Response to concerns expressed in the journal regarding the HPCSA requirement for registrar (MMed) research

To the editor

"The problem is not the problem; the problem is your attitude about the problem. Do you understand?"

– Captain Jack Sparrow

A recent editorial[1] and letter[2] in the journal question the appropriateness of the current HPCSA regulation for a compulsory practical research component of training for specialist registration. We agree with the call by both publications for national discussion to address the issues raised, although arguably the time for "urgency"[2] has long since passed. Nevertheless, it is always timeous to reflect on current practice and try to find solutions as well as identify problems.

But where do the problems lie? And how do they specifically relate to the research training requirement?

Registrar research was introduced to fulfil an *educational* not a research need. Inevitably, tension is created between the goals of education and goals of research and this should be recognised. In an academic system that rewards research productivity, inevitably this tension could exacerbate the problems of (*inter alia*) small studies, predatory journals, and submission of "non-useful" or "non-meaningful" research to journals. But these are problems not due specifically to registrar research; they already exist, and their extent depends in part on how we teach research. We argue that the registrar research program presents an opportunity for us to decrease their impact. "Polluting the publication well" is entirely under the control of journal editors. Registrar research is not only subject to final peer review, but also requires supervision by an experienced researcher and preliminary post-graduate and ethical review by university bodies. So it should ultimately result in a better quality of research. In short, registrar research will only contribute to these problems ***if we and the journal editors permit it***.

Secondly, the registrar research component was never intended to result in a publication, but to produce an examinable document that demonstrates practical understanding of the research process. It *need not be original*, so the "desire to be first" argument need not apply and the call by Biccard et al. for teaching "a greater value on research which extends and confirms prior research" seems eminently suited to the MMed goals. However, original work is not excluded. If the process produces publishable material, then this might be regarded as the output of an exceptional student and, in our view, would deserve a distinction.

Rather than pursue ever diminishing possibilities of a type 1 error, one should seek knowledge that answers the question: "does this result alter the way I live my life or treat my patients?". So for us, "best practice" is more relevant than "truth". Best practice is based upon currently accepted research findings, which survive not through a process of verification, but by resilience against falsification. Research is based upon scepticism and challenging the perceived wisdom and accepted working hypotheses of the day; it is only a matter of time before a new "truth" emerges: "*eppure si muove*".

Not all research is quantitative, and may not require the use of a p value or 95% confidence limits. Are we also to bemoan the lack of understanding of trustworthiness, transferability, mindfulness, immersion, data saturation and symbolic interactionism?

Both Biccard et al. and Rodseth et al. call for an alternative to the practical research project as a means of assessing research knowledge. Declarative learning is already assessed by written examination. However, application of that learning as a research skill is best assessed by its practical application, demonstrated in a dissertation or publication. The practical approach also permits assessment of transformative aspects of learning (critical reasoning, synthetic reasoning, scientific thinking, and enquiry-led problem solving). Registrar research will not include all research knowledge and skills; the dissertation (thesis) is assessed on the basis of the skills required by the type of research performed.

What then are the issues created by the programme itself? (Some of these issues have already been addressed by the South African committee of Medical Deans.[3])

1. Ethical Issues

a. The introduction of compulsory research forces the student into the subsidiary position of a power relationship that includes not only the supervisor but frequently also the head of department. In effect the students become a vulnerable group (in addition to participants) within the research process. In order to achieve specialist professional registration and career progression, the student becomes dependent upon the grace and favour of her seniors. There is clearly potential for exploitation and abuse.*

b. There is a risk that students may be pushed into a particular research project in order to provide cheap labour for a senior researcher's publication objectives. While it is understandable that different units have their own research agendas, the full canvas of potential topics and research designs should be opened to the students. They should enjoy the process and appreciate what research has to offer.*

c. The student should have the choice (when available) between dissertation and publication. Not all efforts will be suitable for publication, and inappropriately forcing publication for promotional metrics or because the Head of Department has a chum on a journal's editorial board should be avoided. The successful student should emerge with respect for the system and not a cynical view of academic power.

*We acknowledge the argument that a. and b. have always been the case in academic progression; the important difference here is that the process is now compulsory for professional advancement.

