

# An overview of occupational medicine and health services and associated challenges in southern Africa

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*This paper is an account of Dr Dingani Moyo's knowledge and experience regarding the status and key challenges of occupational medicine (OM) and health services in southern Africa. It builds on two previous publications on the organisation of occupational health and safety in southern Africa.<sup>1,2</sup> Dr Moyo draws from his working experience in Africa, providing occupational health (OH) technical expertise in the region, conducting training in OM, heading the OSHAfrica Scientific Committee: Education and Competency Improvement, lecturing at the University of the Witwatersrand in South Africa and the Midlands State University in Zimbabwe, and being a member of the Executive Committee of the South African Society of Occupational Medicine (SASOM). He was involved in the establishment and operationalisation of 10 OH service centres in seven southern African countries, under the Global Fund's TB in the Mining Sector (TIMS) project;<sup>3</sup> training of mine and labour inspectors, doctors and nurses on the World Bank's Southern African Tuberculosis and Health Systems Support (SABHSS) project in four southern African countries;<sup>4</sup> and the establishment of two OH clinics in Zimbabwe, under the USAID-funded Kunda-NqobiTB (KN-TB) project.<sup>5</sup> Having worked predominantly in mines in Botswana and Zimbabwe, and as head of the OSHAfrica Scientific Committee: Education and Competency Improvement, Dr Moyo has extensive experience in Africa and, more specifically, in southern Africa. Dr Moyo is a member of the American College of Occupational and Environmental Medicine (ACOEM)'s Training and Marketing Committee. In writing this paper, he also draws on his experiences as past board member and national secretary for Zimbabwe of the International Commission on Occupational Health (ICOH).*

## INTRODUCTION

Southern Africa is endowed with an abundance of mineral resources across most of its countries. These include cobalt and copper in Zambia; diamonds in Angola, Botswana and Zimbabwe; and gold, platinum and chrome in Zimbabwe and South Africa, to mention just a few. Agricultural activities are also prominent in most southern African countries.<sup>6</sup> The diversity of industrial activities is characterised by a plethora of occupational risks in the working space. A key concern is the gross mismatch between the extensive and diverse industrial activities with their associated risks, and the level of maturation of occupational health management systems (OHMS) in southern Africa.

