?

Osteopathic practice is a specific and located set of activities that is influenced by the orientation of the practitioner and their positioning within a healthcare system. Like most health professions, osteopaths do not operate in isolation from others' related practice. They act within a community of osteopaths, which partly regulates their practice (as well as having regulation imposed from outside that community from government for example), at the same time as operating within the community of healthcare practitioners more generally (where drivers for outside regulation often arise).

Attempts have been made in many professions to define practice activities as sets of scientifically based activities, and while this has some initial appeal, particularly the notion that good practice needs to be based on good evidence, such an approach has severe limitations. Schwandt³ outlined two models that distil a range of diverse approaches to professional practice, that give shape to different practice activities. This work is helpful in illuminating the complexity of professional practice and different ways of viewing it. Schwandt's Model₁ includes a cluster of approaches based broadly in scientific knowledge traditions, while his Model₂ is based in what the author calls the *practical knowledge traditions*. The elements of the first of Schwandt's models are strongly present in much of the current discussion promoting evidence-based practice and accountability measurement: the knowledge utilised must by definition eliminate the inherent complexity of the everyday thinking that actually occurs in practices.

Model₂ in contrast, takes up ideas about practice of authors such as Schatzki.⁴. Schatzki⁴ sees practices as "embodied, materially mediated arrays of human activity centrally organised round shared practical understanding" (p 2). Practice in Model₂ is 'human activity concerned with the conduct of one's life as a member of society'. Practice is a "purposeful, variable engagement with the world" (p 321). Practices are fluid, changeable and dynamic, characterised by their "alterability, indeterminacy and particularity" (p 322). What is important is the specific situation in which particular instances of practice occur and hence the context-relativity of practical knowledge. Knowledge must be a flexible concept, capable of attending to the important features of specific situations and so on. Practice is understood as 'situated action'.

There is a tension between these two models of viewing a practice such as osteopathy, and one cannot be reduced to the other. They imply different ways of viewing what it is to be a practitioner and, necessarily, different views of assessment. However, Boud² has pointed out that while Model₁ has dominated discussions of higher education courses and assessment, and therefore Model₂ needs to be given much more attention, both need to be considered when thinking about assessment. Boud² also suggests that contextual knowledge and skills, practice setting, practitioner disposition as well as the need to engage with other professionals and with patients themselves are all important features simultaneously necessary for practice and essential to consider in its assessment.

In the context of osteopathy, the culture of entry level and overseas trained osteopath assessment design was dominated by Model₁ concepts and must therefore be expanded to include the Model₂ concepts as discussed above if one is to develop an appropriate culture for the assessment of overseas trained practitioners. The project to develop the Capabilities for Osteopathic Practice ¹ was oriented around the premise that any set of capabilities developed should be framed within an understanding of practice that encompasses Schwandt's Model₂, and which therefore places osteopathy competence within its full context of operation.

COMPETENCE OR CAPABILITY?

To establish a framework for assessment in osteopathy, it is necessary to start with a set of key features that represent what is being sought in a practitioner which should include to be an effective, efficient and lifelong learner. In healthcare literature much focus has been given to the work of Millers⁵ who introduced a hierarchical approach to competencies and what it means to demonstrate competence in healthcare practice (Figure 1, adapted from the original). Suitable assessment tools for each stage were identified in this hierarchical model, and these tools have been commonly and extensively used for many years within healthcare assessment, including high stakes and overseas trained credentialing assessments, thus creating a strong culture orienting the design of many of the current assessment and learning processes.^{6,7}

While the Vocational Education and Training system in Australia has focused on competencies (being the consistent application of knowledge and skill to the standard of performance required in the workplace), it can be asked whether 'competencies' is the best framework for current healthcare practice and whether that framework leads to a sufficiently broad and contextualised concept of practice requirements. Although 'competencies' have in many cases been superseded in learning and assessment literature, ⁸⁻¹⁰ and replaced by 'capabilities', much assessment practice has yet to change in response to these emergent concepts.

Capabilities are higher order representations of effective practice whereas competencies and their underpinning knowledge and skills tend to be lower order components on Millers triangle⁵ (Figure 1). Note: the ascending arrow indicates that the top layers of the triangle relate to more authentic professional behaviour, thus adapting Millers triangle to understand authenticity in real clinical situations.¹¹ What this means is that practice is now recognised to extend beyond the top layer of Millers triangle, and new imagery is required to capture practice in its complexity⁸ Hence assessment tools must also be identified that can extend beyond the use deployed through the application of Millers triangle and concepts of competency, so that performance of practice is more fully captured in assessment.