2. Non-uniformity of standards

The introduction of compulsory registrar research was only one part of the HPCSA initiative. The other was to introduce a single examining body, the purpose of which was to ensure uniformity of postgraduate examination standards across all the medical schools of South Africa. The introduction of a practical research component was an additional attempt to level the playing field between institutions that included it already and those that did not. Ironically, this attempt to coordinate course components (and incidentally comply with requirements of SAQA) created a problem identical to that which the creation of a single examining body was intended to resolve, namely non-uniformity of standards. The current lack of uniform requirements for the research component between institutions and disciplines, and lack of uniform standards of marking, represent the swamp that still needs to be drained.[4]

3. Lack of transparency

There is no clear target at which students might aim when assaying what is expected of them, and many supervisors are relatively inexperienced and may be as much in the dark as the students. Biccard et al. are right to talk of "grey" research in referring to work printed in a bound copy and left on a shelf in a University archive, perhaps never again to see the light of day. Even work that is published, after meeting editorial and peer review standards (themselves variable), may not be identified as the result of a Master's project. Even if they were (and Biccard makes the point that not all Universities permit this route of completion), we have no way of knowing the proportion of all projects they represent. With written examination, on the other hand, the student has the guidance of the relevant college syllabi, access to past papers, and reassurance that her peers are answering exactly the same questions.

4. Lack of Resources

One of the main problems associated with the HPCSA ruling has been that it was introduced without any consideration for the resources, particularly human, required to introduce the program in those institutions with no history of obligatory registrar research, and the additional burdens placed upon students' and supervisors' timetables. The additional requirement, without expanding the four years' registrar time and without insisting upon protected time for research can delay degrees beyond the required completion time.

Anecdotally, we know that many students have concentrated upon College examination requirements before turning to the research component at a time too late to achieve professional specialist registration in their registrar years. This delayed completion then delayed their specialist careers and resulted in a knock-on effect on health care services by reducing the number of specialists available for appointment.

There is a lack of suitably qualified and experienced supervisors and examiners, particularly in those institutions where university regulations demand an external examiner (in some cases two). Over the past couple of decades there have been significant increases in the numbers of both undergraduate and postgraduate students without any increase in the number of academic (or clinical) staff. Thus more time and effort has been demanded of our experienced and qualified researchers, taking doctoral students and post-docs away from their own work, in many cases without any additional incentive. We can well understand the frustrations felt by active and innovative researchers, particularly if they see "researchers" from other disciplines cynically milking the system with trivial database dredges as a means to improve promotional metrics.

Mindful that complaining about a problem without proposing a solution can be regarded as whining, we would like to table a few proposals for discussion:

1. The Universities might introduce multilateral arrangements such that each contributes examiners to a national pool, among whom the work of examining might be shared. The autonomy of individual institutions might be maintained by respecting their individual format and style, but there would be a uniformity of standards of marking consistent with the educational goals of the Master's research programme and the rigours of scientific discourse.
2. Each university should be encouraged to ensure that the work of its MMed students, whether in the form of dissertation or published papers, is available electronically to all centres. By providing exemplary material, this will both guide the candidates and permit the calibration of standards, and expectations across institutions.
3. Regular interchange of ideas and experiences between institutions, and where necessary joint meetings with other stakeholders (e.g. Colleges, HPCSA and DoHET and provincial health departments) to assess and fine-tune the process. One of the first priorities is to ensure adequate funding and staffing of the MMed programmes, including the research component, and to source funds appropriately from the Universities, DoHET, National DOH (possibly via conditional grant, or earmarked portion of the HPTDG) and provincial health authorities. It might be possible to roll this up into a national body that might coordinate processes in proposals 1 and 2. Again, such activity should remain sensitive to and respect the autonomy of the individual stakeholders.

Discussion of proposals such as these and others will help mould research training into a worthwhile workable enterprise. Meanwhile, it is incumbent upon those first violins among us to remember the time when all any of us could do was blow wind through the trombone. The 2010 HPCSA requirement for registrar research has tremendous potential for the good, not only for the registrars but also the profession as a whole. However, this will only be achieved if we get our act together and make it work.

Chris Rout, Colleen Aldous, Richard Hift

Emerging Academics Research Support, Nelson R Mandela School of Clinical Medicine, University of KwaZulu-Natal

References

1. Biccard BM, Dyer RA, Swanevelder JL, Coetzee JF, Shafer SL. Is the HPCSA requirement for a research dissertation for specialist registration the best option? Southern African Journal of Anaesthesia and Analgesia. 2017;23(4),4-6.
2. Rodseth R, Wise R, Bishop D. Polluting the well. Southern African Journal of Anaesthesia and Analgesia. 2017;23(6),5.
3. Hift R, Aldous C. Standardisation of the research Component of the Master of Medicine (MMed) Degree 2017. Awaiting publication. Available in all Deans' offices.
4. Aldous CM, Adhikari M, Rout CC. The research component of specialist registration – a question of alligators and swamps? A personal view. SAMJ. 2015;105(1),21-22.