

Transforming occupational health services provision in southern Africa through capacity building

Norman Khoza: African Union Development Agency (AUDA-NEPAD); SAIOH Immediate Past-President, 2021–2022

e-mail: normank@nepad.org

Chimwemwe Chamdimba: African Union Development Agency (AUDA-NEPAD)

e-mail: chimwemwec@nepad.org

Dr Dingani Moyo: Baines Occupational Health Services, Zimbabwe; Faculty of Health Sciences, University of the Witwatersrand, South Africa; Midlands State University, Zimbabwe; National University of Science and Technology, Zimbabwe

e-mail: moyod@iwayafrica.co.zw

INTRODUCTION

Africa boasts an expanse of diverse natural resources, notably minerals and agriculture. Almost every country is endowed with a specific natural resource that provides livelihoods to many. In tandem with the vast diversity of activities to tap these resources, a multiplicity of occupational exposures, some with far-reaching consequences, characterise the working environment across Africa. Most occupational diseases are under-reported due to poor diagnostic and management skills.^{1,2} Africa lags significantly in occupational health knowledge capital and institutional memory. Access to occupational health services, human capital in occupational health, and institutional memory at country levels is grossly deficient across most African countries.^{3,4} In most countries with near-absent specialists, occupational medicine expertise is very constrained; South Africa is the exception.^{1,3,5} Best practice standards in occupational health, including competency in the International Labour Office (ILO) International Classification of Radiographs of Pneumoconiosis (ICRP), are lacking.

In recent years, the African Union Development Agency (AUDA-NEPAD), through the Southern African Tuberculosis and Health Systems Support (SATBHSS) project, birthed an innovative strategic approach to cover human capital deficits through capacity building in occupational health across southern Africa.⁵ This includes a firm focus across the entire spectrum of occupational lung diseases (OLDs) in response to the triple epidemic of the human immunodeficiency virus (HIV), tuberculosis, and silicosis in southern Africa.⁶ The interventions include training of physicians, safety and health practitioners, occupational safety and health (OSH) inspectors, and many other cadres involved in occupational health.

KEY LANDMARK INITIATIVES

Occupational health is a multidisciplinary domain that requires an interface of various disciplines to safeguard employee health and wellness. The project focuses on policy reforms, adoption of best practices, and capacity building of occupational hygienists, medical practitioners, and nurses involved in occupational health practice in the four countries: Malawi, Lesotho, Mozambique and Zambia. The key initiatives include: 1) the roll out of the code of practice (COP) for OLDs, 2) training of doctors on the ILO's ICRP, 3) occupational health training for nurses, and 4) training of occupational hygiene professionals. Furthermore, AUDA-NEPAD, in collaboration with the Centre of Excellence on Occupational Health and Safety in Zambia, is developing a training/mentorship curriculum on the ILO ICRP to ensure a stepwise sustainable approach to capacity building.

Code of practice for occupational lung diseases

In 2021, the SATBHSS project developed a COP for OLDs to guide the management of OLDs. This was in response to the lack of diagnostic and management skills with regard to OLDs. The COP covers silicosis, asbestosis, coal workers' pneumoconiosis, and chronic obstructive pulmonary disease, among many others. It gives insight and guidance to occupational health practitioners on the diagnosis and management of OLDs, and linkage to local and regional compensation systems. The COP was developed in a generic format, which countries can adapt to their specific needs. Adaptations to the COP are currently being made by technical in-country task teams in Malawi, Zambia, Mozambique and Lesotho.

Countries are encouraged to adopt and adapt the COP to improve the surveillance of OLDs. This is particularly important in the face of human capital deficits and a paucity of published guidance documents on OLDs in the region.

ILO classification of radiographs of pneumoconiosis capacity enhancement

The ILO ICRP is used internationally for epidemiological research, screening and surveillance of workers in dusty occupations, and for clinical purposes.⁷ It is used for systematically describing and recording radiographic abnormalities in the chest caused by dust inhalation. There is a dearth of expertise and competency in the use of the ILO classification of radiographs. This is further compounded by inadequate intellectual capital and institutional memory regarding occupational health in most public health institutions across most countries.

In addition to developing capacity on OLD diagnostics and management, AUDA-NEPAD took a further step to focus on capacity building on the ILO ICRP. In 2021, two capacity-building workshops for doctors were conducted in Zambia at the Centre of Excellence in Kitwe, where 28 medical doctors and radiologists from Malawi and Zambia were trained on the ILO classification.

There is a significant deficit of knowledge in the use of the ILO classification, as evidenced by a mean knowledge gain of 68% in one of the training workshops. To further improve understanding of the ILO classification, AUDA-NEPAD embarked on a stepwise approach to develop a regional curriculum for training/mentorship of medical doctors on the ILO ICRP. Zambia trained doctors from districts to support the decentralisation of occupational health services.