PRACTICE AND ITS ASSESSMENT.

The assessment tools appropriate for any situation vary according to the nature of what is being assessed. ^{12, 13} Hence, how someone assesses practice will depend upon their understanding of practice. As discussed above, a narrow skill set (of proscribed techniques and procedures) and a defined knowledge set (such as basic anatomy and physiology, biochemistry and pharmacology) is commonly framed within a particular concept of 'practice' illustrated by Schwandt's Model₁, and which can be related to the assessment of lower order components on the Miller triangle. Essentially having a broader definition of professional practice that is more aligned to Model₂ than Model₁ brings a better understanding of what it means to move upwards through Millers

triangle, on through competence and into capability. At its most basic, the top of the triangle represents 'being competent' and being effective at 'doing', but that belies the complexity and changing nature of practice, and the influence of the person engaging in the practice itself. The top of the triangle should be regarded as being professional in a community of practice that draws on more than a store of knowledge and its application. Communities of practice engage with professional practice knowledge which involves drawing on the intentions, meanings, values and interests of many people engaged in that practice, in a reflective integrative way, which has to change over time and adapt to uncertainty. 14, 15

Such a view about professional practice knowledge moves assessment away from decontextualized, low-level knowledge to the making of judgements in context. This does not mean that knowledge is of any lesser importance, but that it is not meaningful to assess it independently of judging how it is used in practice situations. It recognises that assessment is not primarily a process of measurement, but is best considered as one of judgement.¹⁶

There is a wide range of tools that can be used for assessment and this range is needed for the varied learning outcomes that need to be assessed. A different range of tools may be required for credentialing of overseas trained osteopaths than those commonly used in osteopathy assessments such as the OSCE or long case, mostly researched through their applications in other healthcare professions ¹⁷⁻²⁰ as these may be of limited value in high stakes assessment for a range of practical reasons, such as cost and reliability when only a small number of cases are used.

Some of these tools may be new to the osteopathic profession, for example the mini CEX tool developed by Norcini²¹ but they are already used in many contexts including international medical graduate assessment in Australia.²² Even a 'clinically oriented problem solving approach' utilised within newly designed tools such as extended matching multiple choice and key features examination²³ has a narrower focus than the real-life experience of practice.

The use and nature of real-life exam situations thus becomes paramount when one considers tools for the assessment of practice. In this regard one must begin to consider the value of work based assessment for credentialing purposes, as some aspects of practice can only be assessed in such a normal clinical context. Whilst work place based assessment is now being used in medical education its use in osteopathic credentialing and high stakes assessment purposes is a new proposal being made here.

Finally an appropriate assessment tool can only be identified when full consideration is given to the nature of the individual performance indicators to be assessed. The development of performance indicators is always somewhat fluid and is highly context dependent, but they are intimately linked to the development of a set of capabilities for practice. Framing the capabilities through an appropriately defined and oriented practice lens thus ensures that whatever the eventual format of the assessment and its criteria and performance indicators, they are more likely to represent a broad view of normal practice than anything developed from a more technical view of what is meant by professional practice.

ASSESSMENT PROCESS DESIGN

However the view of practice is shaped, its relationship to assessment must be carefully

considered. To fully consider the implications of professional practice for assessment, those designing an assessment system need to recognise that assessment is not only about making final judgements about learners' capabilities, but shapes the way these capabilities themselves actually develop. Assessment profoundly influences learners and moulds what they do, how they do it and their own conceptions of what is important in professional practice. It is not only important in making decisions about readiness to practice, but about fostering the learning needed to become a practitioner, and, ultimately more importantly, the learning needed after registration to move from being a basically competent practitioner, to one that is self-generating who can extend their capabilities throughout their working lives.^{27, 28}

The two primary aims of assessment of students are to aid learning and to certify their achievement. The development of understanding around the concept of 'practice' and its relationship to learning, higher education, work based learning and continuing lifelong learning is well developed within the literature ^{16,29} but the relationship between the nature of practice and how it is best assessed is currently underdeveloped across several ranges of assessment situations, including various diagnostic and 'judgemental' situations.

