Decolonising undergraduate medical curricula through the integration of African traditional medicine and science – a South African perspective

W Mthethwa,[1] 6th-year MB ChB student; **E Kalk,**[2] MB BCh, PhD, MPH; **C D Sylvester,**[3] MBA; **I Ntatamala,**[4] MB ChB, MMed, FCPHM (OccMed) SA

[1] *Faculty of Health Sciences, University of Cape Town, South Africa*
[2] *Division of Public Health Medicine, School of Public Health, Faculty of Health Sciences, University of Cape Town, South Africa*
[3] *Centre for Integrated Data and Epidemiological Research, School of Public Health, Faculty of Health Sciences, University of Cape Town, South Africa*
[4] *Division of Occupational Medicine and Centre for Environmental and Occupational Health Research, School of Public Health, Faculty of Health Sciences, University of Cape Town, South Africa*

Corresponding author: *I Ntatamala (itumeleng.ntatamala@uct.ac.za)*

Background. The South African (SA) healthcare system's colonial legacy continues to impact its institutions, including in higher education. The integration of African traditional medicine (ATM) into medical curricula offers one avenue for meaningful decolonisation within the health sciences. This could enhance sensitivity towards the significant portion of the population that relies on and uses ATM. However, the extent of ATM integration in medical curricula remains unclear.

Objective. To assess the integration of ATM into current medical curricula at SA universities.

Methods. We used a mixed-methods approach, including: (*i*) an online search of peer-reviewed publications; (*ii*) a review of open-access/grey literature from SA medical universities; and (*iii*)) a direct approach to SA medical universities for relevant information. The structured literature review included a search of English full-text articles on PubMed, EBSCOhost, Scopus and Web of Science databases published between 1994 and 2023, using the search terms: 'African Traditional Medicine', 'health sciences curriculum', and 'medical education'. Grey literature, including websites, policy documents and curricula of medical universities, was also reviewed. Faculties of health sciences of the 10 medical universities were directly approached via email to provide details of the integration of ATM into their curricula.

Results. There was limited integration of ATM into medical curricula. The structured literature search demonstrated that only one medical university significantly integrated ATM into their curriculum. Open-access/publicly available evidence revealed some ATM integration in only two universities. Of the four responses received from the direct approaches, two universities integrated some ATM while two had no integration of ATM.

Conclusion. There is a need for deliberate and sustained efforts to integrate ATM into medical universities through policy change and provision of resources for teaching and learning.

Keywords. Medical curricula, undergraduate, traditional medicine, South Africa.

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The inaugural Traditional Medicine Global Summit organised by the World Health Organization (WHO) that took place in Gandhinagar, Gujarat, India on 17 and 18 August 2023 was aimed at garnering political support for the integration of traditional medicine and science into formal health systems, inclusive of health sciences education and research.[1] This development coincided with various global movements that have called for change in the current social, economic and political climate including the #BlackLivesMatter movement in the USA, which sparked a global discussion on addressing issues such as racism, racial prejudice and police brutality in society and the healthcare system.[2] In South Africa (SA), the change that came in 1994 paved the way for meaningful redress from the legacy of colonialism and apartheid in institutions and broader society.[3] In the post-apartheid era, movements led by young people, including #RhodesMustFall and #FeesMustFall, have ignited deeper and meaningful conversations around decolonising education, institutional racism and social awareness.[2,4] Such movements have heightened calls to decolonise the higher education system, which entails re-evaluating and changing the present curricula to incorporate the contributions and experiences of formerly marginalised/excluded people in teaching and learning practice.[2,5] This also entails critically examining the ways in which education has frequently supported Eurocentric viewpoints and colonial knowledge systems.[4,5]

In the context of healthcare and the health sciences, decolonisation refers to interrogating and reconstructing the existing elements of the current health system. The WHO defines a health system as a set of interconnected processes, individuals and infrastructures that aim to provide freedom from disease as well as upholding/promoting biopsychosocial welfare.[6] Global public health continues to largely function within colonialist frameworks and methodologies, as indicated by the predominant presence of well-financed western academic establishments that exert significant influence over the global medical education.[2] As such, non-western countries such as SA may struggle to adhere to these established standards and norms, which are not adapted

to better align with their lived experiences.[7] The acknowledgement and integration of African traditional medicine (ATM) into health sciences curricula is one mechanism towards decolonising medical education and re-aligning future health paradigms.[4,5]

