### Abstracts

**630** STATUS OF REGULATIONS ON HEALTH AND SAFETY IN MINING IN KENYA SINCE ENACTMENT OF THE OCCUPATIONAL HEALTH AND SAFETY ACT,2007

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**Introduction** Large and small scale Mining in Kenya has been in practice for close to 100 years. This includes mining of minerals like soda ash, gold, fluor spar, gemstones, quarrying. As an occupation with varied risks, regulation has been used in many countries to ensure the health, safety and welfare of workers is taken care of. There have been various regulations governing some aspects of mining in Kenya including health and safety. Such laws were enacted as early as 1940 for the Mining Act CAP 306 and 1951 for the Factories Act CAP 514 whose purpose was to make provision for health, safety and welfare of persons employed in factories and other places.

**Methods** A systematic review was conducted after setting the research questions. Online databases and sources were identified to conduct the review. The articles under review were limited to law provisions on health and safety in mining in Kenya. Online sources used include Kenya law reports database, the Extractives Baraza, the Ministry of Labour Website and Ministry of Mining Website.

**Results** Laws and Regulations that touch on health and safety in mines which were enacted before the Occupational Health and Safety Act,2007 have since been repealed. The Mining Act of 2016 replaced Mining Act CAP 306 where small scale mining has been recognised as a legal activity. However, there are no specific regulations on the health and safety provisions for this group of workers. Kenya has not ratified a number of International Labour Organisation(ILO) conventions on health and safety.

**Conclusion** Kenya has taken notable steps in ensuring mining industry has regulations that govern its operations. Having artisanal and small scale mines recognised as a legal activity are indicative of these steps among others. The findings also indicate the need to have rules that are specific to the industry.
**Introduction** The mining sector that has driven the South African economy for over 100 years left a legacy of occupational lung diseases in mineworkers, their families and communities in Southern Africa not comparable with any other working populations and compounded by the migrant labour system. The 33,000 mineworkers compensated for silicosis, 109,000 for tuberculosis and 14,000 for asbestosis-related disease amongst other occupational lung diseases over the past 30 years is thought to be only the tip of the iceberg. This study aimed to document progress towards ameliorating this situation and identifying residual challenges.

**Methods** A review was conducted of relevant policy and legislation and epidemiological studies showing the size, shape and scope of occupational lung diseases and access of current and ex-mineworkers to prevention interventions, health services and compensation. This was supplemented by 12 semi-structured interviews and data analysis.

**Result** The approach to the occupational lung disease challenges within the Southern African mining sector included the development of a database of 600,000 files, outreach services including fixed and mobile health units and financial services, tracking and tracing ex-mineworkers using geospatial mapping tools and increased compensation payments. Multi-stakeholder participation involving governments in the Southern Africa region, trade unions, the Chamber of Mines, ex-mineworker associations and multi-lateral agencies assisted with financial, infrastructural and technical resources.

**Discussion** The challenges in the post-apartheid era have meant that vast numbers of mineworkers who have fallen ill or became disabled as they worked to produce South Africa’s mineral wealth were not receiving health services and compensation. Progress is now being made to address the problems identified. Despite these efforts there are barriers to access services including socio-cultural factors, distance and lack of knowledge amongst ex-mineworkers about occupational lung diseases and compensation.

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### Musculoskeletal Disorders

**Abstracts**

**1045** MUSCULOSKELETAL DISORDERS AMONG NURSES: EPIDEMIOLOGICAL AND SEMI-QUANTITATIVE STUDY

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**Introduction** This study aimed to identify biomechanical risk factors of musculoskeletal disorders (MSD) among nurses.

**Methods** A cross sectional survey-structured by the Nordic MSDs questionnaire- was conducted through a representative sample of the 1179 paramedics providing nursing care in two university hospital in Tunisia (n=301). A representative work period in each department was identified. A multidisciplinary working group, according to estimated usual physical load, divided theses departments into four homogeneous groups. Semi quantitative biomechanical constraints based on 56 direct observations with encoding software and over 2 hours each one was conducted, in accordance with the homogeneous exposure group sampling table. Physical load scores were elaborated according to the posture adopted, gestures performed and characteristic of handling (type, assistance, weight and autonomy of the patient) and assessed on the Chamoux physical strain scale.

**Results** The prevalence of the back MSDs was equal to 70.3%. Variable prevalence of the upper limbs MSDs was noted according to the anatomical area (43.68% for neck, 50.27% for shoulders, 15.01% for elbows and 29.35% for wrists). Observational study concluded that handling activity, as well as type and duration of constraining postures, were variable in function of the department of assignment. According to Chamoux scale the average physical load score was variable from 7.76 in departments with ‘heavy physical requirement’ to 7.25 in those associated to ‘low’ physical requirement. Multivariate analysis showed a significant difference concerning the thrust and the traction of light and heavy load, the activity of handling and the characteristics of the handled patients. It also concluded that paramedics affected to