ASSESSMENT FOR LEARNING

Often the 'assessment for learning' concept has been used to augment approaches within formative assessment for any given educational programme.³⁰ In a professional programme these concepts (such as fostering motivation, reflection and self-assessment) can be focused towards the core idea of 'assessment for learning' that it is to aid learners in the process of learning through providing opportunities for practice, for feedback, and for understanding standards and criteria and how to use them.

Such approaches are also commonly used within osteopathy pre-registration programmes, where 'assessment for learning' naturally links elements within the programme, through the high stakes entrance gateway, and into one's professional work place and lifelong career. Assessment tools used throughout the programme and designed in this context flow naturally between ensuring standards and engaging the candidate in feedback that is informative and gives guidance to and enables changes to practice were required, and can contribute to aspect of the assessment of learning which occurs at the end of the programme / curriculum (within the summative and high stakes assessment for entry into the profession). But, what about high stakes examinations that stand separately from any education programme or curricula? Assessment of international medical graduates and overseas osteopathic applicants for example do not occur in relation to any educational programme and are arguably solely for admission to practice in a particular country – with a gatekeeper role to ensure standards of professional practice within that regulatory arena are maintained.

So, should one focus on 'assessment of learning' or 'assessment for learning' in this situation? To help clarify this, there are various factors emerging from the assessment for learning literature which are necessary to consider when one is reviewing assessment design for overseas trained candidates (and indeed for practicing professionals throughout their careers). These are that learning is necessary throughout ones professional practicing life, assessment should be about identifying areas of weakness and how to address them, and the attainment of context specific components required for the new regulatory location, rather than being simply a barrier to overcome to gain practice rights.

Questions assessment writers might need to ask, when considering how the design of an assessment process for overseas trained osteopaths might be formulated, are shown in Table 3. This reflective process helped to clarify that assessment for learning principles, and the use of work place based assessment were appropriate concepts and tools for the assessment process being considered.

ASSESSMENT 'OF' OR 'FOR' LEARNING: RELATIONSHIPS TO 'PRACTICE' AND THE CULTURE OF ASSESSMENT IN HIGH STAKES EXAMINATIONS

It can be claimed that high stakes assessments are not for learning, they are for judging.³¹ But should this be the case? Assessment of learning (summative assessments) can have a tendency to focus on the lower order competencies / knowledge on Millers triangle⁸ (Figure 1) and because these are often aligned more to a Model₁ view of practice,³ it is easy to see how high stakes examination tools often focus on 'knowledge', 'narrow skills sets' and issues of narrowly framed competence. As such they may appear to regulators and other stakeholders to be a reasonable assessment process as it is technically easier to identify component parts of practice and assess them in isolation. This approach may suit a narrow view of practice and needs for assessment – that is (amongst other things) to screen candidates for issues that may impact on safety of the public. But, the problem is that as these tools emerge from an understanding of practice that is akin to Schwandt's Model₁, they do not effectively consider the actual ability of the applicant to perform safely and appropriately in real practice. Models of assessment based on Schwandt's Model₁ of practice may also not capture the ability of the overseas trained applicant to enter effectively and appropriately into the community of practice within a given (new) location. Thus regulators needs and those of the public are probably not best served by such a culture of assessment design.

A more appropriate view of high stakes examinations would be to orient them more towards the Model_2 concept of practice and to include 'assessment for learning' principles (or more clearly, a work based phase that involved some high stakes assessment as part of it shouldinclude assessment for learning as described). Note: high stakes assessment that are without a work based phase may not need to include learning for assessment concepts as such, but they do need to be organised so that there is not a negative backwash effect on learning that inhibits worthwhile learning through candidates' anticipation of being assessed narrowly or inappropriately. This is an area where current assessment design in osteopathic high stakes assessment may need revision.

The inclusion of a workplace-based phase or component though would lead to an emphasis on three key factors in the relationship with assessment, which need to be drawn out in a design of assessment for high stakes, credentialing and overseas assessment processes:

- 1) the situated-action nature of practice indicates the need for work based observation in high stakes assessment;
- 2) that it is as important to assess how a practitioner is prepared to deal with the uncertain, changeable and variable nature of practice over time as to monitor their (static) level of competence in a 'one moment in time' high stakes examination; and
- 3) that high stakes assessment processes should not be separate from the relationship to learning these assessment tools should still be capable of aiding learning, developing

capability and providing feedback for future development and readiness for practice. They need to be part of a continuum of assessment that encompasses and supports the range intime and range in-depth and breadth of any individual practitioner's practice life.