The curriculum is modelled on the ILO classification syllabus with modifications to incorporate a foundational body of knowledge in occupational health, and OLD diagnosis and management. Although

the ILO classification neither defines pathological entities nor considers working capacity, the curriculum incorporates knowledge on the diagnostic principles of OLDs – an area in which most clinicians lack the requisite knowledge and experience. The high burden of tuberculosis in most African countries complicates the diagnosis of OLDs, especially for clinicians without occupational medicine training.

Occupational health training

In 2021, AUDA-NEPAD conducted three training sessions for occupational health nurses in South Africa, Mozambique and Lesotho, with the aim of equipping nurses with basic occupational health knowledge and skills. Forty-five nurses from Lesotho, Malawi and Mozambique underwent training on the fundamentals of occupational health, with an emphasis on spirometry, audiometry, lung functioning testing, visual testing, and fitness for duty.

These capacity-building sessions for nurses resulted in the following outcomes:

1. Malawi set up occupational health teams to establish and support occupational health service centers in seven districts.
2. The Lesotho and Mozambique teams that provide services at the occupational health centres are focusing on improving these services.

Occupational hygiene and inspectors training

Occupational hygiene is an exceptionally limited discipline in Africa, with only a few occupational hygienists in most southern African countries. This further limits the linkage of medical surveillance with occupational risk exposure profiles. During 2021, AUDA-NEPAD pursued a growth strategy within this discipline and trained a record 36 occupational hygiene professionals, who then sat for an international examination recognised by the International Occupational Hygiene Association (IOHA). In Malawi, a team was trained to use occupational hygiene equipment. Seventy-one occupational health and safety inspectors from Malawi, Zambia, Lesotho and Mozambique were trained on risk assessment. These activities demonstrate quantum leaps in developing occupational health capacity in southern Africa. Following the training in occupational hygiene, 20 workplace risk assessments were conducted, and the countries submitted reports. Eleven workplaces were visited, and further workplace-specific training was provided to 50 participants across the project countries.

CONCLUSION

The SATBHSS project has played a pivotal role in capacity building in southern Africa since it was initiated in 2016. AUDA-NEPAD, through the project, aims to continue the capacity development initiative in 2022, with a focus on sustainability by all project countries. It is hoped that more occupational health practitioners and OSH inspectors will be trained to ensure sustainability beyond the project's lifespan as governments take control of these initiatives.

ACKNOWLEDGMENTS

The World Bank funds the SATBHSS project: P155658 and P173228. For more information, visit www.satbhss.org and www.nepad.org. AUDA-NEPAD would also like to acknowledge the Regional Centre of Excellence on Occupational Health and Safety, Zambia; the Occupational Health Division, Wits School of Public Health; University of Cape Town; National Institute for Occupational Health (NIOH); Baines Occupational Health Services; SeniNhle Occupational Health Services; Infinity SHE; and individual and internal project countries' experts for their contributions to building the Africa we want.

REFERENCES

1. Moyo D, Zungu M, Erick E, Tumoyagae T, Mwansa C, Muteti S, et al. Occupational health and safety in the Southern African Development Community. *Occup Med (Lond)*. 2017; 67(8):590-592. doi:10.1093/occmed/kqx071.
2. Moyo D. An overview of occupational medicine and health services and associated challenges in southern Africa. *Occup Health Southern Afr*. 2021; 27(2):51-54.
3. Naidoo R, Kessy F, Mlingi L, Petersson N, Mirembo J. Occupational health and safety in the informal sector in southern Africa: the WAHSA project in Tanzania and Mozambique. *Occup Health Southern Afr*. 2009; 15:46-50.
4. Masekameni MD, Moyo D, Khoza N, Chamdimba C. Accessing occupational health services in the Southern African Development Community Region. *Int J Environ Res Public Health*. 2020; 17(18):6767. doi:10.3390/ijerph17186767.
5. AUDA-NEPAD. Human capital and institutions development; 2021. Available from: <https://www.nepad.org/areas-of-work/human-capital-and-institutions-development> (accessed 16 Jan 2022).
6. Srivastava S. Silicosis, tuberculosis (TB) and HIV/AIDS: the triple epidemic among gold mineworkers in South Africa (literature review and policy analysis) (MPH dissertation). New Haven: Yale University; 2013. Available from: <http://elischolar.library.yale.edu/ysphtdl/1277> (accessed 16 Jan 2022).
7. International Labour Organization. Guidelines for the use of the ILO International Classification of Radiographs of Pneumoconioses (revised edition 2011). Occupational Safety and Health Series No. 22 (Rev. 2011). Geneva: ILO; 2011. Available from: https://www.ilo.org/safework/info/publications/WCMS_168260/lang--en/index.htm (accessed 16 Jan 2022).