The aim of this study was to examine the integration of ATM into current medical curricula at SA universities. More specifically, our objectives were to assess the current state of ATM integration, explore the reasons behind its integration, methods adopted for integration, and identify challenges encountered in the process. ATM was defined as healthcare methodologies known to indigenous African peoples used in the prevention, diagnosis and treatment of physical, social or spiritual illnesses, as well as to enhance quality of life.[8-10] This encompasses a wide spectrum of methods and protocols that can exhibit significant variations across distinct communities.[8] ATM is distinct from other forms of healing practices, such as complementary and alternative medicine, which have origins outside of Africa and have not been integrated into indigenous cultures historically.[11] Medical education provides an opportune avenue to shape the minds of current and future healthcare workers and healthcare outcomes supporting future changes in institutional culture at universities and in medical practice.[5] It is hypothesised that there is limited integration of ATM science and principles into current medical curricula in SA due to a historical reliance and bias towards western biomedicine.[2]

Within this aim, our objectives were to quantify how many of SA's 10 universities offering health science degrees integrated ATM into their syllabuses; what format this took; and whether any enablers or barriers had been identified.

Methods

We applied a mixed-methods approach to achieve the objectives, comprising: (*i*) a structured literature review of peer-reviewed publications; (*ii*) a review of the grey literature and information on medical school curricula available online; and (*iii*) reaching out to SA faculties of health sciences engaged with teaching and learning for information on ATM integration into their medical curricula.

Literature review. We conducted a thorough internet search of English full-text articles on PubMed, EBSCOhost, Scopus and Web of Science databases using a timeline of literature published between 1994 and 2023. The year 1994 was chosen, as it represents a critical moment of change in SA in the efforts of transformation and eradicating the legacy of colonialism and apartheid. Search terms included 'African Traditional Medicine', 'health sciences curriculum' and 'medical education'. A manual evaluation of searched terms and reference lists of relevant studies, journals and articles was also conducted. This review article includes various forms of literature addressing the integration of ATM into the health sciences curriculum of SA medical universities in English.

Grey literature. Open-access/publicly available grey literature from universities was further reviewed including the websites, policy documents and curricula of SA universities that offer medical training.

University syllabuses and operational integration. SA's 10 medical universities were approached via email to request publicly available documents describing the institutions' integration of ATM, rationale for the integration, the study years in which ATM is offered, how such integration occurs, assessment practices and challenges encountered by educators at universities.

Methodological limitations

The literature reviewed had to comply with the abovementioned eligibility criteria and all resources were electronically accessed; hard copy resources were not reviewed/obtained from universities. A narrative literature review was conducted to synthesise the findings instead of a more rigorous systematic review and meta-analysis, with the quality of articles being formally graded. We were limited to the English language, SA and open-access resources with regard to information on medical curricula at the universities. Information on the operationalisation of ATM integration was limited to responses from the faculties of health sciences and publicly available information.

Results

The structured literature search yielded six peer-reviewed publications (Fig. 1 and Table 1), which described integration of ATM at SA health sciences faculties and medical schools. From the literature review, only two universities (A and B) (Table 2) had open-access/publicly available grey literature outlining integration of some ATM, which could be accessed by the research team. Four of 10 faculties of health sciences responded to our email request for evidence of ATM integration in the institution's medical curriculum (universities C, D, E, F) (Table 3).

Peer-reviewed publications retrieved (Fig. 1 and Table 1) largely agreed that there is a lack of integration of ATM at SA medical universities. Key themes in the literature include the understanding of health-seeking behaviours of patients and the role of ATM, lack of integration of ATM into the medical curriculum, understanding the viewpoints and mindsets of health science students and healthcare professionals around the integration of ATM, factors challenging integration of ATM and strategies to facilitate integration. Chitindingu *et al.*[11] noted that of the seven SA medical universities reviewed, only one significantly used theoretical and practical tools such as interactions with traditional healers to integrate ATM into their curriculum. This was in contrast to five other universities that had minimal integration of ATM, using introductory teaching of concepts, and at one university there was no integration.[11] Results of a more recent study by Lawrence *et al.*[5] on three medical universities noted minimal change from previous research, with integration comprising a single lecture highlighting basic concepts that provide a description of ATM. Only one of the three universities offered tasks that required collaboration between medical students and traditional healers.[5] Others have also reported that all 10 of the medical universities do not have an independent course on ATM that incorporates and collaborates with traditional healers.[10,11] The peer-reviewed literature strongly argued for curriculum reform and transformation due to the heavy focus on teaching concepts rooted largely in western biomedical sciences.[2]