So, assessment tools used in these situations must be framed within a concept of practice that engages with that understanding of 'real practice' - embodied by the key points of practice being situated-action, that it is developmental and uncertain, and that it changes over time – therefore requiring a workplace-based assessment phase to capture these components of practice. In other words, assessment of the candidate's understanding of and fluency with what constitutes practice in real terms in that environment may be assessed by tools that emerge from an understanding of Schwandt's second model of practice.³ The authors of the current paper suggest that regulators needs and those of the public are probably best served by such a culture of assessment design. The review of documentation and current processes of assessment in the osteopathic profession as described in Table 1 revealed that the current culture of assessment design within osteopathic overseas assessment process in Australia, New Zealand and elsewhere, and within other related health care professions such as Physiotherapy, Chiropractic and Medicine used assessment tools related to, and framed within, a context of the Model₁ view of practice. This conclusion can also be applied to the debate in the osteopathic literature concerning high stakes examinations³²⁻³⁴ thereby reinforcing the need for change.

ASSESSMENT TOOL CHOICES

The assessments for overseas trained osteopathic candidates being used at the time the project was undertaken, commonly utilised assessment tools such as the long case and various written tests, with some use of vivas or modified OSCE's. It is necessary to consider if the assessment tools and processes that were being used in that circumstance are able to be employed within a high stakes examination process that is framed instead by the Model₂ concept of practice, and if not, what might need to be used instead.

Having developed a set of capabilities for osteopathic practice based on the Model₂ view of practice, it is clear that the reviewed high stakes examinations based on the Model view of practice would have to encompass more elements and criteria than can be measured in a short time frame and through traditional methods such as the long case, OSCEs, factually based multiple choice examinations and various written tests if the examination was to encompass a Model₂ view of practice, and to capture the full range of capabilities developed. Whilst some of the current assessment components may still be useful they would need to be adapted, and be conducted alongside other new or additional elements. On reflection, the culture of those (existing) assessment designs was not considered the most relevant in a context of a Model₂ view of practice. Instead there should be a change away from the application of knowledgebased tests, away from reliance on simulated patient OSCEs, towards problem solving written tests such as key features exams ²³ and extended matching components ³⁵, a move away from the long case and towards the mini clinical examination (CEX) ^{21, 22} type of examination processes, supplemented by direct observation of procedural skills (DOPS) and case based discussion. Most importantly, an assessment process should include an element of work-based assessment, as some capabilities cannot be captured unless a real situated practice is observed over time. This work based assessment could only be done once the osteopath had demonstrated sufficient capability to enter into the profession (based on the other components of the assessment process), where they would then have a period of ongoing assessment, based on 'assessment for learning' principles as outlined above, and which would incorporate the various broader elements of capability and osteopathic practice that could only be reviewed over time, and within the local cultural, social, geographical and healthcare system environment that the osteopath was now engaged within. Such a process would have the positive spinoff of candidates gaining familiarity with local osteopathic practice through a period of supervised practice.

Workplace based assessments undoubtedly pose a challenge for regulatory environments that do not already recognise provisional or modified registration pathways however if this is overcome, this type of assessment process (when applied in full) is more capable of ensuring that the standards which the community of osteopaths within that location had identified as being relevant to practice, could be attained and demonstrated. The development therefore of a set of capabilities for practice based on a broader view of practice would thus best serve the community of osteopaths in this regard, by supporting a shift to a more appropriate assessment culture 'for learning' and therefore the development of a more appropriate set of assessment tools and processes to credential overseas osteopaths wishing to enter the local community / practice in jurisdiction and engage in 'real' practice. Ensuring that these tools and their purposes are made explicit to all, including regulators and potential candidates helps to avoid confusion and helps ensure the assessment system design is effective in judging what it purports to judge. The clearer the principle of the assessment is for any candidate, the more likely he or she is to engage with the responsibility of the learner (practitioner) - being the self-regulation of their learning.

