OCCUPATIONAL DISEASES AND INJURIES AMONG ASMs IN EAST, CENTRAL AND SOUTHERN AFRICA. THE WAY FOWARD

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OUTLINE

- Background
- Key health challenges among ASMs.
- Contributory Factors to the plight of ASMs
- The way forward

BACKGROUND

- About 13M ASMs in Sub-Saharan Africa representing about 30% of the global artisanal and small-scale miners.
- Critical economic activity: Livelihoods
- Contributes to SDGs 1, 2, 3, 4 etc
- High mobility, remote operations & use of basic tools
- Archaic mining methods

NEGATIVE CONSEQUENCES OF ASM

- Social and environmental consequences
  - unsafe working conditions
    - Diseases and injuries
  - Deforestation
  - Water pollution: Heavy metals

ARTISANAL & SMALL-SCALE MINING

Poverty Driven Trade

Poor Health-Related Quality of Life

MAJOR CHALLENGES IN ASM

- Vulnerability of ASMs to diseases & injuries
- Paucity of legal frameworks specific to OSH/OHS for ASMs.
- Lack of organized OSH/OHS services
- Lack of IEC
- Lack of Basic occupational health services
- Lack of access to health services

BURDEN OF DISEASES & ACCIDENTS

- Tuberculosis:
- HIV
- Occupational Lung Diseases – Silicosis
- Mercury & cyanide toxicity
- STIs
- Noise exposures
- Alcohol & substance use
- Accidents & injuries
- Gendered OSH Challenges

BURDEN OF TB IN SUB SAHARAN AFRICA

- TB burden among miners in Sub Saharan Africa estimated at **3000 – 7000** per 100 000 (WHC, 2017)
- **3 – 10 times** higher than in the general population
- Tuberculosis prevalence (Howlett, P 2023et al
  - Microbiologically confirmed disease 1.8 to 6.1%
  - Clinical disease 3.0 to 17%
- Silicosis: 11 -37% (Howlett, P 2023)

RESEARCH

- Paucity of research in ASM
- Vulnerable and forgotten
- High mobility

BURDEN OF DISEASES & ACCIDENTS

	TB	Silicosis	HIV	Mercury & Other
Zimbabwe ***(Moyo, D et al 2023)***	7% **>35x gen. pop**	19 -23% 1 in 5	18%	Acc & injuries 35% & 26% resp 52% exceeded HBM levels 1 & II of Mercury
Tanzania ***(Mbuya, A et al 2023)*** ***(Vera, AV & Macha 2018)***	7% **24x gen pop**	30%	1.8%	Hg: 47% > WHO limit
Rwanda **Hatfield S et al 2025**		9%		
Ghana **Ohene**, S et al 2021 **Saalidong, B.M., Aram, S.** 2022	14%			5-46% >Hg levels High mercury levels: 43% > OEL
Malawi Rambi et al	14%			

ASM CHALLENGES

- High burden of ODs & injuries
- Inadequate & fragmented legislative frameworks
- No organized OSH systems
- Lack of access to Health services
- Lack of Basic Occupational Health Services (BOHS)
- Lack of expertise Human capital

SPECIFIC CONCERNS-RESEARCH IN ECSA

- ASMs have a good health seeking behavior but are constrained by access to health services: (***Moyo, D et al. 2025, 2024, 2023 & 2022 & Malhotra et al 2025***)
  - Long distances
  - Travel expenses
  - Ore insecurity
- Lack of targeted Health Care Interventions
- Fear and stigma main barriers to health care access

THE WAY FORWARD: RESEARCH EXPERIENCE

Research findings in ASM

- **Strategic & intelligent Approach** to service delivery
  - One-stop Supermarket Approach
  - Mobile vs static services
- **Integrated mobilization**
  - Collaborative with traditional leaders, District administrators, ASM leadership, other implementing partners

THE WAY FORWARD : RESEARCH EXPERIENCE

- Legislative Frameworks
  - Legal reforms
- Basic Occupational Health Services (BOHS) Model
- Information, Education & Communication (IEC)

THE WAY FORWARD

- National level commitment to OSH in ASM
- Specific & contextualized legislative arrangements for ASM
- Establish flexible & contextually relevant health delivery systems
  - Workplace Based Screenings (Moyo, D et al 2024
  - Expanded Access to radiological services

ONE STOP CENTRE SUPERMARKET APPROACH

- Involve ASM leadership & associations
- Defined service package for ASMs
  - Screenings
  - Information, Education & Communication (IEC)
  - Holistic: One Stop Shop
  - ***TB, HIV, OLDs, Heavy Metal Toxicity, Accidents, STIs. Alcohol & substance misuse***

SUMMARY ON WAY FORWARD

Original Paper

Stakeholder perceptions of a workplace-based screening programme for artisanal and small-scale miners in Zimbabwe

A. M. Malhotra[1,2], F. Kavenga[3], R. T. Ncube[4], G. Madziva[5,6], F. Moyo[5,7], B. Chigaraza[5], E. Marambire[1,8], S. Kasozi[3], C. Timire[1,3], C.J. Calderwood[1,9], A. Nyambo[3], K. Ndlovu[3], M. Zungu[10,11,12] and D. Moyo[5,13,14]

Occupational Medicine Journal, 15 December 2025

The Way forward

- **ASM:**
  - ASMs & ASM representative organizations: involve in co-design of health services
- **Health Services**
    - Access: Proximity to mining areas & flexible schedules
- **National Level:**
  - BOHS,
  - National campaign and strategy related to ASM IEC

The Way forward

- **Beyond Health**
  - Formalization of ASM
  - Support and social protection for infectious and occupational disease(s)
  - Design, rehabilitation and social security systems at a national level
- **Research**
  - Explore establishment of resilient and sustainable occupational health systems in public health facilities beyond donor funding
  - Ongoing monitoring and evaluation of health needs in addition to programmes and interventions

THE END

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