A review of the open-access/publicly available grey literature including university websites revealed that two universities integrated ATM in the first and sixth years of the MB ChB programme. University A did this through community engagements, interaction with traditional healers and written and oral assessments.[12] This university was also the only one that established a specialised department within their Faculty of Health Sciences dedicated to ATM. University B offers an introductory course that acknowledges ATM as part of societal and cultural frameworks.[13]

Of the 10 SA medical universities that were approached via email, four responded. One offers a course during the second and third years of the MB ChB programme that explores patient health beliefs through a series

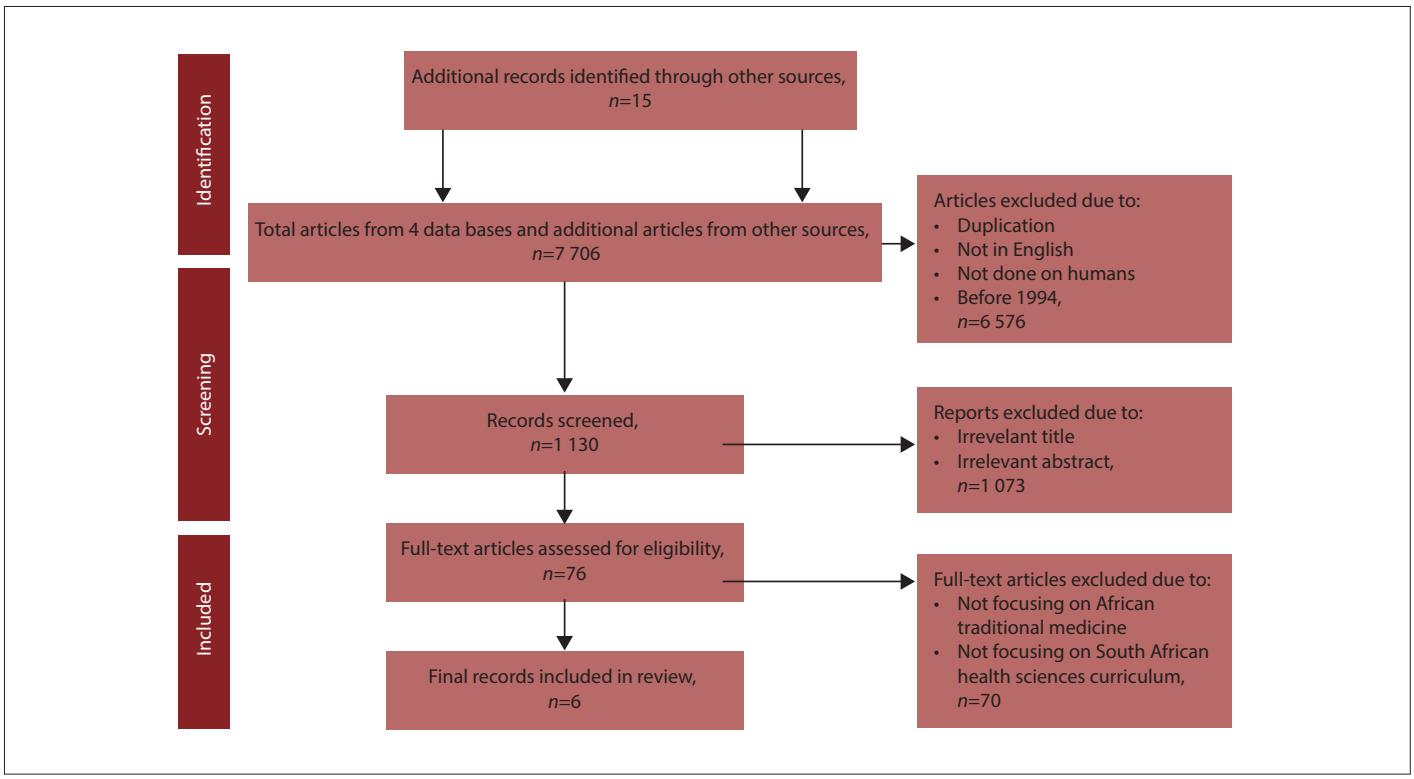

Fig. 1. PRISMA flowchart of literature search. (PRISMA = Preferred Reporting Items for Systematic reviews and Meta-Analyses.)