CHANGING CULTURE IN HIGH STAKES EXAMINATIONS

When viewed as a whole, a high stakes assessment process which includes a work based assessment phase introduces a new culture, and opens up several possibilities (beyond that described above) that are not necessarily inherent within traditional format high stakes examinations. The provisionally registered practitioner (or registrant with modified registration, or with conditions, for example) has an opportunity to actively engage with the learning process built into the assessment design. This would be a deliberate principle of the work based phase of assessment strongly focusing on participants' self-regulation of their learning, and self assessment of the validity of their own professional approaches. From this perspective the assessment process can support practitioners in retaining that self-regulatory perspective throughout their professional lives.

The international movement of practitioners poses many challenges for regulatory authorities that a properly designed assessment process should mitigate, but the challenges should lead to opportunities, not barriers. Assessment can, in addition to the factors discussed above, be used to encourage and support this wider community perspective and lead to greater professional dialogue and communication. From all these views, assessment design should then include constructs about how to support and up-skill osteopaths when moving internationally, rather than inadvertently erecting barriers which are arguably as counter-productive to public health and healthcare delivery as isolationist / exclusionary and outmoded views of practice protection which rely on technicist views of high stakes assessment.

CONCLUSION

The main conclusions is that without an element of work based assessment, a range of capabilities for practice cannot be fully considered when assessing fitness for practice and that any high stakes examination based only on a 'one moment in time assessment model' is flawed. Assessment must be framed from an appropriate set of capabilities and if one enters into a debate about the nature of practice for osteopaths, about the values and principles one wishes to bring to practice and what the community of osteopaths considers encompasses professional practice knowledge, then that debate leads to a better understanding of what those capabilities should be and thus what a more appropriate framework and culture for understanding the profession's practice should look like. This would then naturally lead to the development of the most appropriate assessment designs across a range of situations, including high stakes examinations for entry into the profession, whether at the end of a professional education programme, or for migrating osteopaths wishing to move to different regulatory environments.

REFERENCES

- 1. Boud D, Hager P., Stone, C. Capabilities for Osteopathic practice. 2009. Available at http://www.osteopathiccouncil.org.nz/clear-skies-report.html
- 2. Boud D. How Can Practice Reshape Assessment? In: Joungin G, ed. *Assessment, Learning and Judgement in Higher Education*. Dordrecht: Springer Netherlands; 2009, p. 29-44.
- 3. Schwandt TA. On modeling our understanding of the practice fields. *Pedagogy, Culture & Society* 2005; **13**(3): 313 32.
- 4. Schatzki TR. Introduction: Practice Theory. In: Schatzki T, Knorr Cetina K, von Savigny E, eds. *The Practice Turn in Contemporary Theory*. London: Routledge; 2001, p. 1-14.
- 5. Miller GE. The assessment of clinical skills/competence/performance. *Acad Med* 1990; **65**:S63-7.
- 6. Epstein R. Assessment in Medical Education. N Engl J Med 2007; **356**:387 96.
- 7. Bashook PG. Best practices for assessing competence and performance of the behavioral Health workforce. *Administration and Policy in Mental Health and Mental Health Services Research* 2005; **32**:563-92.
- 8. Sturmberg JP, Farmer L. Educating capable doctors--a portfolio approach. Linking learning and assessment. *Med Teach* 2009; **31**:e85-9.
- 9. Gardner A, Hase S, Gardner G, Dunn SV, Carryer J. From competence to capability: a study of nurse practitioners in clinical practice. *J Clin Nurs* 2008; **17**:250-8.
- 10. Gardner G, Dunn S, Carryer J, Gardner A. Competency and capability: imperative for nurse practitioner education. *Aust J Adv Nurs* 2006; **24**:8-14.
- 11. Van Der Vleuten CPM, Schuwirth LWT. Assessing professional competence: from methods to programmes. *Med Educ* 2005; **39**:309-17.
- 12. Wass V, Van der Vleuten C, Shatzer J, Jones R. Assessment of clinical competence. *Lancet* 2001, Mar24; **357**(9260):945-9
- 13. Wilkinson TJ. Assessment of clinical performance: gathering evidence. *Intern Med J* 2007; **37**:631-6.
- 14. Kemmis S. Knowing practice: searching for saliences. *Pedagogy, Culture & Society* 2005; **13**(3): 391 426.
- 15. Sturmberg JP. Variability, continuity and trust towards an understanding of uncertainty in health and health care. *J Eval Clin Pract* 2010; **16**:401-2.
- 16. Hager P, Butler J. Two Models of Educational Assessment. *Assessment & Evaluation in Higher Education* 1996; **21**:367 78.
- 17. Wilkinson TJ, Campbell PJ, Judd SJ. Reliability of the long case. *Med Educ* 2008; **42**:887-93.
- 18. Ponnamperuma GG, Karunathilake IM, McAleer S, Davis MH. The long case and its modifications: a literature review. *Med Educ* 2009; **43**:936-41.
- 19. Roberts P, Priest H. Reliability and validity in research. Nurs Stand 2006; 20:41-5.
- 20. Walsh M, Bailey PH, Koren I. Objective structured clinical evaluation of clinical competence: an integrative review. *J Adv Nurs* 2009; **65**:1584-95.
- 21. Norcini JJ, Blank LL, Duffy FD, Fortna GS. The mini-CEX: a method for assessing clinical skills. *Ann Intern Med* 2003; **138**:476-81.
- 22. Nair BR, Alexander HG, McGrath BP, et al. The mini clinical evaluation exercise (mini-CEX) for assessing clinical performance of international medical graduates. *Med J Aust* 2008; **189**:159-61.
- 23. Farmer EA, Hinchy J. Assessing general practice clinical decision making skills: the key features approach. *Aust Fam Physician* 2005; **34**:1059-61.
- 24. van Mook WN, van Luijk SJ, O'Sullivan H, Wass V, Schuwirth LW, van der Vleuten CP. General considerations regarding assessment of professional behaviour. *Eur J Intern Med* 2009; **20**:e90-5.