## Occupational health services in southern Africa

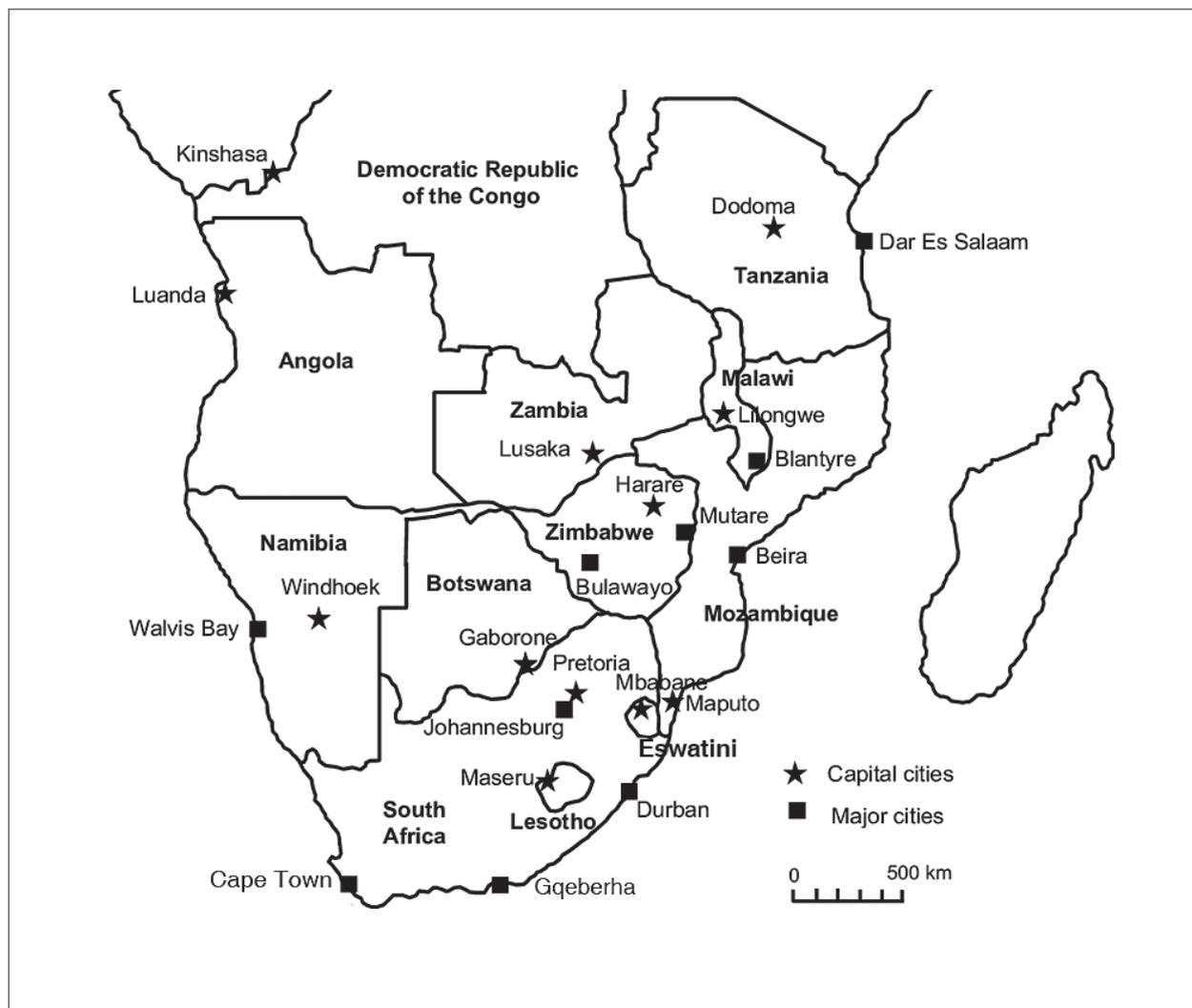
Occupational health services (OHS) are still largely at an infancy stage in southern Africa, except for the Republic of South Africa, which has better systems than the other countries.<sup>1</sup> The discipline of occupational medicine (OM) has had a challenging gestation, and a grossly protracted delivery process. Southern Africa has a dearth of published data in the field of OH. From the minimal available sources, levels of access to OHS in countries like Tanzania are incredibly low – below 5% – while, in South Africa, outside of mining, access levels are less than 20%.<sup>7,8</sup> This is in tandem with international trends, where the global access levels of occupational safety and health (OSH) services is below 15%.<sup>9</sup> Basic occupational health services (BOHS) have not yet been embraced by most ministries of health in the southern African countries. Integration of OHS into primary health remains far-fetched on the horizon.

Commitment to OHS at national levels across most of the countries

is suboptimal. This is partly evidenced by the very few countries that have ratified the key International Labour Organization (ILO) Conventions: C155 on Occupational Safety and Health, and C161 on Occupational Health Services.<sup>10</sup> Countries like Angola, Botswana, Eswatini, Malawi, Mozambique, Namibia, South Africa and Tanzania have not yet ratified Convention C161. Only a few countries (Lesotho, Malawi, South Africa and Zimbabwe) have ratified Convention C155. This negatively impacts both national and organisational OHS provision in the respective countries. Commitment to OHS should start at the national level for an effective and comprehensive cascade, across all levels, to the workers. Zimbabwe is a good example in this regard, having ratified both Conventions and developed a national occupational safety and health (OSH) policy.<sup>11</sup>

## Role of Government

Apart from South Africa and Zambia, most ministries of health do not play significant or prominent roles in the provision of occupational medical services (OMS). Occupational health services are not integrated into primary health services in most countries. Occupational medical services are near absent in the informal sector and public service, and even worse-off are the highly mobile and remote working artisanal and small-scale miners (ASMs), especially in Zimbabwe, Mozambique and Tanzania. Most countries lack organised and comprehensive OHS for health workers, save for infection control programmes. Except for South Africa, occupational hygiene services are almost non-existent in most countries. This further reflects the infancy of OHS since occupational hygiene is an inseparable component of any national or organisational medical surveillance programme.



**Map of countries in southern Africa**

In most southern African countries, OSH services are the responsibility of the ministries or departments of labour, mining and, to a lesser extent, health. Generally, the labour ministries carry the primary responsibility of overseeing OHS provision and enacting relevant legislation and OSH policies. In Zimbabwe, for example, the National Social Security, under the Ministry of Labour and Social Welfare, is responsible for the provision of OSH as well as clinical OHS, such as medical examinations; while, in Zambia, the Occupational Health and Safety Institute (OHSI) falls under the Ministry of Health and is charged with the provision of clinical OHS.<sup>12,13</sup> Hence, the organisation of OMS varies across countries.