of lectures, tasks and readings. Another indicated that changes to be made to their curriculum in the future would include indigenous knowledge systems, and two universities indicated having no specific material, teaching and assessments related to ATM. The universities reported several challenges to integrating ATM into the medical curriculum, including poor lecture attendance (as the ATM lectures are not compulsory) and lack of interest from students.

Discussion

We found evidence of limited and inconsistent integration of ATM into medical curricula in SA. The SA literature in this field is limited, mainly comprising qualitative studies with small samples. Direct enquiry found that apart from University A, there was little formal integration of ATM in curricula, with plans to improve capacity at only one other institution (University D).

Reasons for integration

The practice of ATM constitutes an integral aspect of the lived experience of the majority of South Africans, with ~80% of black South Africans engaging with traditional healers in various capacities.[3,10,14] SA is home to a substantial number of traditional health practitioners, ranging from ~250 000 - 493 000 individuals, a figure surpassing the 23 000 documented biomedical healthcare professionals.[3,10,15] Despite these striking statistics, the inclusion of ATM in medical curricula is conspicuously deficient. Traditional healers wield significant influence in shaping the conceptualisation of illness and health among many South Africans, thereby fundamentally shaping their health-seeking behaviours.[2]

The rationale for integration pertains to a host of varying factors. Nemutandani *et al.*[10] speak of a myriad of challenges faced by patients in accessing biomedical healthcare facilities. These include the substantial distances patients often must traverse, with the associated financial costs, which are particularly prevalent in rural areas.[10] Patients also frequently endure protracted waiting times in suboptimal conditions, exacerbated by the inadequate working conditions of healthcare personnel, which frequently entail resource shortages and a deficit of essential staff.[10] For many, these factors render access to biomedical healthcare unattractive and, at times, unfeasible, compounded by cultural beliefs regarding illness and healing.[10,14] Consequently, the integration of ATM emerges as a potential means to ameliorate many of the deficiencies inherent in the biomedical healthcare system.[4]

The recognition of African traditional practices within a legal framework is enshrined in various policies and legislations domestically and internationally.[10,16] Notably, in SA, this recognition is primarily embodied in the Traditional Health Practitioners Act (No. 22 of 2007), legislation that acknowledges the indispensable role played by traditional healers in communities.[4,15] This legislation advocates for the formal inclusion of traditional healers within the conventional healthcare system and affirms patients' rights to utilise ATM in their pursuit of healthcare.[10,16] There are calls to introduce ATM as a third tier of healthcare (in addition to the public and private biomedical models) to the National Health Insurance programme in SA.[17]

Furthermore, formal integration assumes importance in the context of overcoming the psychological battle of colonised minds.[18] The process of decolonising the mind constitutes a pivotal step towards enabling historically marginalised individuals to recognise the colonial conditioning that stigmatised and subordinated ATM, indigenous beliefs and practices as inferior.[10,18] This shift in mindset holds the potential to reposition displaced indigenous knowledge systems at the forefront and, in turn, foster greater collaboration between the two healthcare systems.[10,18,19]

Table 1. Summary of peer-reviewed literature on integration of African traditional medicine at South African health sciences universities and medical schools