- 25. Murphy D, Bruce D, Mercer S, Eva K. The reliability of workplace-based assessment in postgraduate medical education and training: a national evaluation in general practice in the United Kingdom. *Adv Health Sci Educ* 2009; **14**:219-32.
- 26. Rethans JJ, Norcini JJ, Baron-Maldonado M, et al. The relationship between competence and performance: implications for assessing practice performance. *Med Educ* 2002; **36**:901-9.
- 27. Boud D, Falchikov N. Aligning assessment with long-term learning. *Assessment & Evaluation in Higher Education* 2006; **31**:399 413.
- 28. Boud D. Reframing assessment as if learning was important. In: Boud, D & Falchikov, N, ed. Rethinking assessment in higher education: Learning for the longer term. London: Routledge; 2007:14-25.
- 29. Knight P, Yorke M. Assessment, Learning and Employability. *Learning and Teaching in Higher Education, Maidenhead*: SRHE and the Open University Press 2003.
- 30. Assessment and Reform Group 2002. Assessment for Learning: 10 principles. Research-based principles to guide classroom practice. *Assessment Reform Group*; London, United Kingdom.
- 31. Joughin, G. (2009). Assessment, Learning and Judgement in Higher Education: A Critical Review. *Assessment, Learning and Judgement in Higher Education*. G. Joughin, Springer Netherlands: 1-15.
- 32. London S. The assessment of clinical practice in osteopathic education: Is there a need to define a gold standard? *Int J Osteopath Med* 2008; **11**:132-6.
- 33. Abbey H. Assessing clinical competence in osteopathic education: Analysis of outcomes of different assessment strategies at the British School of Osteopathy. *Int J Osteopath Med* 2008; **11**:125-31.
- 34. Fletcher P. Clinical competence examination Improvement of validity and reliability. *Int J Osteopath Med* 2008; **11**:137-41.
- 35. Samuels, A. Extended Matching Questions and the Royal Australian and New Zealand College of Psychiatrists written examination: an overview. *Australas Psychiatry* 2006; **14**:1: 63-66.
- 36. Newstead S. The Purposes of Assessment. Psychology Learning and Teaching 2003; **3**:97-101.
- 37. Nicol DJ, Macfarlane-Dick D. Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education* 2006; **31**:199 218.
- 38. Nicol, D. (2007). Principles of good assessment and feedback: Theory and practice. From the *REAP International Online Conference on Assessment Design for Learner Responsibility*, 29th-31st May, 2007. Available at http://ewds.strath.ac.uk/REAP07