Legislation governing OHS is highly fragmented and, where it exists, it is deficient in content and lacks coordination. Some of the commonly found pieces of OSH legislation include Occupational Safety and Health Acts, Factories Acts, and Workmen' Compensation Acts. Most countries have legislation on OSH, which focuses on prevention and risk management. There is a paucity of complementary legislation on OMS. Most of the OHS legislation is modelled on former colonial laws that have not changed with the growth and development of OHS. Apart from South Africa, there are no legislated or regulated OM standards for audiometry, spirometry, vision screening, biological monitoring, return-to-work standards, or risk-based medical surveillance standards underpinned by occupational risk

exposure profiles. This is also largely due to lack of occupational hygiene services and expertise.

### **Workplace programmes**

Most countries in southern Africa lack basic and comprehensive workplace programmes. Most practice is largely based on outdated laws that have not evolved with scientific evidence. An example of this is in Zimbabwe and some other countries where legislation, through local authorities' by-laws governing food handler's medical examinations, still require routine unnecessary, costly, and scientifically unjustified tests, such as chest X-rays, throat swabs and stool examinations. In the absence of occupational hygiene services in most of these countries, workplace programmes on hearing conservation, respiratory conservation, mental health, ergonomics, and risk-based medical examinations are not being effectively implemented due to the poor development of OHS in the region.

Key concepts that are yet to take root in most countries are risk assessments and linkage to medical surveillance programmes at workplaces. Mental health programmes and ergonomics programmes are also not well developed in southern Africa. The current COVID-19 pandemic has exposed the weaknesses and poor development of OHS. For example, return-to-work and fitness-for-duty workplace programmes focused on COVID-19

have been articulated from a generalist point of view, by different medical disciplines that lack a workplace-based OH approach. Exceptions are some of the multinational corporations and large organisations that have their own internal OH programmes, which are often well-developed and, in some cases, match international best practice standards.

### Service providers

Occupational medical services are usually provided by general medical practitioners in most countries in southern Africa. Occupational medicine is not a developed specialty and lacks central coordination and implementation structures in the region. In almost all countries, except South Africa, the OSH legislation tends to designate responsibility to registered medical practitioners instead of occupational medical practitioners (OMPs) or occupational medicine specialists. Occupational medical services in some of these countries are largely based on price rather than quality and comprehensiveness of the service. This stems from lack of understanding, by organisations, about the specialised role and significance of OM.

Occupational medicine and occupational hygiene practices suffer from a dearth of human resource capital in the region. The number of occupational medicine specialists and qualified occupational hygiene specialists is near zero in all southern African countries other than South Africa. Occupational medicine specialists, possessing a Master's degree in medicine (occupational medicine), or membership/fellowship in occupational medicine, and who are registered with medical or health professions councils, are almost non-existent in most southern African countries. South Africa has about 44 registered occupational medicine specialists, while countries like Zimbabwe, Namibia, and Lesotho have one each; Botswana and Tanzania each have two registered occupational medicine specialists.<sup>14-19</sup> Occupational medicine practitioners in possession of a diploma in occupational medicine/health or a Master's degree in occupational health, but not registered as occupational medicine specialists by the respective national regulatory authorities, have played a pivotal role in bridging the gap. Anecdotally, almost every southern African country has a qualified OMP. Most OMPs work in private organisations; there are inadequate numbers in the public sector. Where OMPs do exist, they play a significant role in the inception and implementation of risk-based medical surveillance programmes and improved OH practice.

### Occupational health training

South Africa is the only country that has institutions that offer a Master's degree in medicine (occupational medicine) and a fellowship qualification in occupational medicine. Similarly, a Diploma in Occupational Health, specifically for doctors, is not offered anywhere outside of South Africa. Most southern African countries offer diploma and degree programmes in OSH that are non-clinical and dedicated to health practitioners and non-clinicians. Academic institutions in the region are yet to embrace the concept of OM and appreciate its relevance as a speciality. South Africa has played a significant role in training and education in the field of OM. South African institutions, such as the University of the Witwatersrand, University of KwaZulu-Natal, University of Cape Town, University of the Free State, and Stellenbosch University, have trained many doctors in the region. This is one area where the region requires ideological improvements, combined with an aggressive approach to capacitating its institutions, to leverage capacity building. This will take a deliberate effort, commitment, and investment of resources into national capacity-building programmes.