Author	Year	Type of study design	Sample size, *n*	Health science discipline	Key themes investigated	Recommendations	Limitations
Lawrence *et al.*[5]	2021	Qualitative	43	Medicine	Understanding ATM; empathising with patients using ATM; integration of ATM into medical curriculum	Current medical curriculum needs to change and include formal teaching of ATM; change in mindsets required at medical schools; greater collaboration needed between key stakeholders to implement change	Limited to three South African medical universities; limited to final-year medical students; convenience sampling; possible recall bias
Ngunyulu *et al.*[4]	2020	Qualitative	39	Nursing	Understanding the viewpoints of nursing students around the integration of ATM into the curriculum	Students reported having a lack of skills required to provide holistic care involving recognition of ATM and its role in communities; change in the current curriculum is needed for integration of ATM to occur	Convenience sampling; limited to volunteers – therefore may not represent the student population
Moeta *et al.*[2]	2019	Qualitative	6	Nursing, medicine, traditional medicine	Change in health sciences students and health professionals' mindsets regarding ATM; factors challenging integration of ATM; strategies to facilitate integration	Factors challenging integration include the stigma associated with ATM and a lack of research on ATM; collaboration and co-operation are key to successful integration of ATM into existing nursing curricula	Discussion forum with limited sample size (*n*=6)
Nemutandani *et al.*[10]	2016	Qualitative	77	Nursing, medicine, pharmacy, dietetics, psychology, social work	Provision of quality ATM healthcare; concepts around the science behind ATM; guidance on policies to foster collaboration	Renewing current curriculum to include ATM at undergraduate levels is vital; adoption of appropriate policy guidelines is needed; collaboration between key stakeholders	Purposive sampling; self-reported data can lead to recall bias; attribution and hyperbole
Chitindingu *et al.*[11]	2014	Review	7	Medicine	Health-seeking behaviours of patients; lack of integration of ATM into the medical curriculum	Patients use ATM in seeking healthcare; need for changes to the medical curricula to integrate ATM; need for effective collaboration between key stakeholders	Study was done via telephone interviews
Mammen[20]	2013	Cross-sectional	98	Medicine	Attitude of medical students towards referral of patients to traditional healers; lack of information on ATM in medical curricula	Medical students had little to no intention of referring patients to traditional healers despite awareness of the role of ATM; need for an inclusive curriculum on ATM for medical students; need for research on attitudes of medical students towards ATM	Convenient sampling; data may not be representative of student population

ATM = African traditional medicine.

Moreover, students would benefit as it would enable them to adopt a more holistic perspective on health and wellness.[4] This holistic approach encompasses not only the treatment of illnesses but also the promotion of overall wellbeing. The integration of such a perspective into medical education empowers healthcare providers to adopt a more comprehensive approach to patient care.[5] Students stand to gain by becoming culturally sensitive and proficient healthcare providers, thereby enhancing their capacity to understand and respect the cultural beliefs and traditions of their patients.[5,11]

Methods of integration

The realisation of effective integration of ATM into medical education can be achieved through a variety of teaching and learning practices/methods. One viable approach used involved the revision of curricular content to encompass dedicated coursework on ATM, discussing ATM's underlying concepts, methodologies and therapeutic modalities.[2,4] Comprehensive exploration of historical, cultural, ethical and practical dimensions of ATM could also be included in the educational framework.[10,20] Additionally, practical training initiatives could be implemented, wherein students are

Table 2. Summary of findings from open-access/publicly available university sources

University	MB ChB, year	Overview of curriculum/course
University A	1	Health and illness are explained using societal, economic, cultural and political contexts The emerging healthcare professional is therefore able to understand the social context in which they will operate while being cognisant of the sociocultural background of their future patients The course will include a series of lectures, tutorials, a reflective essay and an examination
University B	6	Teaching aims to provide students with the practical tools to be able to learn within the context of rural health, understand patient lifestyle issues, the plural health system and complementary medicine The abovementioned is done through a series of practical interactions with various healthcare stakeholders, including traditional healers Assessments include a portfolio and oral examinations

Table 3. Summary of direct responses from university health science educators/deans regarding integration of ATM at their universities

University	MB ChB, year	Overview of curriculum/course	Limitations/challenges
University C	2 - 3	Objectives include that students need to gain an understanding of and respect for parallel health beliefs and systems Raises questions on health beliefs through problem-based learning cases There are readings, a lesson page and a lecture in each year	Poor lecture attendance, voluntary attendance (ATM not compulsory)
University D	1 - 3	Renewed MB ChB curriculum that plans to integrate indigenous knowledge systems through the pillars of the health system and the community, which would include traditional healers Aims to create a favourable environment where future healthcare professionals can be open to other approaches to healthcare beyond biomedical health care Semester modules that introduce theory around various models of healthcare	Does not currently directly include ATM
University E	1 - 6	No form of ATM integration in the clinical disciplines	Not indicated
University F	1 - 6	Learning outcomes but no specific ATM integration	Not indicated

ATM = African traditional medicine.

afforded the opportunity to observe and engage with traditional healers within their clinical practices, under appropriate supervision.[4] Such hands-on exposure can facilitate a deeper understanding of ATM and its associated belief systems.[5,10]

To implement these transformative changes, it is imperative to examine instances of successful institutional adaptation. As illustrated by Chitindingu *et al*.,[11] one university has achieved theoretical and practical integration of ATM. It has established a specialised department within its Faculty of Health Sciences, exclusively dedicated to ATM pedagogy and scholarship.[21] Although presently only available at the postgraduate level, this department endeavours to incorporate indigenous knowledge systems into the curricula of medical universities.[21] It underscores the importance of fostering collaboration among key stakeholders.[16] Furthermore, noteworthy progress has been made in the establishment of an ATM-specific laboratory, dedicated to researching the applications of ATM in disease treatment.[13] This university has also actively advocated for the formal recognition of medical referral letters issued by traditional healers and has facilitated supervised visits by medical students to traditional healthcare institutions.[22,23]

Cultural sensitivity training as part of integration will play a pivotal role in imparting to students the significance of cultural sensitivity and comprehension in the context of traditional medicine.[8,18,19] Such training contributes to the cultivation of mutual respect and understanding between practitioners of ATM and western medicine. Moreover, addressing ethical considerations and regulatory aspects is of paramount importance, as it equips students with the knowledge essential for navigating the ethical quandaries, intellectual property rights and regulatory complexities associated with traditional medicine.[8,24]

Challenges to integration

The foremost challenge to achieving integration in the field of healthcare is entrenched in history. The legacy of colonialism cultivated and perpetuated a global healthcare framework that marginalised medical practices misaligned with western doctrines and ideologies.[2] ATM, throughout history, has been unjustly stigmatised, notably through legislative measures such as the Witchcraft Suppression Act 3 of 1957,[18] which reinforced the perception of western medical practices as superior while denigrating traditional practices as inferior and devoid of value.[2,18] Consequently, this has exerted a significant influence on the prevailing belief that ATM lacks empirical validation and unduly favours western paradigms and ideologies regarding the nature of illness, its treatment and management.[10]

Additional challenges stem from the lack of financial resources allocated for essential infrastructures and assets necessary to implement integration, including research laboratories, expert personnel and educational institutions.[9]

The absence of standardised practices compounds the challenge, as the co-existence of diverse belief systems and methodological disparities among individuals and communities renders the formulation of a uniform curriculum a formidable task.[15]

Quality control and safety also emerge as legitimate concerns, given that certain traditional medicinal approaches may not have undergone comprehensive safety and efficacy evaluations.[5,9] This issue becomes particularly pertinent when traditional and western therapeutic modalities are employed concurrently.[5] Furthermore, the lack of scientific substantiation for the efficacy of some ATM techniques may foster scepticism and resistance among medical instructors and students.[9]

Implications and recommendations

The integration of ATM in SA medical universities is limited and should become a priority, with provision of adequate funding to support its teaching and research. There is a need for health science educators, students and traditional healers to collaborate in ensuring integration of ATM into medical curricula as an opportunity to optimise healthcare interactions and improve health outcomes.[5] More research still needs to be done on the benefits, challenges and strategies needed to successfully integrate ATM into the health science curriculum of SA medical universities.[4,20]

Conclusion

Currently, there is a lack of ATM integration within the undergraduate health sciences including medical curricula across SA medical universities.[5] Such a transformation is pivotal, not only for shaping future medical practitioners' approach but also for reshaping the institutional ethos of medical schools.[5,10] There is limited information on examples of successful integration of ATM in the medical curricula of medical schools in Africa, particularly those in sub-Saharan Africa.[25] Integration presents an opportunity to rectify several deficiencies inherent to the current healthcare system.[2] A concerted effort should be made to facilitate the assimilation of ATM into medical curricula, given its alignment with the healthcare-seeking patterns of a substantial portion of the SA populace.[3] This juncture signifies a momentous occasion for acknowledging historical inadequacies and instigating a process of decolonisation. However, it is imperative that this endeavour be characterised by meticulous planning, regulatory measures, ethical engagement and collaboration with key stakeholders to effectively achieve integration.[2,9,10,14]

Data availability. The data sets generated and analysed during the current study are available from the corresponding author upon reasonable request.

Declaration. The views expressed in this article are those of the authors and are not the official position of the University of Cape Town.

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