### The future of occupational medicine in southern Africa

Despite the foregoing challenges, the wheels of change of OMS have started turning, albeit at a very slow pace. There have been several developments aimed at the genesis of OMS in the region. The Global Fund, through the Tuberculosis (TB) in the Mining Sector (TIMS) project, established 11 occupational health clinics in eight southern African countries, aimed at screening for TB and occupational lung diseases in miners, ex-miners, their dependents, and the mining communities.<sup>3</sup> This marked a quantum leap in the establishment of OMS, although the sustainability post the project remains to be seen. Under the Southern African Tuberculosis and Health Systems Support (SATBHSS) project, funded by the World Bank, capacity building in OSH and OM for doctors, nurses, mine and labour inspectors, and OSH practitioners in Malawi, Zambia, Mozambique and Lesotho, on TB and occupational lung diseases, is ongoing and has been of significant value.<sup>4</sup> The United States Agency for International Development (USAID), through the Kunda-Nqob'iTB (KN-TB) project, is establishing two OH clinics at two provincial hospitals in Zimbabwe. One of these OH clinics, at Gweru Provincial Hospital, became operational in the last quarter of 2020.<sup>5</sup> The project has further embarked on an inaugural mobile OH outreach programme – the first of its kind in Zimbabwe – providing TB screening and occupational lung disease screening to the highly mobile and remote ASMs. These have been significant strides in the establishment of OMS in the ministries of health in the respective countries. The African Union Development Agency (AUDA) and its partners have been involved in training occupational hygienists and doctors from Malawi, Mozambique, Lesotho and Zambia.<sup>20</sup> OSHAfrica, a continental OSH foundation, has been involved in several efforts in Africa, including in the southern African region, where it is establishing structures to give guidance on OSH legislation as well as conducting capacity building in OSH, OM and occupational hygiene.

Countries like Zambia, through local initiatives and grants support, have improved their OHS provision structures. This has culminated in the establishment of a Centre of Excellence at the Occupational Health and Safety Institute (OHSI) in Kitwe. Through the World Bank's SATBHSS project, OHSI has offered training in the ILO classification of chest radiographs for pneumoconiosis. In Zimbabwe, the National Social Security Authority (NSSA) runs one of the biggest rehabilitation centres in the region, at its Bulawayo Rehabilitation Centre. The NSSA has further introduced mobile occupational health services to companies across the country, which has greatly improved access to OMS.

### RECOMMENDATIONS

In view of this discussion, the following recommendations are made:

1. Governments should ratify both ILO Convention 155 on OSH and ILO Convention 161 on OHS.
2. The ministries of health should engage qualified OMPs and OM specialists to oversee the establishment and operationalisation of OM departments.
3. Training institutions must establish OM and occupational hygiene specialist training.
4. Enactment of comprehensive and overarching OH legislation should be pursued by southern African countries.

### CONCLUSION

Occupational medicine services in southern African countries, apart from South Africa, are poorly developed and are provided mostly by

general practitioners with no specialist training in OM. Southern Africa has a critical shortage of OMPs and OM specialists, and lacks academic institutions that offer specialist training. Occupational health legislation is fragmented, inadequate and often lacks coordination. Most countries in the region, including South Africa, have not yet ratified ILO Convention 161 on OHS. Adoption and implementation of the BOHS model by the southern African countries will significantly improve access to OHS. There is no evidence of concerted and transformative self-generated efforts by countries to improve southern Africa's narrative in OMS. A flicker of momentum stems from donor-funded initiatives, such as those associated with the Global Fund, World Bank, and USAID; and from the mobilisation of OSHAfrica and other organisations. A radical transformative approach by governments, preceded by the urgent ratification of ILO Conventions 161 and 155 by member states, will challenge the status quo and leverage the genesis of basic and organised OMS.

### DECLARATION

The author declares no conflicts of interest. He has been involved in the regional OH projects implemented by the Global Fund's TIMS project, World Bank's SATBHSS project, USAID's Kunda-Nqob'ITB project, and is a board member of OSHAfrica and a member of the SASOM Executive Committee.

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